



COTTAGE GROVE CITY COUNCIL

February 7, 2024

12800 RAVINE PARKWAY SOUTH
COTTAGE GROVE, MINNESOTA 55016
COUNCIL CHAMBER- 7:00 PM

- 1 Call to Order
- 2 Pledge of Allegiance
- 3 Roll Call
- 4 Open Forum
- 5 Adoption of Agenda
- 6 Presentations
 - A Part-time Fire Department Recognition
Staff Recommendation: Receive a presentation and recognize the Fire Department's years of service.
 - B February 2024: Black History Month Proclamation
Staff Recommendation: Receive a presentation and recognize Black History month.
- 7 Consent Agenda
 - A January 3, 2024, Special Meeting Minutes (Swearing-in & Badge Ceremony)
Staff Recommendation: Approve the January 3, 2024, Special Meeting Minutes (Swearing-in & Badge Ceremony).
 - B January 3, 2024, Regular Meeting Minutes
Staff Recommendation: Approve the January 3, 2024, Regular Meeting Minutes.
 - C January 17, 2024, Special Meeting Minutes (Legislative Review)
Staff Recommendation: Approve the January 17, 2024, Special Meeting Minutes (Legislative Review).
 - D January 17, 2024, Regular Meeting Minutes
Staff Recommendation: Approve the January 17, 2024, Regular Meeting Minutes.
 - E December 18, 2023 - Planning Commission Minutes
Staff Recommendation: Accept and place on file the minutes from the December 18, 2023, Planning Commission Meeting.
 - F Response to Open Forum Question - January 17, 2024
Staff Recommendation: Accept the response letter replying to the request to link the South District Street & Utility Improvements Phase 2 Feasibility Report to Agenda Item 7.J. from the January 17, 2024, City Council meeting open forum.
 - G Reappointing Commissioners and CVB Directors
Staff Recommendation: Appoint Commissioners and CVB Directors to their assigned Commissions listed in the memo.

- H Transcribing Agreement
Staff Recommendation: Authorize entering into an agreement with Judith Graf for transcription services for 2024.
- I Rental License Approvals
Staff Recommendation: Approve the issuance of rental licenses to the properties in the attached table.
- J Accept donations received in the 4th Quarter 2023
Staff Recommendation: Adopt Resolution 2024-14, accepting donations received in the 4th Quarter 2023.
- K Abatement of utility billing certification
Staff Recommendation: Adopt Resolution 2024-15, authorizing the abatement of utility billing certifications in the amount of \$1,095.98.
- L HERO Center Joint Powers Agreement (JPA) Amendments
Staff Recommendation: Approve the second amended Joint Powers Agreement between the City of Cottage Grove and the City of Woodbury for the East Metro Public Safety Training Facility (HERO Center).
- M Kingston Park Building Final Design Service Agreement
Staff Recommendation: Authorize service agreement with Oertel Architects for Kingston Park Building Project final design services.
- N Mississippi Dunes Building Concept Design
Staff Recommendation: Authorize service agreement with ISG, Inc. for Mississippi Dunes building planning and concept design.
- O Holcim MWR, Inc. – Annual Mining Permit
Staff Recommendation: Adopt Resolution 2024-016 approving the 2024 Mining Permit for Holcim – MWR, Inc. – Nelson Sand & Gravel Facility.
- P Cottage Grove 2024 Standard Specifications for Street & Utility Construction and 2024 Standard Detail Plates
Staff Recommendation: Approve the Cottage Grove 2024 Standard Specifications for Street & Utility Construction and 2024 Standard Detail Plates.
- Q RAISE Grant
Staff Recommendation: Adopt Resolution 2024-020 supporting the City's RAISE grant application for the County 19A/100th Street Realignment Project.
- R Construction Cost Share & Maintenance Agreements with Washington County for the County Road (CR) 74 Multi-Use Trail Project
Staff Recommendation: 1) Approve the Cooperative Agreement between Washington County and the City of Cottage Grove for Construction Cost of County Road (CR) 74 Multi-Use Trail. 2) Approve the Cooperative Agreement between Washington County and the City of Cottage Grove for Maintenance of County Road (CR) 74 Multi-Use Trail Project.
- S 2024 Mill and Overlay Project – Approve Plans and Specifications and Establish Bid Date
Staff Recommendation: Adopt Resolution 2024-018 approving the plans and specifications and establishing a March 7, 2024, bid date for the 2024 Mill and Overlay Project.
- 8 Approve Disbursements
 - A Approve Disbursements
- 9 Public Hearings
 - A 2024 Pavement Management – Hold Public Hearing and Order Project
Staff Recommendation: Adopt Resolution 2024-019 ordering the 2024 Pavement Management Project.
- 10 Bid Awards
- 11 Regular Agenda

- A Proposed Discount Tire Facility at 8647/8649 East Point Douglas Road South – Conditional Use Permit

Staff Recommendation: Adopt Resolution 2024-017 approving the Conditional Use Permit for a minor automotive repair use for Discount Tire to be located at 8647/8649 East Point Douglas Road South.

12 Council Comments and Requests

13 Workshops - Open to Public

- A Police Annual Use of Force Report

Staff Recommendation: Receive the annual use of force presentation and abbreviated annual SWAT report from Deputy Director Brad Petersen and Sergeant Nicholas Bailey.

14 Workshops - Closed to Public

15 Adjournment



City Council Action Request

6.A.

Meeting Date	2/7/2024
Department	Public Safety
Agenda Category	Presentation
Title	Part-time Fire Department Recognition
Staff Recommendation	Receive a presentation and recognize the Fire Department's years of service.
Budget Implication	N/A
Attachments	None



City Council Action Request

6.B.

Meeting Date	2/7/2024		
Department	Communications		
Agenda Category	Presentation		
Title	February 2024: Black History Month Proclamation		
Staff Recommendation	Receive a presentation and recognize Black History month.		
Budget Implication	N/A		
Attachments	<table border="1"><tr><td>1.</td><td>February 2024 Black History Month Proclamation</td></tr></table>	1.	February 2024 Black History Month Proclamation
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PROCLAMATION

February 2024: Black History Month

- WHEREAS: Each year, the Cottage Grove Council takes pride in recognizing February as Black History Month. This month is a time for honoring and exploring the culture and history of African Americans, as well as recognizing that our society's rich diversity is one of our greatest strengths; and
- WHEREAS: Black History Month is a time for all Americans to remember the rich history of a people who helped to build this country through neighborhood leadership and involvement, advance the cause of civil rights, and strengthen families and communities; and,
- WHEREAS: In 1926, Dr. Carter G. Woodson, a Harvard scholar, established the observance of Negro History Week to inspire schools and communities to organize local celebrations and host performances and lectures. The event was first celebrated during a week in February that encompassed the birthdays of both Abraham Lincoln and Frederick Douglass; and
- WHEREAS: Minnesota is home to many prominent Black trailblazers, including Dr. Robert S. Brown, the first Black doctor from Minnesota; Lena Smith, Minnesota's first Black woman lawyer; Neva Walker, the first Black woman elected to the Minnesota legislature; and
- WHEREAS: The City of Cottage Grove remains committed to acknowledging the generations of African Americans who struggled against adversity, injustice, and discrimination in order to achieve equal rights in American society; and
- WHEREAS: Black History Month calls our attention to the continued need to battle racism and build a society that lives up to its democratic ideals. We must reflect on our collective past, reveal its impact on present conditions and implement equitable solutions for a more just future; and
- WHEREAS: The City of Cottage Grove is proud to honor the history and contributions of African Americans in our community, throughout the state, and nation.

NOW, THEREFORE, the Mayor and City Council of the City of Cottage Grove, County of Washington, State of Minnesota, hereby proclaim the month of February 2024 to be designated as Black History Month.

Passed this Wednesday, the 7th day of February 2024.

Myron Bailey

Mayor



City Council Action Request

7.A.

Meeting Date	2/7/2024		
Department	Administration		
Agenda Category	Action Item		
Title	January 3, 2024, Special Meeting Minutes (Swearing-in & Badge Ceremony)		
Staff Recommendation	Approve the January 3, 2024, Special Meeting Minutes (Swearing-in & Badge Ceremony).		
Budget Implication	N/A		
Attachments	<table border="1"><tr><td>1.</td><td>2024-01-03 City Council Special Meeting</td></tr></table>	1.	2024-01-03 City Council Special Meeting
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MINUTES

COTTAGE GROVE CITY COUNCIL

COUNCIL CHAMBERS
12800 RAVINE PARKWAY SOUTH

January 03, 2024

SPECIAL MEETING - 6:00 P.M.

Training Room

1. CALL TO ORDER
2. ROLL CALL
3. Presentations
 - A. Swearing-in and Badge Ceremony
Staff Recommendation: Perform the Swearing-in and Badge Ceremony for Jon Pritchard, Fire Chief; Brad Peterson, Public Safety Captain; Dan Schoen, Public Safety Sergeant; Nick Bailey, Public Safety Sergeant; Pat Young, Public Safety Sergeant; and honor the retirement of Public Safety K9, Gunnar.

The Director of Public Safety, Pete Koerner, addressed everyone and noted the Public Safety Department's goal has always been to offer the highest quality community-based services. Cottage Grove manages the Police, Fire, Ambulance, and Emergency Management Departments under the umbrella of Public Safety. Director Koerner thanked Council for their support of the Public Safety Department. City Administrator, Jennifer Levitt, read the oath with each of the honorees and their representatives pinned their badges.

Public Safety K9, Gunner, was honored by playing the recording from his last call and sign-off. Gunner took pictures with Council and staff.

4. ADJOURNMENT

The meeting was adjourned at 6:35 p.m.

Minutes were transcribed by Tamara Anderson, City Clerk.



City Council Action Request

7.B.

Meeting Date 2/7/2024

Department Administration

Agenda Category Action Item

Title January 3, 2024, Regular Meeting Minutes

Staff Recommendation Approve the January 3, 2024, Regular Meeting Minutes.

Budget Implication N/A

Attachments

1.	2024-01-03 City Council Meeting
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MINUTES

COTTAGE GROVE CITY COUNCIL

COUNCIL CHAMBER
12800 RAVINE PARKWAY SOUTH

January 3, 2024

REGULAR MEETING - 7:00 P.M COUNCIL CHAMBER

1. CALL TO ORDER

The City Council of the City of Cottage Grove, Washington County, Minnesota, held a regular meeting on January 3, 2024, at Cottage Grove City Hall, 12800 Ravine Parkway. Mayor Bailey called the meeting to order at 7:00 p.m.

2. PLEDGE OF ALLEGIANCE

The audience, staff, and City Council Members stood and recited the Pledge of Allegiance.

3. ROLL CALL

City Clerk Tammy Anderson called the roll: Mayor Bailey-Here; Council Member Garza-Here; Council Member Khambata-Here; Council Member Olsen-Here; Council Member Thiede-Here.

Also present: Jennifer Levitt, City Administrator; Kori Land, City Attorney-LeVander, Gillen & Miller, PA; Tammy Anderson, City Clerk; Ryan Burfeind, Public Works Director; Gretchen Larson, Economic Development Director; Zac Dockter, Parks and Rec Director; Pete Koerner, Public Safety Director; Emily Schmitz, Community Development Director.

4. OPEN FORUM

Mayor Bailey opened the Open Forum.

John McLoone, publisher of the Cottage Grove Journal, 1304 Vermillion Street, Hastings, addressed Item F on tonight's agenda, to designate the St. Paul Pioneer Press as the City of Cottage Grove's newspaper for official publication in 2024. He's hopeful that they'll reconsider a rubber stamp of staff recommendation. We started our newspaper during the pandemic in 2020; it's a lot of work, but we're dedicated to helping the community any way we can. We work hard to be a good corporate citizen, we donate to and promote local causes. We're an active member of the Cottage Grove

Area Chamber of Commerce. We had so much fun at the Cottage Grove Community Showcase the last few years, as countless people stopped by our booth and thanked us for bringing a newspaper back to Cottage Grove. His wife was actually shocked; she said, people like you. We can't do it alone, though, we're nothing without the community. We publish weekly. For generations, the City of Cottage Grove recognized the importance of its weekly newspaper, bestowing it as its official newspaper. This city was built on items that had to be posted in a weekly newspaper, and looking around the community, he'd say that didn't pose too many problems or obstacles. All the permitting got done, everything got built, and this town is thriving. The intent of the statutes governing public notices isn't convenience; they're meant to notify the public in the place they'd be most likely to see them, that undoubtedly is the Cottage Grove Journal. Unlike many newspapers, we're on a steady growth trajectory, and he will admit this would certainly be as much of a shot in the arm for us to be designated as the official newspaper as it is a kick in the backside every year to see these notices go to St. Paul. We work hard to serve our communities. We take public notices very seriously, we bend over backwards to help our municipal partners. Deadline for public notices, honestly, is when his paper goes on the press. We remade plates in our Hastings paper last week because something came in two hours after we were supposed to actually be on press, but because of the holiday we were able to make the change and get their notice in. The City of Cottage Grove is honestly the only municipality he can think of that doesn't designate the local newspaper as its newspaper of record. Can we change that tonight? Please give us a try. As your City Attorney will tell you, if it doesn't work out, you can make a change back at any time during the year; this isn't a one-time thing. He admitted they don't have an average circulation of 30,000 readers in Ramsey, Dakota, Washington, Anoka Counties and western Wisconsin every day. To him, that doesn't matter. We target Cottage Grove and we're proud of that. Thank you for your time.

Mayor Bailey thanked Mr. McLoone and asked City Attorney Kori Land if she wished to comment on this.

Attorney Land stated the memo that's in the Council packet explaining the legal qualifications for your official newspaper are outlined pretty well. Given that you don't have a local newspaper that is in the City of Cottage Grove that has an address here, you're able to choose your official newspaper as one that is within an adjacent county. So, you could choose the Dakota County Cottage Grove Journal because their address is in Hastings, but you could also choose the St. Paul Pioneer Press. From a legal standpoint, they're equal. It then becomes a practical standpoint, the advantages that one or the other has; so, that's what the Council has to weigh.

As no one else wished to address the Council, Mayor Bailey closed the Open Forum.

5. ADOPTION OF AGENDA

Mayor Bailey stated he wanted to make a quick correction on one of the items on the agenda. One of the items we were looking at doing tonight was Item 13A, Workshop,

Open to the Public, which is a workshop to discuss the Viewpoint Project. That has been removed from our agenda this evening for a future meeting date.

Council Member Thiede made a motion to approve the agenda with the removal of Item 13A Workshop; second by Council Member Garza. Motion carried: 5-0.

6. PRESENTATIONS - None.

7. CONSENT AGENDA

- A. Approve the December 6, 2023 City Council Regular Meeting Minutes.
- B. Approve the December 20, 2023 City Council Regular Meeting Minutes.
- C. Accept and place on file the minutes from the October 23, 2023 Planning Commission Meeting.
- D. Approve the issuance of rental licenses to the properties listed in the attached table.
- E. Adopt Resolution 2024-001 authorizing the renewal of the attached business licenses for 2024.
- F. Designate the St. Paul Pioneer Press as the City of Cottage Grove's newspaper for official publications in 2024.
- G. Approve Resolution 2024-002, Designating Depositories for City Funds and authorizing the investment of surplus funds.
- H. Approve Resolution 2024-003, delegating authority to pay certain claims and allowing electronic fund transfer transactions.
- I. Accept the amendment to the 2022-2024 MCES Water Efficiency Grant to receive an additional award of \$10,000.

None of the Council Members wished to pull any items on the Consent Agenda for further comment and/or discussion.

Motion by Council Member Khambata to approve the Consent Agenda; second by Council Member Olsen. Motion carried: 5-0.

8. APPROVE DISBURSEMENTS

- A. Approve payments for the period of 12-14-2023 through 12-27-2023 in the amount of \$2,222,395.25.

Motion by Council Member Olsen to approve disbursements; second by Council Member Garza. Motion carried: 5-0.

9. PUBLIC HEARINGS - None.

10. BID AWARDS - None.

11. REGULAR AGENDA - None.

12. COUNCIL COMMENTS AND REQUESTS

Council Member Khambata wished everyone a Happy New Year. He hoped everyone had a safe holiday. We had a Swearing In Ceremony earlier this evening, so, he congratulated all of our Public Safety members who were either promoted or retired, in Gunnar's case.

Council Member Olsen stated he hoped everyone had a wonderful holiday. He was, unfortunately, not able to be present for the meeting right before Christmas. He knows that it wasn't a very long meeting, but he apologized as he was traveling for work. His understanding is that things went well. First of all, he wanted to say thank you to all of the staff for the hard work that they put forth in 2023. As we transition into 2024, he knows that hard work is going to continue. Part of that is all of the various activities that took place over the holiday break; he believed we had several hockey tournaments in town, so Ice Arena and Park and Rec staff were definitely busy. We haven't had a lot of snow, but we had some slick spots, so he believes our Public Works team was out salting roads, etc. It never fails, that always happens during the holiday season. We're very grateful that all of those folks were so committed to come out and do the work that needed to be done, even during the busy holiday season.

Council Member Olsen mentioned that the month of January is Firefighter Cancer Awareness Month. Incidents of cancer and very specific types of cancer are much more prevalent in firefighters than in the general public; hence, the reason that we have a Firefighter Cancer Awareness Month. One of the things that stands out about that to him is we actually have a retired firefighter who's battling cancer; it's difficult to tell what in particular may have caused that. There's a lot of research out there about some of the different chemicals that get used in fighting fires and the firefighting foam, etc. So, if you know any firefighters in your life, make sure that you give them an extra special thanks this month for putting themselves on the line in several different ways to help protect our communities.

We had the opportunity this evening to see the badge-pinning ceremony for our new Fire Chief, Jon Pritchard, which was fantastic, along with our new Captain in the Public Safety Department, Brad Petersen. We also have three new sergeants (one of whom is pretty familiar to at least somebody on this Council): Sergeant Nick Bailey, Sergeant Dan Schoen, and Sergeant Pat Young. All three of them got their badges tonight, and it was a really special time. That's something as a City Council that we take a lot of pride in, because those folks all were kind of homegrown, they grew up in our department, so, that was very fun.

Council Member Olsen mentioned of course in the month of January, a lot of laws change. So, if you haven't paid any attention, there's a lot of different legal information that's out there about some of the laws that our legislature passed in 2023 that have now taken effect in 2024. Some of those are paid leave for employees at different

businesses, there was also a minimum wage increase, etc., so avail yourself of that information. A lot of that comes out through the State of Minnesota, through their various websites, social media, Twitter, etc. There are probably some things that apply to you, so if you're not familiar with all the different legal elements that took place in 2023 that have now become official in 2024, take a few minutes and inform yourself. He thinks that would be to your benefit, a lot of good stuff happened last year at the Capitol, and we're really excited to see more good stuff this year.

Council Member Thiede said Happy New Year, he's looking forward to a great 2024. He also congratulated the Public Safety recipients tonight, they did a good job.

He also said that things are definitely starting to pick up with Strawberry Fest for 2024; it's actually going to be on the third weekend in June this year, the weekend after Father's Day. Make sure to take note of that, and we definitely can use the help. Our first meeting this year will be on Monday night at 6:00 p.m., here in the St. Croix Room, and we'd love to get people to come in and help. We also have meetings on the third Monday of the month, so go to the website to find the location; sometimes they're here, sometimes at Carbone's. We'd love to have people come out and help, we definitely need the help.

Council Member Garza also wished everyone a Happy New Year. She congratulated all of the recipients of the awards tonight; our Public Safety Department is rocking and rolling. It's so awesome to see that we have added some new people to the team and we were able to shift some things around and move people up. So, we're really happy to see all of that. She stated she's looking forward to 2024, is excited for all of the things that we have going on in the City of Cottage Grove, so, thank you.

Mayor Bailey stated even though we haven't really had any snow of consequence, this coming Saturday, January 6, is what they're calling the Dust 'Em Off Vintage Snowmobile Show and Swap, which is from 10:00 a.m. to 4:00 p.m. It takes place on the corner of Keats Avenue and 70th Street; it's kind of in the farm field that's across from Almar Village where Carbone's, etc. are located. The Lions are going to be there, serving food and beverages. Council didn't get a chance to be there last year and again this year because we're doing our Strategic Planning meeting, but from the pictures he's seen it looks like it's a pretty large crowd that shows up for that event. If you get the opportunity to stop in and check it out, he'd encourage you to do so.

Mayor Bailey stated tomorrow, Thursday, January 4, there are actually two hockey games taking place at the Ice Arena: Park boys vs. Roseville, and East Ridge vs. Cretin. So, it's going to be a crazy event up there, and he thinks it's the kickoff to the 50th Anniversary of the Ice Arena. So, if you're a popcorn connoisseur, like he is, the popcorn is going to be back to prices 50 years ago, which is 50 cents. There will be other items happening this year, including a drawing for some free ice time and disco. If you're interested, stop in at the Ice Arena to watch the boys' or the girls' hockey teams; watch the screen outside of the Ice Arena to see who's playing and when.

Mayor Bailey stated many people and staff have reached out to him today regarding the fenced-in area between Culver's and US Bank, which is going to be Chase Bank. They've put the fencing around that particular area, and he will be sure to put that information on our social media, too.

Council Member Garza asked with the area that they put the fence around, are we not having the car shows or anything there anymore.

Mayor Bailey told Council Member Garza that the car show was moved quite a while ago down to St. Paul Park, at the Lions Levee Park. There were some parking challenges in Cottage Grove with Kohl's and others, and Kohl's was planning to sell that lot, so they decided to move it to St. Paul Park.

Mayor Bailey stated our Workshop tonight in the St. Croix Room is open to the public. There are now three items in the workshop: The Dowdle Puzzle, the Kingston Park Building Design, and the 2024 Project Bonding.

Mayor Bailey stated we will not be adjourning in here, but will adjourn from the Workshop. He stated Council will also be meeting together on this Saturday.

13. WORKSHOPS - OPEN TO PUBLIC - ST. CROIX ROOM

A. Viewpoint Project Discussion - *Removed from the Agenda*

B. Dowdle Puzzle

Staff Recommendation: Provide feedback on the must-have and nice-to-have people, places, and things chosen to represent Cottage Grove in the Dowdle Puzzle in the attachment included in the report.

Council and staff held an informational open workshop regarding the Dowdle Art Project and the next steps. Dowdle Studios has extended an invitation to the City of Cottage Grove to participate in the "Land That I Love" tour, which will commemorate America's 250th birthday starting in 2026. This tour, led by renowned folk artist Eric Dowdle, aims to showcase the unique stories and rich histories of various communities by partnering with a select few in each state.

Recognizing the potential economic and promotional benefits of this endeavor for tourism and marketing, city staff organized a virtual meeting with the Dowdle team, which included Mayor Bailey and CVB Chairman Olsen. Following the meeting, it was decided that work on an agreement should proceed.

On December 12, the EDA Commission approved the agreement, with some modifications related to items to be included in the painting (people, places, and things). City directors were tasked with brainstorming the individuals, locations, and objects that best represent Cottage Grove. The compiled list of ideas was shared with Council in the workshop. Council narrowed the list down to a proposed 18 people and 52 places:

People

1. Mayor Myron Bailey – on a float or fire truck in one of the parades
2. Councilmember Dave Thiede – same as 1 above
3. Councilmember Justin Olsen - same as 1 above
4. Councilmember Tony Khambata - same as 1 above
5. Councilmember Monique Garza - same as 1 above, plus she is Movies in the Park with Mo
6. Former Mayor Sandy Shiely
7. Washington County Commissioner Karla Bigham
8. Former Washington County Commissioner Myra Peterson
9. Public Safety Director/Police Chief Pete Koerner – holding a Night to Unite sign
10. Former Fire Chief Rick Redenius – in a fire truck, in the parade strawberry fest or monster parade
11. Santa Gary Spooner - with Bulletin Newspaper in hand
12. Sean William Scott
13. Sam Jacobson
14. James Norris
15. Strawberry Fest Ambassadors General Faces (3 total – 2 girls, 1 boy)
16. Allie Morse
17. Kerry Lightenberg
18. Jeff Nelson

Places

1. Concrete Arrow/Jansen Farm
2. Atkinson Cemetery
3. Cottage View Drive-In Sign
4. American Motorsports Bar
5. The Gold Rush
6. Langdon School Building
7. Holiday Train
8. Mississippi River/Pelicans & Eagles in the Backwaters/Kayaking/Settlers Island
9. Park High School letter patch logo
10. Woodridge Inclusive Playground
11. City Hall
12. Central Fire Station
13. HERO Center
14. Camel's Hump look-out
15. Welcome to CG Sign
16. Cedarhurst Mansion
17. Shepard Farm
18. Furber Farm
19. VFW Red Barn

20. Cottage Grove Ice Arena
21. River Oaks Golf Course
22. Tank's Corn Stand
23. Hope Glen Tree House
24. Boondocks (red exterior)
25. Zywiec's Haunting Experience
26. Strawberry Fest
27. Hometown Holiday Celebration - (Santa chair with lights on trees)
28. Food Truck Festival - (food trucks represented at any festival or at City Hall)
29. Monster Bash Parade - (mesh with Strawberry Fest parade)
30. Chamber logo
31. Cross-country skiing at the Ravine
32. Junction 70 - Jason with two burgers in his hand and his business logo
33. Coyote's - maybe near the Mississippi River
34. Lion's Club Logo
35. Snowmobile trails
36. Parks and open spaces
37. Snowplow
38. De Mori's
39. Jerry's Restaurant
40. Tom Moy
41. New Moon
42. Jack's 76
43. Sal's Pizza
44. Woody's Restaurant
45. Movie's in the Park
46. Ravine Parkway Banner
47. Parks: Disc Golf, Bike Park, Dog Park
48. McHattie Farm
49. Pumpkin Chuck
50. Farmers Market
51. Military Road
52. One Family Festival

Council provided direction to staff to help move forward with the next steps. The meeting was concluded, and Council and staff moved to the Training Room for the Kingston Park Building and 2024 Bonding Workshops.

- C. Kingston Park Building Design Workshop
Staff Recommendation: Receive information and give direction on Kingston Park building concept designs.

Parks and Rec Director Zac Dockter stated he'll talk about the Kingston Park Building redesign. We've been talking about this for a very long time, but it got elevated to a priority this summer when we had the CIP discussion. Council asked us to start working on a concept design. Director Dockter introduced Andrew Cooper with Oertel Architects, who will be doing most of the presentation and will show you the concept designs.

Director Dockter stated what we heard from Council at the CIP workshop was: 1) To increase restroom capacity and functionality. 2) Add a multiuse recreational room, similar to what we have in our other buildings. 3) Add space for general storage needs for events and programs; 4) Add a serving kitchen. 5) Accommodate additional picnic space. 6) Provide something unique, different than most of our park buildings.

We did the concept design and held a couple of stakeholder meetings with our Parks Commission and also with some key stakeholders of the park. The additional information we heard from them has partly been incorporated into this design and will be incorporated into the final design: 1) Increase kitchen and serving window size, especially to the outside, so we can easily get food back and forth to the serving areas. 2) Consider the traffic flow for events that may utilize a kitchen and portable grill, so we can grill outside. 3) Maximizing picnic space was reiterated. 4) Address site electrical needs for larger events; that's not as much a building design function, but certainly there's an electrical load that needs to come from the building itself. We can hopefully work on those things simultaneously. 5) We got mixed reviews on the monument sign.

Just remember, this is a concept design, so it's wide open. If there's anything you'd like to see differently, we'd like to hear your feedback.

Andrew described the process that he and the rest of their design team took to the concept design and how we came up with the images that you'll see. We brought our design team out to take a look at the park, which is huge; it's really at an interesting juxtaposition, as a lot of neighborhoods surround it, and you have to weave your way through neighborhoods to get to the park. The educational element is to the east, and then it's a road and farms on the other side. So, there's a really unique location about this, a striking element of something that really registered with our design team and how we would create that within the building plan and the building program.

Currently, the existing building has a unique shape but it's not necessarily striking, it's low scale with the roof shape, and it's on a very large, open parcel of land. The park is entirely soccer fields and an upper plateau baseball field. Anything you have there is going to be very physical, there's not a lot of topography that you're dealing with, so something has to stand up and be visible.

At the onset, we went through a series of critical spaces: The meeting room, the kitchenette, restrooms, to really understand those size parameters with the City staff. So, once we started putting those 20 x 30 boxes on the Site Plan for a certain space, we'd know how to orient it with our other support spaces, like restrooms and whatnot, and where it would point.

Building: What you see here is kind of the manifestation of that building program. When we talked about the multipurpose room, it seemed that with an upfront, primary use of the facility, that needs to go out towards the parking lot. That's what's going to create

the building geometry and that kind of striking view. Then we'd serve that with the ancillary spaces, such as the kitchenette, the storage and mechanical rooms, and then design an abundance of restrooms. Currently in this plan, in the women's restroom, for instance, there are seven water closets and associated sinks to serve those water closets, and there are similarly seven fixtures in the men's, three toilets and four urinals. For building code, you need seven of those for the space, so we are a little over and above the restrooms necessary for the actual building. But now you're talking about a larger park, so it makes a lot of sense.

Covered Picnic Shelter: We looked at a couple different options with the building plan of how we would orient and integrate a covered picnic shelter into the building architecture. Knowing that the playground is to the south and the bigger fields for the bigger kids are also to the south, it just made better sense to get more visual acuity from maybe a more populous game. Also, from when there's more people using the playground, that split has that visual connection to the building, too, where the concession sales would be built. The concession sales is oriented to the south, as is the picnic shelter. We also want to consider in the summertime we have some harsh sun, so we want to create that shade opportunity. So, it's not just a light picnic shelter, but it's a fairly substantial picnic shelter that you'll see in the images.

Mayor Bailey asked how close will that picnic shelter get to the park, the play area; he asked because we have one particular point when he takes his grandkids over there, there's only a couple seats around the perimeter of the park, and none of them are covered with trees. So, everybody finds the trees on the back side, and they sit under the trees, but not on benches. So, if it's going to be closer, that's awesome. Andrew pointed out the playground pad, which is closer than where it is today.

More comments/discussion ensued:

- Council Member Thiede asked if the trail is in the same place, that's confirmed.
- Andrew explained the red dot is where the existing building is, so you can see how we're closing that in.
- Mayor Bailey noted the existing building has indoor picnic tables, so it is taking it much closer; he said it would be so nice to sit at a picnic table or something up there. Andrew stated we're expanding the existing picnic shelter and showed the existing trail that goes by the basketball court.
- Council Member Garza noted the picnic shelter is covered, that's confirmed.
- Andrew stated as we're coming up with the building program, first we need to make it logical for the size of the potential project, but it also has to fit within the existing infrastructure. There are utilities that come through the existing building, and we want to reuse those; so keeping the plumbing within the same general areas with this building makes a lot of fiscal sense. Also, if we don't have to tear up the parking lot and the existing pathways to put a building footprint, we're not disrupting the park's use in general. Going back to the existing conditions, that covered shelter there is a good 40 feet away from the picnic shelter.

Andrew stated he'd go through a series of images, as he talks about the design in general. We can always come back to anything that you might want to ask a question about.

We looked at three design options: 1) A gabled roof, which is a more traditional park building. 2) A hip-edged roof that had a little bit more articulation at the front of the parking lot, so it would be a little flatter and then popped up, was a little more avantgarde in terms of its structure. It was a great design, but he personally thought it was way over budget even at that early concept stage, but then Zac and staff didn't like it anyway. 3) This is kind of a simple mono-pitched roof that starts out low and crawls up to the parking lot, so that's how tall it's going to be at the parking lot.

Director Dockter stated we're looking at a series of stone and kind of residential Hardie Board type siding materials, so it's something that's off the shelf, it's durable, but it's not something that's going to require a ton of maintenance. With park buildings, wood is great as long as we can get it up high; when wood is down low, it becomes an abuse and maintenance factor.

There is a vertical monument sign, two things on this image: 1) That's front facing, faces the sunset, so we're proposing to take advantage of that, since we get great sunsets at Kingston. 2) It's 50-50 on whether or not people like the monument sign. We also told them to be creative with the monument sign; it's not his fault, but it's not our standard rock sign. We can always mix that up. Mayor Bailey stated we already have a rock sign.

Andrew stated one of the things we liked about this corner or just in general is the building isn't out on the corner of the paths and the parking lot intersections, but it is a strong corner that you want to put something on there. So, even if it's not a Kingston Park vertical monument sign, something that has way finding would be helpful; like softball fields this way, soccer fields this way, playground that way. So, there's something there he thinks would be good; we just want to make sure that if something was there, that it's as big as this, but it's something that we think would look right with the architecture. Anything smaller and lower we'd still be okay with, but men in our office came up with putting the logo on the top of that design.

With expanses of glass in the public area, there's a considerable amount that faces north that doesn't have a large sunscreen or overhang on it because you don't need it there; you're not trying to shade the sun from the north. And then we're taking advantage of the western sunsets.

Public Restrooms: Are accessed through the back of the building, outdoors, and then internally through a hallway to the community space. So, they can be secured if they're not going to be open fulltime to the public. So, if someone is not using the rental space and you don't want those restrooms open on a given night at 9:30, they can be closed and locked up. There is still a family restroom in the plan, that is located under the canopy; we're looking at a wood structure, creating something that's solid but not so heavy and weighted down.

Director Dockter stated regarding the restrooms, operationally, we are keeping the family restroom open daily, and we would just open the other restrooms for large tournaments or the rental season.

Andrew noted with these being the opposite side of public view, it prompted a lot of discussion, at the onset of the concept design development stage; Public Safety asks how are those going to be monitored and how are they going to be patrolled if a police officer cannot drive by and see people going in and out of them, how do they know that

they're occupied if they were open that day. There are a lot of different ways we could do that with lighting and security protocols; it's not complicated, it's just something that we have to think about going on into the project. Discussion followed:

- Mayor Bailey stated these two bathrooms are on the very back side of it, and the family ones are on the corner of the pavilion. Andrew stated the family restroom is facing the playground, and it gets signed as such.
- Council Member Olsen asked if those two face the trailway, but Andrew stated those two face the tennis courts; Mayor Bailey stated to Council Member Olsen's point, they're facing the trail.
- Andrew stated if the community space was open in the evening for any reason, those restrooms would be 100% accessible from the interior space; those restroom doors would not be locked on the inside, they would only be locked on the outside, and you wouldn't need them for egress, for exiting for any reason.

Andrew stated we're at about 2,400 square feet of covered canopy area in this plan, which is the same size as the whole previous shelter. So, it's actually a little bit more than double the previous shelter. There are two-to-three picnic tables in the shelter now, while we're at a dozen, comfortably, and we could cram even more in there if you'd like. He thinks it's fairly comfortable seating. There's also some permanent bench seating out beyond the canopy, so there's still opportunity to kind of go in and out.

Interior Space: Everything that we designed at this point in the concept design is we were provided with a cost estimate, and it's very simple and durable on the inside: Polished concrete floors, standard drywall, impact resistant maybe, but still standard drywall on the inside. Everything is a stick frame, everything is wood framed; so, we're not talking about a heavy masonry structure to try to keep this build economical. Using heavy timber and cross-laminated timber to be the structure, so the structure's visible, it's finished appearance is not something we have to treat once its up. So, less touches means that once a contractor puts it up, it's done, and there's not a painter that has to come by and refinish things. In this image, we wanted to show how we'd integrate lighting; there are fancy circular lights and a lot of different options. You can see the visual access to the playground from the indoor space. There is kind of a pass-through option for concessions or in the kitchenette; there is also a concession window that faces the interior, so there can be sales both indoors and outdoors. There is access to the restrooms, so that's what would be permanently open as long as the community space is open.

When we look at a facility like this that's going to be used into the early evening, how does it also get lit because that is part of the striking appearance. Something that's very inexpensive to do is to use colored LED lights. It's something that can be very easily integrated in the architecture, it's not an expensive feature, and is something that then creates a nice showpiece for the whole park. You can theme it for the Fourth of July, St. Patrick's Day, Strawberry Fest, etc. You can choose colors for the day and it's very easy to do.

The materials are very simple, nothing super fancy, its just something that's going to make sure to stand the abuse of children running around with their parents and running into the building. Discussion followed:

- Council Member Olsen asked if the overhang itself was wood; that was confirmed. He was asked if there are any concerns about the sun fading that or causing damage. Andrew replied there are always concerns with fading a natural product, whether its wood or natural metal, which will also fade with UV. He personally doesn't find it as a bad thing, as things age and patina naturally. He thought the wood canopy structure is not going to get hit with the sun, so that's always going to stay that rich wood-tone color. The columns, on the other hand, would probably fade at different levels, depending on their sun exposure. Right now, we're showing heavy temper in terms of the columns, he's not sure its going to stay like that once we get through a design exercise with an actual structural engineer and get a more detailed cost estimate. There might be a scenario where there is steel up to a certain point and wood up above it, so that would lessen the amount of wood that would patina over time.
- Council Member Olsen asked if they could also wrap the wood. Andrew replied yes, and they do a lot of treatment of wood products as a whole. They've also done some plastic, synthetic composites that look like wood. Some architects say if we're going to use wood, let's use wood; we had that debate in the office recently. When it comes to park buildings, it might be a simple project, but we know maintenance is a significant cost. It's not the same as a pool house at a private residential development that's going to get a lot of attention. It's still going to get a lot of attention from Parks and Public Works maintenance staff, but it's not a constant yearly upkeep, it's more just kind of cleanliness. So, making it easy to maintain makes it a more durable project as well.
- Council Member Garza asked with the wood columns, is there any worry that with our winter snow if that would eat up the wood at the bottom and if we need to be concerned about that. Andrew replied we'd be more concerned about any kind of steel connections that are down at the concrete level. If this becomes something that you're going to plow and use in the wintertime, which is a possibility, if you're salting that, then that becomes an issue. So, the details would be at a later design stage, but maybe a concrete post that comes up a foot and gives you a good base there.
- Council Member Khambata asked what about the salt and degradation on the stone façade, is that all factored in as far as durability. Andrew replied synthetic stone and natural stone are naturally salt resistant.
- Council Member Khambata asked as far as with the mortar joints and all that, will those hold up. Andrew replied he wouldn't be terribly concerned with the products that we'd specify as synthetic products, it's basically an epoxy-grade order, so its more plastic than it is cement. Once it gets put out there, brick and block will have some of that degradation downfall, but its usually just in that first eight inches. Again, specifying the right order of products will prevent that.
- Mayor Bailey asked if that is solar. Andrew replied this is solar, he fully admitted its shown the wrong way in the image. Yes, there would be the opportunity to get solar on this roof. One of the benefits of using the heavy timber structure is that it can take the load, and solar panels are not as heavy as they used to be. There's

still a little load that has to be carried on them, so heavy timber would very easily be able to carry that. Mayor Bailey stated it would be nice to be able to do that.

- Mayor Bailey stated he knows this is preliminary, but he has two other questions for Andrew or Zac. 1) He's seeing those little white things and asked if those are rocks. Andrew replied yes. So, when we were looking at the Site Plan, one of the things that we had brought up to staff was he's done a lot of work with the National Guard and they call it anti-force protection. We don't have to worry about someone wanting to do harm on purpose to the building, through the parking lot, but he thinks we have to worry about someone accidentally trying to swerve and miss a child and drive off the curb. There is no curb there, it's just a flat pavement, so we need some of those barriers, even with seating. It's going to be necessary to do something there; otherwise, you have less than 40 feet of the traffic aisles. Mayor Bailey stated yes, we want something to prevent people from being able to hit the building with a car. 2) The roof is a flat roof. Right now, we've got a lightning detection system that's on the current roof. He asked are we thinking about maybe adding that to here or are we going to put it separate. Director Dockter replied he hadn't really thought about it, but we could do either or; those things are pretty easy to move and there are a lot of options for how we want it. Mayor Bailey stated if we're going to do the solar or whatever the plan is, he thinks it's worth having it and keeping it at Kingston. Director Dockter stated he thinks there's multiple options for that, we'll see how it works with the design. One thing is right now it looks like a spaceship with that on it, so, people might be wondering what is that thing; Mayor Bailey stated it would be the only thing you'd see on the top of it. Director Dockter stated you'd have to get a long ways away, in fact, you might be able to see some of the lightning spires as you're driving into the park from the far west side. Other than that, he doesn't think we'd see much of the lightning protection unit. The existing building is much shorter and we're dwarfing it with the new plan. Once we get to the final design, and we're actually putting structural steps to stuff, we might need to get it built a little taller than this.
- Council Member Garza stated she thinks it's a beautiful design. Andrew stated he appreciated that very much. He can't take most of the credit, but Jensen and Maddie in our office did a lot of the initial renderings. They look like they take a lot of time, and they do, but they whipped these out so fast for three different design options. The staff got three design options of all similar design quality to really choose from, and whittled them down based on recommendations that you guys had given them. They were also pragmatic choices.
- Mayor Bailey stated he likes it, now we get to the price point.

Andrew asked if there were any questions, but none were asked.

- Mayor Bailey stated it's a beautiful building, and is obviously one of our important parks in our community.
- Council Member Olsen stated it looks fantastic. And its very functionally logical.

- Council Member Khambata stated he likes the amount of thought that went into orienting the overhang so that parents and people can sit and watch the kids play in the park and it's oriented for catching sunsets to the west. In his opinion, it has a similar appearance to the Glacial Valley building, just with the flat roof and so on. He still thinks this is a very unique building and he really likes the overall design.
- Council Member Olsen stated our Lions Club is going to think they died and went to heaven if they get to work out of this building on the Fourth of July, etc., so that will be good, too.
- Director Dockter stated it turned out we had some good numbers as stakeholders.
- Council Member Thiede stated of all the people, it should be the Lions Club that will like it. Mayor Bailey agreed, and noted the One Family people will like it, too.

Mayor Bailey stated for the size of our park there, he asked Council about the corner sign, as Director Dockter stated they were 50-50. Personally, he thinks its fine, he doesn't see an issue with it.

Council Member Olsen stated he thinks its fine.

Council Member Khambata stated he doesn't love it, but he's not gonna fight it either.

Mayor Bailey stated that's what he's saying, it's not like it's the end of the world. It's funny, to your point, the thing that he usually hears about when he's over at Kingston, other than the outhouses, is where's the bathrooms in the building. So, the way signage that shows where the restrooms are or the family restroom is here would be nice, not that it has to be on that corner thing. He thinks we need to have something different there, it doesn't have to be the rock that we have at the beginning, coming into Kingston.

Director Dockter stated so, no help on the sign. We're still at 50-50.

Council Member Garza stated she likes it, she thinks it makes it look modern. But Cottage Grove is so hometown, so, to her, that seems like St. Paul. It seems so modern, but then she still likes it.

Director Dockter stated we liked the vertical, we could try this a million different ways with their staff.

Mayor Bailey stated he agreed with Director Dockter's comment on the vertical. He thinks if we're going to do something there, we need to have it in proportion to the building. If we have just a sign lower to the ground, he doesn't think the feel will be there. So, if we're looking at something, whether it says Kingston Park with the logo on the top, you guys can kind of figure out what makes sense. Is it backlit, is it lit at all?

Council Member Khambata stated he knows this is only a concept, but whatever type of stone you're using for the force barrier there, what if you did like a mill piece of that, taller and kind of narrow, kind of with a light material, and then we use it as like a wayfinding point of interest and have something like that on top. It would like more like a traditional monument, it would be incorporated into some similar stone, but it would still be an imposing feature to mimic the architecture.

Council Member Olsen stated but you're saying you want something different than the existing stone. Council Member Khambata stated yes, because that, in his mind he sees like a piece of like black onyx or black marble with white lettering on it, and he feels like that kind of enhances it.

Mayor Bailey stated like the Ravine Parkway stone with a message on it might be an okay thing, too.

Administrator Levitt stated what if we thought more about art, a vertical art-type feature. We did something unique at the HERO Center; Mayor Bailey stated that's true. Council Member Khambata stated that'd be cool. Director Dockter stated that'd be a great corner for public art; Council Member Olsen stated it really would, wouldn't it, so why don't you guys think on that and see if you can come back to us with something.

Mayor Bailey asked if there is a wall big enough in this building where we could put the new puzzle artwork. Administrator Levitt stated that would be unique. Mayor Bailey stated it would be kind of cool to have it there on the wall for Strawberry Fest. Council Member Garza agreed. Mayor Bailey stated it looks like people can see in there, so it might be a good spot for our design. Council Member Olsen stated we're clearly on the right track here now and asked Director Dockter if he felt good about it; Director Dockter replied he loved it.

Mayor Bailey asked if the thought process here at some point is that programming is going to happen out of there; Director Dockter replied yes. Mayor Bailey stated he kind of figured that. Council Member Olsen stated with the size of this building, of course you would. Mayor Bailey stated we just haven't had the chance before. Council Member Olsen stated he thinks Molly would tell you right now that it's going to be necessary. Director Dockter stated yes, with the neighborhood demographics there, it's going to be.

Administrator Levitt stated the only caveat is from a funding debt management, you're probably not able to fund this bid until like 2026 because this is a lot more than \$600,000.

Council Member Thiede stated we're using the Financial Management Plan (FMP), and remember that FMP is not just looking at the next 10 years in keeping the average under \$100, but looking at any 10-year span and keeping it under, averaging \$100.

Brenda Malinowski, Finance Director, stated that's correct. It doesn't fit into our bond potential for 2024 and probably not 2025, but we can look at 2026 or 2027; maybe build in 2026 and then bond for it in 2027 when we have capacity.

Mayor Bailey stated remember we're in 2024 now, so, the likelihood of building it this year is it's not going to happen. So, we're either looking at 2025 or 2026, and we have to fit it within other significant projects that we have coming in from a bonding capacity standpoint. As much as he would love to build this tomorrow, the reality is there are some other projects and things that we're going to have to make sure that we manage our Debt Levy.

Administrator Levitt stated and by budget time, we can respond to the design, define the cost estimate, and then we have real numbers to look at.

Mayor Bailey stated he's heard from the Council that we all love the design. It looks good, love the little touches, like the fact that we're going to have solar on the roof, maybe working on the art on the corner idea, whatever that may be. He wants to see

what the art is in our new Glacial Valley Park building, not for this, but it kind of gives him a flavor.

Director Dockter stated the next step will be we'll negotiate the terms for the design and bring that back to Council for review; we'll get that on the schedule. Once we get the design, we can confirm the budget, and go from there.

Mayor Bailey thanked Andrew and Director Dockter for the presentation.

Director Dockter stated the Ice Arena is 50 years old, which is very neat. We just celebrated the 30th Anniversary of River Oaks last year. So, a lot was going on in 1974, when we were building the Ice Arena, there were the Wakota Ice Arena in South St. Paul, Aldrich in Maplewood, and West St. Paul built something, so there were only three other rinks in the metro. This Ice Arena was built for both Cottage Grove and Woodbury, because 50 years ago Woodbury didn't have an Ice Arena, and they didn't have their own football stadium. When he played hockey, Woodbury played at our rink. So, a lot has changed over the years, but he thinks the Cottage Grove Ice Arena holds a place in many peoples' hearts for all the events and uses, because when they talk to people and say Cottage Grove, if they're skaters, they will say you guys have that nice Ice Arena. So, we are selling apparel, sweatshirts, YETIs, etc. There's 50-cent popcorn tomorrow as Mayor Bailey mentioned. We kind of scheduled one event per month, then after the six months, we'll see how those events go, and then we'll figure out what we're going to do the following six months: January is 50-cent popcorn; February is buy one, get one hockey tape; March is 50-cent coffee, fountain soda on special event day; April-You can enter to win one free hour of ice time; May-1974 Disco night, skating disco on the rink; June-50% off public skating all month. So, it's going to be a lot of fun, and we'll schedule more events in July.

D. 2024 Project Bonding Workshop

Staff Recommendation: Receive information on the 2024 Pavement Management Project and 2024 Bonding Capacity, and provide direction on the final scope of work for the 2024 Pavement Management Project.

Amanda Meyer, City Engineer, stated the purpose of this discussion is to talk through those projects that are related to pavement rehab, as well as those projects that are being bonded for in 2024.

In 2024, we have the Mill and Overlay, so we have five miles of a two-inch Mill and Overlay in our Thompson Grove neighborhood. Over the last couple of years, we've been working throughout that neighborhood and will be finishing that up in 2024. Project Cost is estimated at \$1.2 million; that includes a cost share with St. Paul Park, as there's a portion of 85th Street that extends over into St. Paul Park, so, we have already started coordinating with them for that work.

The next project to highlight is the South District Street Utilities, Phase 2, in the southwest corner. We've been working on that project over the last couple of years. The phase for 2024 is to finish out some of the utilities, but it's really the street construction, landscaping, lighting, and pedestrian facilities. It will provide that secondary kind of

emergency access down to the River Acres neighborhood, as well as the Graymont Village neighborhood that's being constructed right now. It includes mostly new construction, but there is some reconstruction of just under ½-mile of the **15** roadways with that realignment of Hadley, 100th, and 103rd. Total Project Cost remaining is estimated \$5.25 million.

We wanted to highlight East Point Douglas & Jamaica, Year 2: We have about ½-mile left of reconstruction of East Point from the temporary signal that's between the Holiday East, Top Ten, and Taco Bell area to just east of Wells Fargo. And then about a ½-mile Mill and Overlay that would then extend down to about the VFW.

She noted we have the Utility and Engineering Building down at 110th and Ideal, which is not pavement rehab, but is part of our bonding in 2024.

Engineer Meyer stated the bulk of our presentation for this evening is our 2024 Pavement Management Projects. The red streets highlighted on the screen before you are those areas that were identified when the feasibility report was authorized in May. That feasibility report helps us to analyze the streets and understand project scope and financial feasibility. During the CIP workshop, we also understood that with all of the streets that were being proposed as part of pavement management, with the inclusion of Jamaica, from 80th Street to 90th Street, we knew that there would not be enough funding to do all of these roads. We talked about pulling out East Point Douglas, both from a financial perspective and also just from the perspective that we're already impacting the commercial area of East Point Douglas and Jamaica. So, we'd maybe not want to impact a second commercial area at the same time. She stated Ryan Burfeind, Public Works Director, would talk more about the feasibility study.

Director Burfeind stated he'd build on what Amanda said; we had a few workshops in August, and we talked about everything that we'd authorized from a pavement management perspective. Jamaica Avenue had kind of been added in because that road has just been deteriorating so quickly in the last few years that the rutting is extensive, it has frankly become a safety issue. The ruts are actually up to two inches deep as you approach some of those intersections. Now, last winter and this winter, we just can't get the road clear because the nice, even blades scrape over it with two inches of snow, and then in the summer, cars are hydroplaning. So, we really want to figure out a way to get Jamaica Avenue into the project. We looked at a couple different ways, which he'll talk about, to do that. What's unique is with that amount of rutting, there's not a huge benefit to just replace the pavement. If you remember at Norris Square on 80th Street, we just replaced the pavement, it didn't have the rutting issues as there's not as much traffic and a different structure. If we just replace the pavement, that rutting is likely to come back. We might as well do just a Mill and Overlay, as essentially, we'd get almost the same benefit for a lot lower cost. To do more, we're really looking at like a structural fix, actually doing a stabilized base, like we did on West Point Douglas Road; that's very expensive, and that would quickly eat up all of our capacity for pavement management for next year. He really has a different vision for that road in the future. It's a super wide road, it's much bigger than it needs to be. Its got shoulders, two little four-foot sidewalks, and no boulevard. There's no place to store

snow, and we're going along a road that's 50 MPH and 45 MPH, and he wants to change that. It doesn't really feel like the right time to do a major reconstruction of that roadway, because that's going to push it out so far. What he would like to do is really do something more minor, like the Mill and Overlay, which we'll talk about, but that's going to fix the issues that need fixing. It will give us a smooth roadway and will fix the rutting. Down the road, his vision for Jamaica is to make it a more pedestrian-friendly roadway.

Director Burfeind stated to really redo the road, there's not an in-between option to just replace the pavement; the Mill and Overlay is going to get you a similar life cycle because it's really the rutting that's going to come back first.

Council Member Olsen asked what's the subbase on that road. Director Burfeind replied it's gravel, but it's a lot thinner section than we'd ever do nowadays. So, we're really talking about doing like we did on 80th Street.

Council Member Olsen stated so, you'd have to do a full reconstruction.

Director Burfeind confirmed that and stated it's a massive cost. So, we might as well do the Mill and Overlay at half the cost and get almost the same benefit.

Council Member Olsen asked how far down on the Mill and Overlay.

Director Burfeind replied so, what we looked at was a two-inch Mill and Overlay, with a little more detailed Mill and Overlay. So, we're talking about actually fixing all of the joints, too, because obviously the joints are pretty separated. So, this is a little more extensive than a residential neighborhood Mill and Overlay project, but it's still something that's going to get us 10-to-15 years more of a good ride quality life. And then we can really program that major project someday where we're probably doing overhaul of the medians. He'd like to see getting more boulevard space in the future, actually eight-foot trails, something you could actually ride your bikes on, etc. So, that's kind of what went into this Jamaica Avenue portion of the project.

Like Engineer Meyer said, when we talked at the CIP, we knew we couldn't do everything. We wanted this feasibility report to really figure out where is the best place to spend the money. East Point Douglas was removed just because, like we said, we can't impact both of our commercial areas in one year; that's just not a good way to do business for our residents. So, with the first option, obviously, you can see it still leaves some very high costs and it's just with a Mill and Overlay of Jamaica. What we've found is in that neighborhood, the ten years that he's been here, every time we do a Pavement Management, we do a feasibility study, we do cores, and road stripping. We've talked about asphalt stripping for probably more than ten years, we pull the cores out, and they fall apart, which means the road is in terrible shape. We did all of our cores in the neighborhood on the left, the Hillside Trail, Thompson Grove Estates, and those cores all held together; there are some of the early signs of stripping, but there is no extensive stripping going on. He was shocked, as it's the same era of pavement of all the other pavement managements that we've done, just this past year, the roads were in terrible shape. That was pretty eye opening, we really do have a good three-to-five years of life left in that road. We really didn't feel like it's the best use of money at this time; you want to maximize your life out of a roadway, so that was very surprising. It's the same mix, same era, same MnDOT specs, and he doesn't have an answer on

why that road is not stripping. It's a good thing, we want roads to have good conditions, it's a good problem to have, but frankly, it was surprising.

So, this was basically the first look, if this is everything. We took East Point Douglas out and it wasn't on there.

Option 2: We took the neighborhood out, the neighborhood proper, but we looked at what if we keep Hillside Trail. Hillside Trail also does not have stripping, but it has a lot of traffic with 3,000 cars a day over the last 20-to-25 years. So, that road sustains more wear and tear. When you drive Hillside, you know this could use a rehab. We looked at what could that be if we do just Hillside with Jamaica and with Prestige Estates. We know Prestige Estates has to be done, that's a full reconstruction, and it's got to happen.

Hillside Trail has all the storm sewers for the whole neighborhood. Nowadays, we have catch basins and storm sewers out in neighborhoods. Back then, they put it all in the main road, and all those neighborhood streets drain to Hillside Trail. And that storm sewer needs work, it doesn't need a full replacement, but the whole thing needs a lot of work. So, what that does is it puts all the burden on those residents on Hillside Trail; it should be spread out over the neighborhood, as they all use that storm sewer. So, if we do Hillside Trail alone, it results in an estimated assessment of \$7,700 just for a spot curb replacement. If you remember this year's project, the estimate was \$5,000, and it came in at like \$4,400 or \$4,200; so, that is a huge burden to put on those residents, and that one really should be equal across the whole neighborhood.

He actually drove this road with Gary Orloff, as he's the guy who maintains these roads. Because its not stripping, its not falling apart, it's just there's a lot more cracking, they have to do the blow patching and things like that. Really, these neighborhood streets are manageable; they're low speeds, so it's an easy, safe place for his crew to be doing work. We don't want to push something off if it's not manageable from a maintenance perspective, but he felt very comfortable when I talked about this three-to-five years and keep it with the neighborhood proper. The Special Benefit Appraisals, frankly, wouldn't force a \$7,700 assessment for spot curb. We know that last year's Special Benefit Appraisal he thought was \$5,800, so you'd actually see the City have to pick up all that additional cost, above and beyond. So, it's kind of a unique situation, but Gary is very comfortable with the idea of potentially maintaining Hillside for that three-to-five year period, kind of re-shifting how we do those roads over the next year.

Option 3: We looked at Jamaica and the neighborhood, so it's still a very good project. Jamaica and East Point worked. The fact that we're looking at Jamaica is a huge excitement for me, Gary, and his crew. That was the best thing they could hear because Jamaica is a dangerous place to do maintenance and an expensive place to do maintenance because we have to use blocker trucks for anybody turning, and we're closing lanes, and it's a challenging thing. We know Prestige Estates needs the work done, too; that's one that's kind of been pushed off because it is a full curb replacement. So, there was a for that, it's a full curb replacement, let's get the whole length out of that. But we're at the point where that project needs to be done, so that lands us with this amount of bonding, just under \$3 million and a \$3.3 Total Project Cost. It's still a decent-sized project and especially if you look at all the investment happening next year

in our roadways, with all the other projects Amanda spoke about, it's still a major investment in our system. This really is the best use of our funds for next year.

Council Member Olsen asked Director Malinowski what's our debt capacity this year for this project.

Director Malinowski replied last year, at this time, we were working on our FMP. When we went out for bonding for our 2023 projects, we did our ratings call with S & P, this is what we showed them on top is that this is what we were going to bond in the next five years. So, they not only got our FMP, they got our bond issuance costs, and so, they are expecting us to come in at \$18 million, so, that is what our bonding capacity is for 2024. So, that is the number that we've looked at a couple different times; we know we got the bond rating upgrade last year to AAA, so, we're very new at our AAA rating. So, if we want to think about what we told S & P, in that bonding, we're about at \$18 million.

Council Member Olsen stated okay, so with the three project options that were shown, Option 3 appears to be what Ryan is trying to sell us. So, what does that do, relative to our debt capacity or our bonding capacity, and how does it fit within that.

Director Malinowski replied it does fit within that. At the bottom of this slide here, what we have on the second line there is the Pavement Management for \$3 million, the pavement management at Jamaica and East Point Douglas \$3 million, and then Equipment Certificates we need to issue for some of our equipment, and then that leaves us \$12 million for a Utility Building. So, we're increasing our Utility Building bonding is what we're suggesting; it's still staying right within that \$18 million. The reason that we're suggesting that maybe we want to think about bonding more for the Utility Building is as we've gone through the last 12 months, there's been some things that have come up.

Council Member Olsen stated and it will take less pressure off the utility fees, too.

Director Burfeind stated some of the other things, like Brenda mentioned, is the State assistance. That \$1 million State assistance overhaul, which we found to be frankly necessary, that really wasn't in the works when we were talking about the Utility Building, and maybe we could use more cash. So, that was an extra \$1 million the Council authorized, which the Utility Division is very excited for that project that's in the works. The other one is our water tower. We do know we need that new water tower in the Low Zone; we kind of had to take a pause because water tower pricing went through the roof last year, with the steel. We've kind of reorganized that, we've re-reviewed all of the modeling, and we did our Comp Plan, and we think we can maybe do a little different tower to save some money. But, we might potentially have to use some of that cash to help cover that water tower because we do need it.

Council Member Olsen stated so you want to bond to offset that; Director Burfeind replied, yes, that could help us.

Council Member Olsen stated and we're still going to come in at or below what we projected; Director Malinowski stated for what we disclosed to S & P, yes.

Council Member Thiede stated we're coming in at \$430,000 above it; Director Malinowski stated for right now, with these numbers, yes.

Council Member Olsen stated these are estimates.

Director Burfeind stated this is really probably the most conservative scenario because we took this off the Utility bidding, we took bids, and those bids were a little bit under. We still have all the project contingencies in the Construction Manager's contract; not that every project is the same, but he thinks for Glacial Valley, he doesn't know if those were hardly touched at all from a contingency perspective. Also, we are pursuing funding from the State for our building. So, he has a \$1.2 million request into them. Based on, Woodbury kind of went through this, he thinks the bare minimum they'll authorize is \$600,000. If they try to authorize less than \$600,000, then we'll have to fight them, basically, because he thinks we deserve that. There is money that should buy that down.

Council Member Olsen stated they're going to do another bonding bill this year, too, so, you guys are working through that; Director Burfeind agreed.

Mayor Bailey stated but you have to decide what you're going to ask for. Council Member Olsen stated that's his point, you have to decide what you're going to ask for.

Director Burfeind stated that this \$1.2 million is actually from the 3M Settlement. So, this is actually because we have to do the Water Treatment Plants and house them.

Council Member Olsen stated he's very glad Director Burfeind is confident. Director Burfeind stated it does show slightly above, but this is really the most conservative, worst case scenario. We should know about that 3M Settlement request in the next few weeks.

Council Member Olsen stated okay, so if you drive around town, there's lots of opportunity out there relative to road maintenance, there just is. We're seeing a lot of opportunity on Hardwood because of the additional traffic, the truck traffic, for the development. East Point Douglas we all know is in need of some help. To be frank, there's probably still some neighborhood projects out there that need to take place. So, let's take a five-year view or a ten-year view, understanding that you want us to do this, with the bonding this year, how does that play into our strategy next year, the year after, the year after. He knows we're waiting on some MSA funding, for example, to get some of these other bigger projects done because we borrow against that. But are we still going to be able to keep up with the other stuff that needs to get done, because it's not going to go away.

Director Burfeind stated that's correct. Anytime we talk about not doing something, it doesn't just disappear. There are two things we have to do: 1) When he talked about his new Mill and Overlay plan, and he talked about doing a combination of Mill and Overlays and rehab, we're looking for about eight miles of work per year. We actually are hitting that, even with this new plan. So, we're actually right on, that's our goal, the eight miles per year keeps us on that four-year cycle, between the Mill and Overlays and the reconstruction. So, we actually are hitting that, even with this, just because of all the other projects. It's not just the pavement management next year, there are so many projects fixing roads. 2) Also, just as an engineering group, he thinks we need to basically look at our next ten years of pavement management. We had this good news of roads that doesn't have stripping, so maybe we'll take more cores in the

neighborhoods just to feel comfortable with the future years. He thinks coming up with basically a revitalized ten-year Pavement Management Plan would be very beneficial.

Council Member Olsen stated it's a blessing that we don't have to deal with Hillside now, that's probably an unexpected thing based on previous core samples. There are still going to be issues with those neighborhoods; he thinks we're going to have to be very prescriptive with regard to what we're going to do next year, the year after, and the year after if we're going to stick with our budget planning. Those roadways are going to continue to be heavily traveled. So far, we haven't had a lot of freeze, thaw, this year, but that always happens, too. It just makes him nervous, he doesn't want us to fall behind. Director Burfeind agreed.

Mayor Bailey asked Director Burfeind about the water tower, when are we planning on doing the water tower. Director Burfeind replied 2025, next year.

Mayor Bailey stated he was told that Woodbury is asking the State for money for a water tower.

Director Burfeind stated in Woodbury's vision, in their mind, with a new Water Treatment Plan, putting all their treatment and then just treating their city in one spot. Right now, they have 20 wells that individually go into their system. They're modeling everything; he's actually had some conversations with their director about it, they feel like they have to have new water towers at that treatment plant because of the treatment plant. The State will not pay for that; he thinks they've tried to have the 3M Settlement to pay for it, and it won't, they said no. Director Burfeind thinks that is fair. He said we're a little different, where most of our wells already went to one spot, where we're building that Intermediate Zone plant; it already went to one spot, it went to the City. So, we aren't really changing our operations, how we distribute water, but Woodbury feels like they are, and that's what they're kind of modeling everything, so.

Mayor Bailey asked if we knew where theirs is going, are they going to try to get bonding money for that. Administrator Levitt replied she didn't think they were seeking bonding dollars. Mayor Bailey stated okay, he heard they were, that's why he was asking. Council Member Olsen stated they're just going to have to figure it out.

Administrator Levitt stated it's difficult because Woodbury is dead set on one Water Treatment Plant for their entire city. We don't believe in that mindset; we believe, and she thinks the State is recognizing, that there's a lot of additional costs in what they're choosing to do. So, Woodbury will have to absorb more cost for piping and other things.

Council Member Olsen stated or they could change their plan; Administrator Levitt stated they're refusing to.

Director Burfeind stated the State actually approved the Settlement Plan for two plants in Woodbury, but Woodbury only wants one. So, they have to pay the difference, the upcharge to do one.

Mayor Bailey stated he was just curious. He knows we'll be talking on Saturday about grant opportunities, etc. out there to see if there are some options that will help pay for things that we know we're going to need at some point.

Council Member Olsen stated in terms of maintaining the debt integrity of the FMP, Option 3 is the best way for us to do that. Director Burfeind stated yes. Council Member Olsen asked Director Malinowski if that was accurate.

Director Malinowski stated it is accurate, but that's not the reason, but it does work into the plan the best.

Council Member Olsen said the reason he's asking is again, we're lucky, we have some areas we were planning on that we don't have to deal with, but we will have to deal with those. So, we're going to have to keep our nose to the grindstone in terms of seeking third-party funding, like Ryan said, reevaluating and doing some additional testing. It's just something we're going to have to be really cautious about. If we can maintain the integrity of the FMP, that's an added benefit and a win.

Council Member Garza asked a question on Option 2; she knows it sounds like it's not an immediate concern that we need to work on it, but once we get there, is there any opportunity for sidewalks. Because between the school and the park, she lives near that area, and the kids are on bikes up and down, and Hillside is a fast-traveled road. People fly down that road, so it's just concerning.

Director Burfeind replied that's something we can always review with a feasibility report. So, we put some sidewalks in the median here, along the side here on 90th Street. It's always interesting how contentious they can be, even though the people are walking there today in the road, you put them on a sidewalk, but he thinks it's always something that we can look at.

Council Member Olsen said sidewalks and lighting.

Council Member Garza stated in between the schools and the parks, like she said, she's lived over there now for years, and it's a fast-moving road, and it would be a good opportunity to have some sidewalks.

Mayor Bailey stated it's a good point. Since we're putting it off for a while, it might be something we can take a look at. He just remembers when we did this over on Hadley, we wanted to put sidewalks along Hadley, by Pine Hill, the homeowners over there just beat us to heck.

Council Member Garza stated she'll go talk to the neighbors. Council Member Thiede stated talk to the neighbors and get them all excited about it. Council Member Garza stated she'll tell them that your kids won't get hit by a car.

Administrator Levitt stated we looked at that sidewalk, she thinks about 17 years ago, and at that time, the neighborhood didn't want it.

Director Burfeind stated with something like that, to engage them, we have to have really focused neighborhood meetings on that, on sidewalks, to get the neighborhood involved.

Administrator Levitt stated that does provide the opportunity for that, we'll get the design of it, and if you do it with the neighborhood as a whole, you start to find out if it's going to go.

Council Member Garza stated and you did so much work on that park over there and there's so many things that people can use, that park and the ballfield in the back, and there's an ice skating rink there. So, it's a pretty busy park, between Hillside and that, there's also an elementary school.

Council Member Khambata asked so with the eventual reconstruction of Hillside, would you take that opportunity to branch out off of Hillside with the storm sewer system. Really, right now, is the water literally just running the length of the street through the gutter and then congregating at Hillside. Would you move that back and have some catch basins further down on the side streets?

Director Burfeind replied so it all runs the whole length right now. Actually, in three-to-five years, it's still just a spot curb replacement job. The curb is actually in amazing shape out there, so much so that three-to-five years won't change it. So, it's really just replacing that pavement. Usually, when you add storm sewer, that really happens when you replace the entire curb because you end up having to dig up all of that curb line for boundaries. One thing he will say that's amazing here is if you look at Indian, any big rainstorms up by Ideal Park, that road turns into a pond for a short period of time. We actually don't get that on Hillside; surprisingly, the amount of catch basins they have on Hillside really can capture that water. We haven't had any ponding issues, but certainly some day, with the full reconstruction, that's something we always look at.

Council Member Khambata stated he thinks it's hard to argue with Jamaica; that's the one that's bad.

Council Member Olsen stated and you say the Mill and Overlay is going to give us at least ten years. Director Burfeind replied yes, we actually went and looked because we actually did a Mill and Overlay on a part of 95th Street, that was heavier rutting in 2013, coming out of the marshalling yards. Actually, down there, there's about 1/3 of an inch of rutting; it's just starting to kind of come back after ten years. And that gets significantly more heavy truck traffic than Jamaica does, so, that was a good kind of example of what to expect.

Council Member Olsen stated if you mill down a little more, you can give yourself a little more stability. Director Burfeind agreed.

Council Member Khambata stated he's in favor of Option 3. Council Member Olsen stated yes, me, too. Council Member Thiede stated yes.

14. WORKSHOPS - CLOSED TO PUBLIC - None.

15. ADJOURNMENT

Motion by Council Member Olsen, second by Council Member Thiede, to adjourn the meeting at 9:44 p.m. Motion carried: 5-0.

Minutes prepared by Judy Graf and reviewed by Tamara Anderson, City Clerk.



City Council Action Request

7.C.

Meeting Date	2/7/2024		
Department	Administration		
Agenda Category	Action Item		
Title	January 17, 2024, Special Meeting Minutes (Legislative Review)		
Staff Recommendation	Approve the January 17, 2024, Special Meeting Minutes (Legislative Review).		
Budget Implication	N/A		
Attachments	<table border="1"><tr><td>1.</td><td>2024-01-17 City Council Special Meeting (Legislative Agenda)</td></tr></table>	1.	2024-01-17 City Council Special Meeting (Legislative Agenda)
1.	2024-01-17 City Council Special Meeting (Legislative Agenda)		

MINUTES

COTTAGE GROVE CITY COUNCIL

COUNCIL CHAMBERS
12800 RAVINE PARKWAY SOUTH

January 17, 2024

SPECIAL MEETING – 4:45 P.M.

Training Room

3.A. 2024 Legislative Agenda

Staff met with Legislators to provide an outline of priorities which included:

Economic and Community Development - Cottage Grove continues to experience residential, commercial, and industrial growth, creating a need for legislative action regarding:

- Job growth - Cottage Grove supports economic tools that facilitate job growth without relying solely on the property tax base. The city supports the study of allowing mixed-use buildings that have commercial and residential uses to be included in a special service district (SSD).
- Childcare programs - Expand investments in affordable Childcare Programs.
- Workforce development - Expand investments in workforce development
- Business expansion - Support new and expanding businesses, infrastructure development and public-private partnerships.
- Redevelopment - Begin implementation of redevelopment plans to reinvigorate a tax base that is not fulfilling its potential.
- Housing - Diversify the city's housing stock to ensure it is serving all demographic and socio-economic communities and recognizing certain barriers to housing disparity that impact certain members of our community. Cottage Grove supports programs that reduce barriers to fair housing and equal opportunity.

Transportation - Due to rapid yet measured growth, Cottage Grove is focusing on the following areas:

- Red Rock Corridor - Give businesses the ability to attract talent from the surrounding community through transportation into Cottage Grove.
- Street improvement districts - Address the limited funding mechanisms for maintaining aging streets.

- Lights on Highway 61 - Acquire \$4 million for funding corridor lighting along Highway 61 from the interchange at Washington County State Aid Highway 22 to the intersection with Trunk Highway 95.
- Municipal state aid funding - Cottage Grove, like many growing communities, struggles to fund major roadway projects, creating costly delays and decreased motorist safety.

Parks and Recreation - Cottage Grove has the vision of giving its residents the best recreational opportunities in the state by focusing on:

- Future state/county recreational trail connection - Secure funding for a trail connecting Cottage Grove Ravine Regional Park to Point Douglas Regional Trail/Park.
- Park dedication - Address the need for cities to require park dedication fees and/or land without the requirement that land be subdivided.

Administration - Cottage Grove is committed to excellence in the delivery of public services to community residents, businesses, and property owners. The city operates with transparency and cost-efficient communication while ensuring businesses operate safely and to the highest standards:

- Newspaper notification requirement - Replace the requirement of a local newspaper notification with electronic notices on the city website and other social media platforms.
- Licensure of massage therapists - Seek to establish a state requirement for licensure of massage therapists.

Revenue and Taxation - Cottage Grove is committed to maximizing citizen engagement in the budgeting process, as well as maintaining transparency and responsible stewardship of our citizens' tax dollars by focusing on:

- Office of the State Auditor (OSA) time limits - A reasonable time frame for tax increment financing (TIF) non-compliance violations should be established.
- Restrictions on local government budgets - Maintain city autonomy in deciding the appropriate level of local taxation and services.
- Sales tax on local government purchases - Secure sales tax exemption for purchases of goods and services made by cities.

Water Quality and Sustainability - Cottage Grove remains committed to delivering water that meets state guidelines and producing a long-term plan to enhance resource sustainability while meeting community needs by focusing on:

- Groundwater and well monitoring - To support water quality and well monitoring efforts in accordance with the Environmental Protection Agency Safe Drinking Water Act.
- Impaired water - Support continued metropolitan development while protecting all water resources.
- Water conservation - Contribute to a statewide effort to promote water conservation while providing municipal autonomy relative to individual communities.
- Stormwater and wastewater - Ensure attempts to address water supply sustainability take all water users (and variables) into account, including municipalities, industry, private wells, agriculture, and contamination containment.

Public Safety Cottage Grove Public Safety remains committed to protecting the city and its citizens by focusing on:

- Mental Health Response Act - Fund a multi-jurisdictional co-responder program.
- School resource officers - Implement modifications to law related to school resource officers (SRO).
- Ambulance service costs and liability - Require Medicare to set ambulance payment rates to cover the cost of providing services.
- Officer wellness - Understand and deal with the effects of common stressors facing our law enforcement professionals.
- K-12 threat assessments - Support mandated K-12 threat assessments teams.
- Recruitment and retention need - Support funding for state-wide recruitment and retention efforts.
- Law enforcement training funding - Continue to fund training mandated by the MN Police Officer Standards and Training Board (MN POST Board).
- Fleeing vehicles - Increased penalties for fleeing in a motor vehicle and modification of tracking devices used on fleeing vehicles.
- Permit to purchase fees - Allow agencies to charge a reasonable fee for processing a permit to purchase.
- Paid health insurance for law enforcement retirees - Support paid health insurance for law enforcement retirees.
- Body worn camera redaction - Support reducing body worn camera redaction requirements in areas visible to the public.
- Emergency medical services (EMS) local control - Support local unit of government control of emergency medical service (EMS).

- Oppose threats to building code, sprinklers, and local control - Prevent loss of life from fire and assure Cottage Grove residents are safe in their home.

Legislators and staff discussed 2024 priorities and what to expect with the Legislative session. With all items reviewed and no further discussion or action required, the meeting adjourned at 6:27 PM.

Minutes prepared by Tamara Anderson, City Clerk.



City Council Action Request

7.D.

Meeting Date	2/7/2024		
Department	Administration		
Agenda Category	Action Item		
Title	January 17, 2024, Regular Meeting Minutes		
Staff Recommendation	Approve the January 17, 2024, Regular Meeting Minutes.		
Budget Implication	N/A		
Attachments	<table border="1"><tr><td>1.</td><td>2024-01-17 City Council Regular Meeting</td></tr></table>	1.	2024-01-17 City Council Regular Meeting
1.	2024-01-17 City Council Regular Meeting		

MINUTES

COTTAGE GROVE CITY COUNCIL

January 17, 2024

COUNCIL CHAMBER
12800 RAVINE PARKWAY SOUTH

REGULAR MEETING - 7:00 P.M **COUNCIL CHAMBER**

1. CALL TO ORDER

The City Council of the City of Cottage Grove, Washington County, Minnesota, held a regular meeting on January 17, 2024, at Cottage Grove City Hall, 12800 Ravine Parkway. Mayor Bailey called the meeting to order at 7:00 p.m.

2. PLEDGE OF ALLEGIANCE

The audience, staff, and City Council Members stood and recited the Pledge of Allegiance.

3. ROLL CALL

City Clerk Tammy Anderson called the roll: Mayor Bailey-Here; Council Member Garza-Not present; Council Member Khambata-Here; Council Member Olsen-Here; Council Member Thiede-Here.

Also present: Jennifer Levitt, City Administrator; Kori Land, City Attorney-LeVander, Gillen & Miller, PA; Tammy Anderson, City Clerk; Ryan Burfeind, Public Works Director; Gretchen Larson, Economic Development Director; Zac Dockter, Parks and Rec Director; Pete Koerner, Public Safety Director; Brenda Malinowski, Finance Director; Mike Mroska, Senior Planner; Emily Schmitz, Community Development Director; Jaime Mann, Interim Communications Manager & Assistant City Administrator.

4. OPEN FORUM

Mayor Bailey opened the Open Forum.

Bonnie Matter, 6649 Inskip Avenue South, spoke about Consent Agenda Item J, the South District Street & Utility Improvements. She stated there were three documents attached, and she requested that the Feasibility Study that was done for that project also be included with those documents so that the complete story is there. The Feasibility Report was for south streets, 105th Street that connects Hadley to Ideal, and there's also a loop that goes to 103rd Street. The Feasibility Report was done in March

2022, and it was presented at the March 16, 2022 meeting; it's very detailed, and in addition, it lists the cost, around \$14.8 million, and it breaks down who's going to pay for what and exactly what's going to happen. The reason she would like that report out there, attached to those other documents and kept with it as part of the project plan, is that there's a lot of development and a lot of street planning and road planning that's going on out there. It would be very nice to be able to access these things and review them as a complete packet.

As no one else wished to address the Council, Mayor Bailey closed the Open Forum.

5. ADOPTION OF AGENDA

Council Member Olsen made a motion to approve the agenda; second by Council Member Thiede. Motion carried: 4-0.

6. PRESENTATIONS

A. Retirement Presentation - Kevin Zittel

Staff Recommendation: Receive Kevin Zittel's retirement presentation honoring 30 years of service.

Mayor Bailey stated this is a retirement from the Public Safety Department of Firefighter Kevin Zittel. Mayor Bailey invited Kevin and the Council Members to join him in front of the dais.

Public Safety Director Pete Koerner thanked the Council for giving us this opportunity to recognize Kevin. Over the last couple of years, the Fire Department roundtable came up with a really good comprehensive plan on how we recognize employees, starting at five years and ten years, but we didn't include people at 30 years. Kevin has already had a retirement party, which was well attended. In April, we'll be doing Fire awards where again we'll recognize many of the employees. Mayor Bailey and the Council actually came to him and said we have to do something for a 30-year employee, it just doesn't happen. Kevin is the fourth to hit that number as a parttime employee, which is an incredible number, as he's also worked with Public Works.

Director Koerner stated he's known Kevin since middle school, we played sports together, and Kevin started his employment in October 1993. Back then, we didn't have all of the safety things we do now, but Kevin's been a part of a lot of the changes with the response model and equipment. When he was the Safety Officer, he wore the blue helmet for a while, and Kevin was always passionate about safety, not only on the Fire Department, but he was also on the City's Safety Committee. He was kind of ahead of the game with community risk prevention, different injury prevention things, as he was doing that 25-30 years ago.

Director Koerner listed Kevin's accomplishments: Safety, Water Rescue Dive Team, and Safety Camp for many years. He started the Youth Fire Prevention Program with the Youth Service Bureau, was involved in car seat safety. He does a lot with EMT

services, he was always a fixture at the fieldhouse, doing various EMT events. He had leadership roles as both lieutenant and captain. You probably don't recognize Kevin without his hat on, but when he really looked at some of the highlights, Kevin taught CPR and thousands of people have come through that program. He did that as a part time employee, scheduled training for countless businesses; he did CPR training for my daughter and son, and they loved it.

Director Koerner stated Kevin has had an incredible career, 30 years is remarkable, and he deserves to be standing here tonight with the Mayor and Council so they can thank him.

Mayor Bailey thanked Kevin for his many, many years of service, it's impressive to say the least. He noted his family is here tonight, as well as many of his firefighter partners who have worked with him over the years. There are a significant number of hours that firefighters put in for training and issues that happen, no matter what hour of the day. The firefighters' family events often get interrupted, but our City could not function without individuals like Kevin and all the firefighters. As much as he's sad to see Kevin go, he's actually excited for his future and for him to have more quality time to spend with his family. He thanked Kevin again.

Mayor Bailey read aloud the plaque from the City, which was then presented to Kevin. On behalf of the Council and all the citizens of Cottage Grove, he thanked Kevin for his many years of service and commitment to the community. Everyone applauded.

Kevin stated he didn't really prepare a speech, but he just wanted to thank the City Administrator, Council, and all the leadership team. He and Director Koerner have been through a lot together. It just so happens he had a couple days with Chief Pritchard, who was his sixth Fire Chief in 30 years; he told Chief Pritchard that was why he retired, because he couldn't break in a new chief. He thanked his brothers and sisters here in the back, the new firefighters, and those who have been with him for a long time, they're his family; he thanked them for keeping him safe, he appreciates it. Kevin thanked his wife and his girls, whom he loves, and also thanked his parents, who raised him to be what he is. Everyone applauded.

Chief Pritchard asked Lieutenant Zittel to give his final call to Washington County Dispatch, which he did. Washington County Dispatch recognized and thanked him for his 30 years of dedicated service. Dispatch noted Lieutenant Zittel was 10-7 at 1912. Lieutenant Zittel thanked Dispatch for all the years of service, and to all of his brothers and sisters in Washington County, he thanked them for all of their help and recognition, said 10-7, after which everyone applauded.

Mayor Bailey asked all of the firefighters, police, and family members present to step forward for photographs, which they did.

B. Capture Cottage Grove Photo Contest Winners

Staff Recommendation: Receive presentation on the Capture Cottage Grove Winners.

Mayor Bailey stated Jaime Mann, Interim Communications Manager and Assistant to the City Administrator, will handle this presentation, after which he will again invite Council to join him in front of the dais for recognition of an individual this evening.

Jaime stated we all know Cottage Grove is a beautiful place to live, and it's full of talented, creative people. For at least a decade, probably more, the City has run a Capture Cottage Grove photo contest where we ask residents to capture images within the city limits of Cottage Grove and submit them for judging. The categories each year change, so this year we had four categories for which people submitted photos: Life in Cottage Grove, Business in Cottage Grove, Cottage Grove Parks & Landmarks, and Cottage Grove Celebrations or Events.

We ran the contest for about three weeks; people were able to submit photos with their name and a caption for each photo. After the submission time closed, our City staff voted on all of the photos in each of the four categories.

Jaime displayed some of the non-winning submissions to the contest, and said we had 78 photos submitted among the four categories. It was a blind vote for City staff, as no names were on the survey given to staff, it was just the photo along with the caption that the photographer chose.

Jaime first displayed the two winning photos, for winners who were not present:
Cottage Grove Celebrations or Events: Gwen Martin, for her photo, *"Cooling Off with Sparky."*
Life in Cottage Grove: Michelle Wind, for her photo, *"On Cloud 9."*

Jaime noted one photographer, Isaac Pavek, won in two categories:
Cottage Grove Parks & Landmarks: For his photo, *"Fall Bliss."*
Business in Cottage Grove: For his photo, *"Tank's Family Farm."*

Jaime stated Isaac is here tonight, so she invited him to step forward to join Mayor Bailey and the Council for the award presentation.

Mayor Bailey congratulated Isaac, stated he sees him around town all the time, at all the events, taking pictures, so the fact that he won two of these categories makes perfect sense with the number of pictures that he sees him taking. Mayor Bailey stated these pictures will also tell a story of our community; so, in publications that we're going to be doing over the next year, we'll be using your pictures to show some of the exciting things here and the love of our community here in Cottage Grove.

Mayor Bailey asked Isaac for the first category, Cottage Grove Parks & Landmarks, where this shot was taken, although he thought he knew; Isaac replied that was taken at Ravine Parkway. Mayor Bailey stated the second category, Business in Cottage Grove, was everybody's favorite place to get corn, Tank's Family Farm.

Mayor Bailey congratulated Isaac on behalf of all of our staff and everybody in the City of Cottage Grove on winning in these two categories of the Capture Cottage Grove photo contest. Mayor Bailey gave Isaac his two awards, which contained his photos, as well as a check for winning two categories, which will help him buy film. Everyone applauded and photographs were taken of Isaac with the City Council.

7. CONSENT AGENDA

- A. Approve the December 12, 2023, Economic Development Meeting Minutes.
- B. Approve Resolution 2024-010 and the appointment of the election judges listed in Exhibit A for the Presidential Nomination Primary on March 5, 2024, and authorize the City Clerk to appoint additional election judges, as needed, to fill vacancies.
- C. Authorize issuance of a Massage Therapist license to Mary Denis Seifert for use at Whole Health Massage of Cottage Grove, 8800 East Point Douglas Road South.
- D. Adopt the 2024 Legislative Agenda.
- E. Approve the issuance of rental licenses to the properties listed in the attached table.
- F. Adopt Resolution 2024-004 approving the Conditional Use Permit allowing for the outdoor storage of materials incidental to the principal use at 7501 100th Street South.
- G. Approve the Enhanced Sweeping Program Agreement with SWWD and accept the CCIP grant in the amount of \$153,000 to cover 50% of the costs to replace the existing Elgin sweeper.
- H. Approve Change Order #1 and Adopt Resolution 2024-011 approving the final payment of \$93,367.59 for the Summers Landing 5th Addition project.
- I. Adopt Resolution 2024-008 approving the Feasibility Report, establishing a February 7, 2024, Public Hearing date, and authorizing the preparation of Plans and Specifications for the 2024 Pavement Management Program.
- J. Adopt Resolution 2024-009 approving the Plans and Specifications and establishing a February 8, 2024 Bid Date for the South District Street & Utility Improvements - Phase 2.
- K. Adopt Resolution 2024-12 calling for the sale of the \$18,205,000 General Obligation Bonds, Series 2024A.
- L. Approve the financing of a trackless vehicle through Equipment Certificates.

None of the Council Members wished to pull any Items on the Consent Agenda for further comment and/or discussion.

Motion by Council Member Thiede to approve the Consent Agenda; second by Council Member Khambata. Motion carried: 4-0.

8. APPROVE DISBURSEMENTS

- A. Approve payments for the period of 12-28-2023 through 1-10-2024 in the amount of \$1,893,148.43.

Motion by Council Member Olsen to approve disbursements; second by Council Member Khambata. Motion carried: 4-0.

9. PUBLIC HEARINGS

- A. Roers Companies Cottage Grove Multi-Family Development
Staff Recommendation: 1) Adopt Resolution 2024-005 approving the Purchase Agreement for Outlots A, C, and D to Roers Acquisitions, LLC. 2) Adopt Resolution 2024-006 approving the Preliminary Plat and Final Plat for Camel's Hump Addition. 3) Adopt Resolution 2024-007 approving the Planned Unit Development and Site Plan Review for a 144-unit, six-story, mixed-income, multi-family apartment building located at 6850 East Point Douglas Road South. 4) Hold the Public Hearing for modification to Development Program for Development District No. 1 to include the establishment of Tax Increment Financing District No. 1-21 (Roers). 5) Adopt Resolution 2024-013 approving a modification to the Development Program for Development District No. 1 and adopting a Tax Increment Financing Plan for Tax Increment Financing District No. 1-21 (Roers). 6) Authorize the contract for private development by and between the Cottage Grove Economic Development Authority and Roers Cottage Grove Apartments, LLC.

Mayor Bailey stated Mike Mrosia, Senior Planner, will speak on this Public Hearing topic.

Planner Mrosia stated Roers Companies has submitted an application for Site Plan Review, Planned Unit Development (PUD), Preliminary and Final Plats. This site is located at 6850 East Point Douglas Road.

Site: The site consists of three Outlots, two lots of record. Shown in blue on the screen are Outlots C and D, the two existing stormwater ponds on site that were constructed for development of this parcel. There is also a pipeline easement that is owned by Flint Hills Resources; there are two crude oil pipelines that pass through there. The Applicant is actively working with them as there are a lot of standards on that pipeline and what can get constructed there. We have two lots of record, Lots 4 and 3, and then Outlot A, which was an Outlot deeded to the City as nondevelopable in 2007 when the Frattalone Southpoint Ridge development was approved. So, Outlot A did not receive any kind of park dedication, as it was deeded to the City as a nondevelopable Outlot. There is also a trail easement along the east side of the property, and that provides access up to Camel's Hump Park. As part of the application in front of us tonight, the Applicant is proposing to acquire Outlots A, C, and D. The subject site is guided in the Land Use Plan as Mixed Use and is also zoned Mixed Use. However, this wasn't always the case; the property was previously zoned B-1 with a PDO. Last year, as part of our Citywide Rezoning, we rezoned the property to Mixed Use, to be in conformance with the 2040 Comprehensive Plan.

Proposed Preliminary Plat: Is one lot of record, with multiple easements. There is a large drainage utility easement on the left side of the property, then there's the pipeline

easement, and then there's a gray area shown on the screen that is the development area. There is a trail easement, and then as part of the sale to the Applicant of Outlot A, we are requesting a Deed Restriction be placed on that area, in the northeast corner, to preserve the trees and the trail corridor in that area. So, long term, the trees in that area will stay there as part of this application, and then we'll be able to go in there and maintain the natural trail corridor that leads up to Camel's Hump Park.

Proposal: 144-unit, mixed-income, apartment building. The proposed density is 37 units per acre with a maximum of 40 units, which is the maximum permitted in a Mixed Use District. The Applicant will provide 29 units at 50% Area Median Income (AMI); just for comparison, 50% AMI in Washington County is an annual income of \$43,500 for a single person, or for a family of four, \$62,100. The Applicant is also setting aside 8 units at 60% AMI, which is \$52,200 for an individual or \$74,940 for a family of four. All of the rents are set by HUD: The minimum rental price for 50% AMI is \$1,087; for 60% AMI, the rent is \$1,398. The 107 remaining units will be set at market rate or below; the Applicant has indicated that they're proposing to have rents slightly below what the existing multifamily complexes in the community are, so, that will allow for incomes of 70% to 100% AMI to potentially live in the proposed project.

Amenities: Some amenities that will be included in the project interior are a game room, community room, and a fitness room. The proposed building is shaped like a U, and that was done on purpose, to keep the amenities away from the existing uses on East Point Douglas Road. So, the active area will be included in the courtyard area, which will also have a number of amenities, including a firepit, a patio and dining area, recreational lawn, a playground/tot lot, dog wash, and dog run.

PUD Flexibility: Due to site constraints previously discussed, PUD flexibility has been requested. However, in exchange for the PUD, we'd like to see some of the City's Comprehensive Plan goals met, and this application in front of us tonight is meeting a lot of those goals for affordable housing. It will provide additional housing options on this side of the community. So, the Applicant is requesting flexibility for building height, architectural materials, parking ratio, and landscape flexibility. Otherwise, the proposal is consistent with the Zoning Code except for building height.

Proposed Parking: City Code requires 230 stalls, or 1.6 stalls per unit. The Applicant is proposing 216 stalls, or 1.5 stalls per unit. There are 82 surface parking stalls, and 134 garage parking stalls. The garage is in two levels. The first level is below grade and is accessed off of the drive off of East Point Douglas Road; the second one is accessed internally, through the parking lot, and that will be like the main level of the building, as you can see on the images on the left-hand side.

There's an internal pedestrian system that connects to the existing sidewalk on East Point Douglas Road. As part of the project, the Applicant is proposing to put in a six-foot-wide sidewalk along the eastern side of the property that will connect to the proposed relocation of the existing natural trail on the northeastern section of the property, as shown in green on the map. You can also see on the image on the screen where all of those trees are being preserved as part of that Deed Restriction.

Proposed Architecture: Multifamily buildings are required to have 65% Class 1 materials, which include glass, stone, and brick. The Applicant is proposing to use 47% and includes glass and stone. That 47% is pretty common; we've seen it on the

developments on Hardwood Avenue, Aurilla, for example, The View apartments, and the recently-approved Trellis, as all of those are at about 47% Class 1 materials. Last year, Council had a meeting with the Applicant to talk about the proposal, and at that meeting, Council wished to make this building as a gateway feature into the community, as it's highly visible from Highway 61 as you come into Cottage Grove. The Applicant heard that concern and modified the building to include a lot more stone columns to kind of make it pop as you drive into the community to create that gateway feature and kind of set the architectural tone for the community. Again, the proposal is 47% Class 1 materials; there are also Class 2 and 3 materials, 14% of the building is specialty block and 39% is fiber cement.

Again, the Applicant is asking for some flexibility in the building height; this building will be built into the hillside, similar to The Legends of Cottage Grove. The overall height on the Highway 61 side of the building is 67 feet; however, if you go to the side not adjacent to Highway 61, that side is up to 55 feet. So, that 67 feet is comparable to the height of The Legends building that exists on East Point Douglas, as the height of The Legends on the Highway 61 side is 73 feet of grade to the peak of the roof. So, this building is similar in height to The Legends.

Landscaping: The Applicant is asking for some flexibility due to the site constraints and stormwater requirements. Applicant is proposing to plant 53 trees, where ordinance requires 85; however, the Applicant is looking to plant additional trees on site to get that number higher. They are planting significantly more shrubs, as ordinance requires 94, and the Applicant is planting 408; the majority of those shrubs are around the perimeter of the parking lot, in the parking lot islands, and on the base of the building, as required by City Code. No tree mitigation is required; the two images on the bottom of the screen show the site when it was prepared in 2003 and 2008. A lot of the trees that the Applicant is proposing to remove are volunteer trees that have grown since the site has been cleared. Again, the removal does not trigger tree mitigation. You can see on the 2003 image is that wooded area that will also be preserved.

Site Access: As part of all the development on Hardwood Avenue, the City hired Bolton & Menk to complete a traffic study. In recent years, we've seen the development of the Aurilla Apartments, The View, Pizza Ranch. So, to ensure that Hardwood Avenue can handle additional trips, a traffic study was completed. Once we received this application, we asked Bolton & Menk to amend their traffic study to include this proposal. The Applicant also completed a traffic study just to make sure that East Point Douglas Road and Hardwood Avenue can handle additional trips. Both studies said that the streets are designed appropriately to handle additional trips; the design capacity of East Point Douglas Road is approximately 2,000-5,000 trips per day. With the proposed addition of the project in front of us tonight, that would bring the total trips up to 1,750. Also, our Public Works Director, Ryan Burfeind, is here, so, if you have any additional questions on that, he'll be happy to talk more about that.

Public Process: The Applicant held a Neighborhood Meeting on November 14, 2023, at The Legends of Cottage Grove, and 33 residents attended. General questions raised were about why the Applicant had selected this site, construction timing, anticipated rents, traffic noise from Highway 61, and noise from the potential increase of traffic on East Point Douglas Road. The main talking point was the increased traffic on East Point

Douglas Road; as previously mentioned, the traffic studies said the roads were designed to accommodate that traffic.

Notices of the Public Hearing were posted in the Pioneer Press and were also mailed to property owners within 500 feet. Staff did not receive any comments during that time. Also, no one participated in the Public Hearing at the Planning Commission on December 18. At that meeting, the Planning Commission reviewed this, held the Public Hearing, and they voted unanimously to approve the project before you tonight. Request for Financial Assistance: Planner Mrosia stated this project includes a request for financial assistance. Gretchen Larson, our Economic Development Director, will speak about that.

Director Larson stated as a part of this process, all of the required Public Hearing Notices required by law have been completed. Tonight is the opportunity for the City Council to hold a Public Hearing for the modification to the development program for your Development District No. 1, and to establish a Tax Increment Financing (TIF) District No. 1-21, which would be Roers, a housing district.

As a part of the process, in October the City received a request for public financial assistance from the developer. The Council received information on the project from the developer, also in October. As a part of that discussion, they said what they wanted to construct, which Mike has presented tonight, is a mixed-income, multifamily apartment project, with 20% of the units at AMI. Based upon the desire of the City Council to have even more affordability into the project, Roers went back to the drawing board and included 8 more units at 60% AMI and some more naturally occurring affordable units at 70% AMI and 80% AMI.

The City's financial consultants, Ehlers, then conducted a second analysis, and they concluded that with the additional affordability, that assistance for up to 15 years and \$1.96 million in today's value was warranted.

On January 9, 2024, your Economic Development Authority (EDA) approved the project plan and the proposed modification to Development District No.1, to establish Development District No. 1-21, which is Roers.

To complete the process, we again have to hold a Public Hearing. There is also a Development Contract in your packet, and that Development Agreement is required; it's an agreement between the EDA and the developer, and it defines all the requirements for the actual project itself and everything that the developer has to meet in order to receive public assistance. It also includes a lookback provision, as projects of this size have some adjustments to them over time when they get off the ground, so that has also been done by your financial advisors. While the City is not a party to the actual Development Agreement, your EDA bylaws and enabling resolutions require you to approve all of the projects undertaken by the EDA.

Recommendation: Director Larson stated there's a recommendation slide before you, and staff would like to note that the first three recommendations should be taken first, considered by you at each individual motion, before you hold the Public Hearing. We'll be happy to answer any questions. The other two recommendations will be taken after the Public Hearing is closed, when you can consider those items as well.

Mayor Bailey asked if Council had any questions for Planner Mrosia or Director Larson.

Council Member Olsen thanked Planner Mroska and Director Larson for presenting this to us. He also saw the presentation at the EDA Meeting last week. He asked Ehlers to answer his question because they've answered it once before, and he thinks it's good information for the public to have. It has to do with the lookback provisions that are included within the TIF Agreement, why those exist, and how they safeguard or protect the EDA and/or City in circumstances like this. They're not uncommon, lookback provisions are often there, but it's one of those things that we don't talk about very often. He thinks it's worth articulating to the public, watching at home or who may be watching it later, what those provisions are and why they're there.

Schane Rudlang, with Ehlers, gave a quick review of the lookback provisions in this project, which are typical for projects like this. In this project, there are three different types of lookbacks, which are again kind of the standard that we at Ehlers recommend cities do:

- 1) The first is a lookback when the project is completed. So, you're considering dedicating money to the project tonight, just under \$2 million. It's based on an analysis that the project is going to cost a certain amount of money. If, for some reason, the costs go down for the project, and the developer builds it a lot cheaper than they had anticipated and had shared with us and Council, then the subsidy that was analyzed to be needed now maybe isn't needed. So, there would be a cost adjustment during the Certificate of Occupancy, when the project is done and getting ready to be occupied.
- 2) The second lookback is a performance lookback, to look back at stabilization of the project. So, roughly a year or so after the project is opened and they have all their leases in, they're 90-or-95% occupied, we know what the rents for the project are going to be. Again, the analysis and the level of subsidy was set based on the best information that we have today; we know a lot about what the market is right now, but in two years, when the project's open and leased, maybe rents are doing really well. That means maybe there was too much subsidy in the project, and so, we do an analysis at that point, and then adjust that subsidy down if that's the case. If rents are exactly what we or the developer had as Pro Forma today, there's no adjustment. If they're lower, if the project isn't doing as well as we had expected, we also don't adjust it then. So, the developers always say we should adjust it higher at that point, but we don't do that.
- 3) Similar to the performance lookback, it's a lookback in the event of sale. So, they sell the project, there's an actual sale, and we go back and adjust the TIF Note at that point if the project is performing a lot better than it was originally anticipated to do. He said generally lookbacks don't result in an adjustment because projects generally cost more than what we're looking at today, and rents are usually within a range that we're analyzing right now.

So, it's relatively rare that there are adjustments, but they do happen; they're a great safeguard to make sure that the TIF assistance is the right size.

Council Member Olsen stated he really thinks that's a key point. He appreciated him stepping up to the podium and sharing that. It's important for the public to understand that when we work with developers as a City Council or as a community, many times we

utilize tools like TIF in order to get projects off the ground, and then we recapture that TIF revenue later on after the project is up and running. Ensuring that we right size the TIF is hard to do because market conditions change all the time. He thinks we can all agree that we've seen interest rates go up lately, over the last 1.5 years or so, and now there are some predictions out there that those will start to drop. So, these lookback provisions give us a safeguard against that. He just thinks that's smart business, but he also thinks it's something that very few people know that we do; so, that's why he asked him to share that with us again. He very much appreciated his time and thanked him.

Mayor Bailey asked if the Applicant wished to share anything. Travis Fauchald with Roers Companies thanked City staff for their presentation. Over the past couple of months, we've been working to get this project and its design to a spot that we can present for approval. If approved, we will continue working with the gas pipeline company, as Mike mentioned, to make sure all the formal written approvals are there, to make sure we're building a project that works for them, and they have an easement that governs a majority of the site. We will continue working on our architecture and civil plans to resubmit for permits, and then we would begin financing the project, preparing to start construction later this summer. We're really excited to be here and to be a partner in the investment community. Our engineers and our architects are also here if there are any questions on the design or any of the nitty-gritty details that he might not be able to answer. If there are any questions, he, Logan, and Pete are all here.

Council Member Khambata thanked them for taking the time to be here tonight. For anyone who might be here or watching at home, who isn't familiar with the term AMI, Area Median Income, he asked Travis to briefly explain how you determine those levels and how they're regulated. And, moving forward, how those rents stay affordable.

Travis stated as a large multifamily developer that does a lot of work in the Twin Cities, we do some market rate communities, workforce communities, and a lot of our work are affordable communities that are rent and income restricted. As Mike mentioned, those rent and income restrictions are laid out in a Declaration of Land Use Restricted Covenant, a document that will run with the land that will govern the use and the income and rent restrictions. What that means is ultimately only certain people are able to live in these units with discounted rents. What our property management and our compliance departments do is make sure we're renting to the right residents, that they are getting cheap rent, and they are making what they say they make, to ensure the TIF is being used to serve the right people. Ultimately, the rents and income restrictions are published by HUD, depending on the AMI of the county; those are revisited each year. So, if rents go up in Washington County, the rents and the incomes would go up by the corresponding amount. If rents were to go down, the rent and income restrictions would move or stay the same. So, we're not able to say we're going to provide affordable housing and provide X amount of units at X income restriction and then change those later down the road. It is a math equation that ultimately determines what those rents are and who can live there. On this project, we have rent and income restrictions on one-, two-, and three-bedrooms; we anticipate our tenants are going to be service

workers, teachers, people living on a fixed income, single parents. Those are the residents that we see on these projects. He's hopeful that answers his question.

Council Member Khambata stated absolutely, thank you.

Mayor Bailey thanked Travis for coming in again tonight and listening to the Council when we had an earlier session about wanting to spruce up the building a bit, just from a visual standpoint. That is a very unique parcel. Other developers have tried to come in and figure out how they were going to make it all work, but they never got to the level where you're at now, saying you have a project you believe is going to move forward. He thinks it will be a great use of that property. It will be pretty amazing whether you want to walk down East Point Douglas, around to the different retail options, or go up the hill to Camel's Hump Park, you've got a unique piece of property there that he thinks will be a gem for those who want to live in that particular area of Cottage Grove.

Mayor Bailey stated one of the big things we heard from residents at The Legends, etc. wasn't so much the project that's coming in, but they were concerned about traffic. He stated once this project comes in, everything's great as we obviously expect, and let's say the traffic becomes a bit of an issue, maybe it's the speed. He asked staff what would be the steps we could take if we were to start getting some concerned citizens down there, saying it's been tough for them to cross the road or cars are speeding. He knows what some of the answers are, but thought it would be good for the public to hear some of those answers.

Director Burfeind stated as discussed earlier on, that area continues to be monitored. Thinking about Hardwood Avenue and then Hardwood Court, that intersection is one project we are specifically working on, with signal plans there; so, that's definitely something that's in motion. It's always hard along that entire corridor, and we want to meet warrants for any type of signal improvement; it's very important that we monitor that very closely. We look at all of those intersections along that area, including East Point Douglas Road and Harkness Avenue as well, but Hardwood Court and Hardwood Avenue is our next focus for this area. The signal is being worked on, and we really are looking at how is the development going to happen; we don't quite meet warrants now, but there are other challenges in this corridor with sight-line issues. Of course, we kind of have the curves going up and over the hill, so that kind of plays into it, where we could actually look at building a signal, taking that into consideration. It's not just the traffic, but the sight lines as well.

Mayor Bailey stated if that day were to come and people have concerns, they can obviously reach out to one of us on the Council, Public Safety, and City staff. If there are challenges or issues at some point, we always go back and take a look at it and add features or things to maybe slow down the traffic, or increase patrols, or whatever needs to happen there. He just knows that with all the senior facilities in that market there, they love to walk. Every time he goes down there, they're always walking along the bluff there of Camel's Hump. He thinks maybe there's a perception that it's going to be an issue, maybe it won't be, and hopefully it won't be anything. If there is, there is a way to react to it. Director Burfeind agreed.

Council Member Khambata stated as he had said at Roers' initial presentation, back in October, getting to 60% AML is a tough task; especially with this parcel and the unique constraints that it presented, he thinks Roers came to us with a really well-thought-out plan. They tackled all of the practical difficulties that the property presented in their first shot, and they've only improved upon it. So, for his 20%, he's really in favor of this project.

Motion by Council Member Thiede to Adopt Resolution 2024-005 approving the Purchase Agreement for Outlots A, C, and D to Roers Cottage Grove Apartments, LLC; second by Council Member Olsen. Motion carried: 4-0.

Motion by Council Member Khambata to Adopt Resolution 2024-006 approving the Preliminary Plat and Final Plat for Camel's Hump Addition; second by Council Member Thiede. Motion carried: 4-0.

Motion by Council Member Olsen to Adopt Resolution 2024-007 approving the Planned Unit Development and Site Plan Review for a 144-unit, six-story, mixed-income, multi-family apartment building located at 6850 East Point Douglas Road South; second by Council Member Khambata. Motion carried: 4-0.

Mayor Bailey opened the Public Hearing, an opportunity for anyone who wants to speak on the modification to the Development Program for Development District No. 1 to include the establishment of Tax Increment Financing District No. 1-21 (Roers).

Bonnie Matter, 6649 Inskip Avenue South, stated she had questions. Her concerns are the traffic, and it's more about the Pizza Ranch and Kohl's. What she doesn't understand is if there's more than one way to get out of that place; is there only one road? Mayor Bailey replied where this is going, yes, there is only one road.

Bonnie stated one road; so, is that okay? She thought you had to have two ways to get out.

Mayor Bailey stated he thinks that's a question for Director Burfeind or Director Koerner. He thought what she was referring to is the reason we've added a second road over in the Industrial Park.

Ms. Matter stated right, in another area, but yes; Mayor Bailey stated that's a good question, we'll respond to that.

Ms. Matter also asked on the \$1.9 million, is that bonded, are you going to bond for that now?

Mayor Bailey asked Director Burfeind if he wanted to take the first question and asked Director Larson if she or Ehlers would take the second.

Director Burfeind stated that's correct, that we do look for two points of access, it is really specific to emergency vehicle access. We want that for all users; obviously, in this area, it's very challenging as it's got the bluff and the highway. For emergency vehicle access, there is actually a second way to get through, actually off the ramp as there's a gate in the Highway 61 fence. If there was an issue with the road itself, maybe down by Tutor Time, there's actually a different way to get vehicles in and out of that area

through the accessing that was put in back in 2007, he believed, with the original development.

Mayor Bailey stated this was a good question that Bonnie asked, as, for example, up by Hinton Heights, he knows there's a gate on the back side of Hinton Heights, with only one place going in and out. The purpose of that gate is they didn't want traffic to go through there, but we have the gate there in case Public Safety needs to get access. This is kind of the same situation, only the gate in this case is, in essence, along Highway 61. Director Burfeind stated that's correct, it's on the ramp, specifically.

Director Larson stated she would have Schane from Ehlers answer the question about the TIF.

Schane stated the short answer to the question is no, the City is not bonding or the EDA bonding for those funds; it's called a Pay-As-You-Go note, meaning the property owner pays the property taxes, and the portion that is TIF is then dedicated to the project but only if that money is there. So, there's no financial risk to the City because of the arrangement; they're not bonding, they're not borrowing for it. He hopes that answers her question.

As no one else wished to speak on this item, Mayor Bailey closed the Public Hearing.

Motion by Council Member Thiede to Adopt Resolution 2024-013 approving a modification to the Development Program for Development District No. 1 and adopting a Tax Increment Financing Plan for Tax Increment Financing District No. 1-21 (Roers); second by Council Member Olsen. Motion carried: 4-0.

Motion by Council Member Khambata to authorize the contract for private development by and between the Cottage Grove Economic Development Authority and Roers Cottage Grove Apartments, LLC; second by Council Member Thiede. Motion carried: 4-0.

Mayor Bailey thanked the Roers' representatives, wished them good luck on their project, and he looks forward to seeing their project come out of the ground. He also thanked staff for their presentations this evening.

10. BID AWARDS - None.

11. REGULAR AGENDA - None.

12. COUNCIL COMMENTS AND REQUESTS

Council Member Khambata thanked Public Works for getting out in the bitter cold and doing what little snow removal they had to do. After last year, he hopes we can keep it light, figuratively and literally, the less snow the better.

Council Member Olsen stated he read a report this week that he found very interesting. It had to do with the reason behind developers working more closely with communities like ours on kind of family-oriented apartments, whether that's market rate or AMI, just like the one that we talked about. The report was written by an analyst at Citibank; of course, Citibank is one of the largest banks in the world, they do a lot of financing for these projects. What the report essentially told us is that if you look at 1991 to 2023, the price of owning a single-family home has gone up about 80% in that timeline; whereas, the price of apartment rental has gone up about 40%. So, there's quite a gap between renting and owning. He knows that it's not that simple, there are a lot of other benefits to home ownership from a tax write-off perspective. But it helped to explain a little bit, for people who have been asking why is the City of Cottage Grove becoming such an attractive place for developers, who are looking to put more density and/or apartments as part of their developments. Frankly, it boils down to what is the market going to bear and what does the end user have the ability to afford. He thinks this project with Roers is just a small example of what we've been doing over the last several years with regard to trying to respond to varying market conditions, to make sure that we have lifecycle housing for the people who want to live in our community. He's very grateful for staff, and for all the various developers that staff's been working with, that they've been bringing those kinds of projects our way. It definitely is necessary from an affordability perspective.

Council Member Olsen mentioned that tonight we had the honor of showing our appreciation to a 30-year veteran of the Cottage Grove Fire Department, Kevin Zittel. In February, at our second meeting, he will be presenting a check from his wife and himself to the Cottage Grove Public Safety Board as part of our annual donation to the Craig Woolery Scholarship Fund. Last night, our Cottage Grove Lions Club was kind enough to make a \$2,000 donation to the Craig Woolery Scholarship Fund; last year, they donated \$1,500, so, they kicked it up a notch. Every little bit helps, it's very much appreciated, that check is now in the hands of our Public Safety Director. If there are people out there who are interested in learning more about the Craig Woolery Scholarship for first responders, why it exists, how you apply, etc., he would suggest that you reach out to any of the Public Safety Board members, particularly, President Julie Rice. You can also reach out to our Public Safety Director, to me, the Mayor, or City staff. But there's an opportunity here to really support our Public Safety folks in a way that they need, which is to help them pay for their education, so that we can get the next Kevin Zittel, or maybe more, on our Fire Department or our Police Department. We definitely have to have great Public Safety personnel in our community, serving our residents every day; losing somebody like Kevin is a big loss, 30 years of experience, knowledge, etc. that he could pass on down to other firefighters, other EMTs, other medics. That's a lot to lose, and we've lost some more over the course of the last year. So, we want to refill those ranks, and the Craig Woolery Scholarship is a really great way to help those people pay for school. If you're interested in learning more, reach out to us; on February 21, there will be a check presentation here at the City Council towards that Craig Woolery Scholarship. Anybody who wants to donate, the Public

Safety Board would be happy to take whatever funds you felt were appropriate towards that goal.

Mayor Bailey stated he'll piggyback on something Council Member Olsen mentioned; earlier this month, the Council had a Strategic Planning workshop at our new Glacial Valley Park building, which is absolutely gorgeous. We'll eventually be having a ribbon cutting and grand opening for the public. There is a specific wall in there that was painted by an artist to share the thoughts behind the purpose of Glacial Valley Park and the theme, both past and present. One of the things that we discussed and staff is going to be working on is a housing study. It kind of alludes to the fact that we've been working with a number of different developers on the different types of housing that we need to look for, going forward, as the population is changing. People are getting older and there are different types of housing that people want now, maybe that are different than what he wanted or his parents wanted growing up. So, we need to understand what that means within our community. So, he's very excited to see what that housing study that we do comes back to tell us about the community with the great developments and things happening.

Mayor Bailey also mentioned that earlier this evening, we had the opportunity to sit down with our legislative contingent, along with our Washington County Commissioner, to go over what he'll say are our goals and objectives for the upcoming legislative sessions, specifically, for the State. We went over quite a few different things that are very important to the City of Cottage Grove. We also had a Bonding Tour here yesterday with the State Senate. About 1.5 months ago, we had met with the House in another part of Washington County, and he presented to try to ascertain some funds for the 100th Street road project. We have some funds that we've already received for this road project, it's an over \$40 million project. We're working all the different angles to help get that road project, trail project completed, or at least paid for; our ask from the State was \$12.5 million to see if they can help us bridge the gap to hopefully finish getting all the funding for that. He thanked our legislative team, as they did a great job with us today in commenting and listening to what our goals and objectives are; that included talking to, or providing a letter to, the DNR to help us get that money that's supposed to be going to purchase park land, next to the Dunes Scientific and Natural Area (SNA). We can hopefully get them to get that done because we do want to see that part of the Dunes SNA.

Mayor Bailey stated he's on the Transportation Advisory Board (TAB). TAB basically works with the Metropolitan Council, the governor, etc. to provide funding sources for money that flows in from the Federal government, etc. into the State of Minnesota; they try to divvy out that money in a fair and equitable manner. In the next group of projects, as he told our staff and legislative team, there are over 150 projects that have been submitted for financing; the money available is about \$250 million. If you added up all of the projects that were submitted, they total over \$850 million. Once again, we came off of a pretty big legislative year where a lot of money was provided to cities and it still is, through different means, for transportation projects, parks, etc. There's still a great need

out there. When we talk about maybe going after additional funding for 100th Street, or other projects within the City, we'll continue to do that; we'll continue to fight for the citizens of Cottage Grove to hopefully get our share of that funding.

Mayor Bailey stated he appreciated our Public Works Director, Ryan Burfeind, and our staff. Yesterday, the PCA issued new health-based limits for PFCs, which the citizens of Cottage Grove have dealt with for many years. Earlier today, Ryan put out a video about that. Due to the great work of our team here at the City staff level and some of the government agencies with whom we deal, if people in Cottage Grove are worried about their water, they should not be. Our water is clean, we treat all of our water here in Cottage Grove, down to, as Ryan calls it, a "non-detect level." A lot of communities out there are going to be grappling with how to pay for this stuff, whereas the City of Cottage Grove is lucky enough that we qualified for the original Consent Decree by 3M but also the Settlement Agreement. Our first permanent Water Treatment Facility is under construction as we speak, with a second one that will be coming in the next couple years. In no case will any of our residents have to worry about their drinking water. So, if you hear that out in the public, as this information cycles through, rest assured in Cottage Grove, our staff has our back, and our water is clean. He's 100% confident in the abilities of drinking safe water here in Cottage Grove.

13. WORKSHOPS - OPEN TO PUBLIC - None.

14. WORKSHOPS - CLOSED TO PUBLIC - None.

15. ADJOURNMENT

Motion by Council Member Thiede, second by Council Member Khambata, to adjourn the meeting at 8:08 p.m. Motion carried: 4-0.

Minutes prepared by Judy Graf and reviewed by Tamara Anderson, City Clerk.



City Council Action Request

7.E.

Meeting Date	2/7/2024		
Department	Community Development		
Agenda Category	Action Item		
Title	December 18, 2023 - Planning Commission Minutes		
Staff Recommendation	Accept and place on file the minutes from the December 18, 2023, Planning Commission Meeting.		
Budget Implication	N/A		
Attachments	<table border="1"><tr><td>1.</td><td>Planning Commission Minutes 2023-12-18</td></tr></table>	1.	Planning Commission Minutes 2023-12-18
1.	Planning Commission Minutes 2023-12-18		

**City of Cottage Grove
Planning Commission
December 18, 2023**

The Regular Meeting of the Planning Commission was held at Cottage Grove City Hall, 12800 Ravine Parkway South, Cottage Grove, Minnesota, on Monday, December 18, 2023, in the Council Chamber and telecast on Local Government Cable Channel 16.

Call to Order

Chair Frazier called the Planning Commission meeting to order at 7:00 p.m.

Roll Call

Members Present: Pradeep Bhat, Ken Brittain, Jessica Fisher, Evan Frazier, Eric Knable, Derek Rasmussen, Emily Stephens

Members Absent: None

Staff Present: Emily Schmitz, Community Development Director; Mike Mroska, Senior Planner; Conner Jakes, Associate Planner; Amanda Meyer, City Engineer; Crystal Raleigh, Project Engineer; Tony Khambata, City Council Liaison

Approval of Agenda

Rasmussen made a motion to approve the agenda. Fisher seconded. The motion was approved unanimously (7-to-0 vote).

Open Forum

Frazier opened the Open Forum and asked if anyone wished to address the Planning Commission on any non-agenda item. No one spoke. Frazier closed the Open Forum.

Chair's Explanation of the Public Hearing Process

Frazier explained the purpose of the Planning Commission, which serves in an advisory capacity to the City Council, and that the City Council makes all final decisions. In addition, he explained the process of conducting a public hearing and requested that any person wishing to speak should go to the microphone and state their full name and address for the public record.

Public Hearings and Applications

6.1 Lumbermen's Outdoor Storage – Case CUP2023-021

Lumbermen's, Inc., with approval from NorthPoint Development, has applied for a Conditional Use Permit to allow for the outdoor storage of materials incidental to the principal use at 7601 100th Street South. The materials will be fully screened by a 6-foot tall privacy fence that will enclose 25,000 square feet of the southwest parking area to be used for material storage.

Jakes summarized the staff report and recommended approval subject to the conditions stipulated in the staff report.

Rasmussen said we got an email referencing a five-story building; he asked is there any new planned development to the immediate south or something. He's not sure what they were talking about, what's visible from this five-story building. Jakes replied that email was referring to the Norhart development, a five-story apartment building to the west of the building site. This was something that was discussed through the development application, thinking about site lines. The industrial development and outdoor storage, if approved, would already be in place prior to tenants moving into that building. So, they would be aware of onsite activities prior to renting the units. As part of NorthPoint's original approvals, they submitted a detailed landscape plan and they've planted numerous trees on the western property line. Other trees have the potential to be removed as part of the Norhart project, but as these trees mature it's staff's understanding that those would also screen.

Frazier stated if the applicant has anything to add, they can step to the podium.

Tom Hysong stated he's the Operations/Transportation Manager for this location. He stated they're based in West Michigan, we sell building supplies, and we're very excited to be moving into this market, as it's a new market for them, and they're excited for the opportunities here.

Fisher asked, you're leasing this space; when and if you ever decide to not lease anymore, would you take the fence down and take it with you. Ryan Zickel, Development Manager, NorthPoint Development, 3315 North Oak Trafficway, Kansas City, Missouri, replied typically through our re-leasing process, hopefully we push for the renewal and get them to stay for 20 years. In the off chance that they don't, that will be considered as a re-leasing opportunity, which increases marketability to future tenants. We will potentially remove it, just depending on market conditions at that time.

Fisher asked staff if somebody else takes it over, would another Conditional Use Permit (CUP) have to be issued for the use of that storage area. Jakes replied the CUP runs with that land, so that would allow for that storage area. However, he noted in the conditions of approval, there is a condition that states if that storage area isn't utilized for more than 12 months, upon written notification of the City, we could require that fence to be removed.

Bhat asked what would happen if it wasn't used and the fence was removed, would it go back to being a parking lot or what would be the status of that area. Zickel stated that's correct, it would just go back to being a standard parking lot. Any holes that would be left from fenceposts would be filled, asphalt repair would be completed, and it would be in like-new condition so that we could re-lease it.

Rasmussen stated he's curious with the large pallets of material that you're getting in there, how do you get them in there with two eight-foot gates. Hysong replied if the gate's like this, we take the forklift and swing the pallets in, or we lift them and just go up and over the top of the fence; the forklifts will go higher than the fence.

Frazier stated that might have answered one of his questions. The letter we referenced talked about maybe a covered storage area. He's assuming one of their concerns would be being able to get the forklifts in there then, if they go over, but he asked if there were other concerns about

if it was going to be required to be a covered storage area, from your point of view. Hysong replied he didn't think so.

Fisher asked with the building that it is in, are there walls already kind of sectioning off each space, as this one has three separate spaces. Zickel stated absolutely, that's a great question. Fisher asked, so, there was a wall already there; Zickel replied it's currently being built in place, within the building. Fisher stated her only thought, when she was reading through this, was that seems like a really large outdoor storage space. So, why would somebody just not lease more of the building, but if there's already a wall constructed in there, then that answers that question. Zickel stated that wall kind of lines up on the previous plan with the edge of the outdoor storage to maximize the space that they can use.

Frazier opened the public hearing. No one spoke. Frazier closed the public hearing.

Frazier stated he had another question. Two of the requirements that we look for in a CUP are that the use won't be detrimental to the public comfort and that it won't impair the enjoyment of nearby property or diminish values within the neighborhood. So, with a concern noted in an email that's going to be made part of the record of this, a resident was concerned about people having an apartment that's facing this open storage area. How do we kind of weigh that, then, as part of diminishing the use or enjoyment of a nearby property. Jakes replied when we talk about the full picture of enjoyment, part of that relates to noise, and there are noise standards in place. It is an industrial use, so there would be trailer parking. Weighing that vs. outdoor storage is somewhat similar, they're still storing, whether it's trailers vs. materials on site. It doesn't necessarily change how we refer to the CUP, taking that into account; he noted that generally we have an industrial site and then we stage down through residential Zoning Districts. He would say it's something quite standard where we have an R-6 butting up to an industrial use, throughout the City, in the past.

Rasmussen asked previous to this fence, where its currently going is currently designated and approved for tractor-trailer parking, correct. Jakes replied, yes, that's correct.

Frazier stated he has some concerns, especially with the resident pointing out that this is going to be right next to an apartment complex, where presumably some of these apartments will overlook the storage area. He thought it was a good point that Rasmussen made that if it wasn't going to be a storage area, it would be tractor-trailer parking. So, what's the difference between those two uses; in his point of view a CUP would be appropriate for outdoor storage at this time.

Fisher asked do we know if this apartment building is actually being constructed because it would not be shocking to see an application come through and it never comes to fruition. So, here we are trying to decide a hypothetical person renting a hypothetical apartment in a hypothetical building that's not yet been built. Here we have people who are following the law and asking a reasonable ask. She feels considering all the hypotheticals, it seems a little strange to her. Schmitz stated the Norhart project has its approvals; they are still working to continue to move forward, so we very well might see that construction happening in 2024. Regardless, the site is zoned R-6 for that high density; so whether or not it's the Norhart project, of course we would hope that another project comes to fruition and would be that same density. Fisher stated right, and she's not implying that she doesn't want the apartments there, that's not what she's saying. She's just saying that that's in the future, and who know what will actually start happen-

ing there. She stated, personally, she'd rather look at shingles than a bunch of trucks, but that's just her thought.

Fisher made a motion to approve the Conditional Use Permit subject to the conditions stipulated in the staff report. Rasmussen seconded. Motion passed unanimously (7-to-0 vote).

6.2 Roers Companies Apartments – Case PP2023-020, SP2023-020, PUD2023-020

Roers Companies has applied for a Site Plan Review, Planned Unit Development (PUD), and Preliminary Plat for a proposed 144-unit mixed-income apartment building to be located at 6850 East Point Douglas Road.

Mrosia summarized the staff report and recommended approval subject to the conditions stipulated in the staff report. He asked Assistant City Engineer, Crystal Raleigh, to speak further about traffic, a major talking point at the Neighborhood Meeting; she spoke about the site access and traffic study.

Fisher said Raleigh mentioned that the intersection didn't warrant a change; she asked what is the threshold and what would warrant a change there. We've had discussions about that particular spot, and O2B Kids is theoretically going in there; that intersection is not a nice spot and wondered when it would be addressed. Raleigh stated there are many different factors that contribute to those intersection warrants, such as traffic volumes, but also sight distance and elements like that. We took the O2B Kids' traffic study, which was a significant study for that intersection, which had incorporated a multifamily development on this parcel. The development that's being proposed is a bit bigger, so we had an addendum to the traffic study from the O2B Kids; even with the additional traffic that's generated by this development, those various warrants still were not met. Fisher asked what the warrants are, though, what are the thresholds; is it close, is it like a hair under. To her, that's the biggest thing she's worried about; obviously, that road can handle it, but with that little bitty intersection, she already thinks that road is a little bit of a nightmare. She doesn't know if she's the only one who thinks that, but that's her biggest concern with it. She doesn't know if anyone can answer that question, what the threshold is. Meyer stated there's a variety of criteria that needs to be evaluated, whether or not an all-way stop is considered. If it would be warranted for a signal, we could do an all-way stop as a temporary measure. There are other things revolving around five or more crashes reported in a 12-month period, susceptible to correction by an all-way stop. There are also items related to vehicular volume, so, the number of vehicles per hour in an eight-hour timeframe. It's also about the speed, the approach speed of vehicles; if traffic is exceeding 40 MPH for the 85th percentile, so the majority of traffic exceeding a specific speed limit approaching an intersection. There are four different criteria that we would analyze; it's really about the number of vehicles within a specific timeframe, definitely the crashes, and just if speeds are increasing and really having to evaluate that intersection from a safety perspective. Meyer stated unfortunately it's not a black-and-white answer.

Brittain asked about the pipeline easement. Is the parking lot over the pipeline easement; if so, how does that work. Is it because its not necessarily building a permanent structure, that they can dig it up if they need to; how does that play into things. Mrosia replied that is exactly correct. There is absolutely no build within that easement, that's clear. They cannot go past this line, so they cannot build, but they can build a parking lot in there. However, the biggest thing that the

applicant is working with them on is grading in there. The pipeline owner wants a specific depth between the pipeline and the surface; so, the applicant is working closely with them on that. With conversations he's had with the applicant, the primary area that they're working on with the pipeline owner is circled on the screen; that's the area where they're trying to get that depth to the right area. Brittain asked if that depth is intended to be such that the weight of the car traffic and parking, etc. doesn't interfere with the pipeline's operation or determine feasibility. Mroska replied no, the depth is for maintenance; they want to make sure they have easy access for maintenance. They don't want to dig too deep so if something happens, they can get in there and resolve the matter quickly. It's worth noting, too, that there is going to be a permanent easement in here to allow for access into that site. Also, they can access off of Highway 61 if there ever comes a time they have to access the pipeline. The applicant has been working really closely with the pipeline on this because it kind of hinges on that; so far, they have identified Flint Hills' support of it, however, they're still working on some minor aspects of that.

Stephens stated it said due to site constraints, the applicant is unable to plant the required amount of trees in a practical way. However, they're proposing to plant over 400 shrubs; she thinks everybody knows that trees have different benefits than shrubs. What are the site constraints, and what happens when they cannot meet the tree requirement. Mroska replied part of the constraints on site is the pipeline easement itself. They don't want roots going into that. He won't be shocked as the planning gets to the process that the number of trees near the parking lot will probably be removed, as he can imagine they will not want those going in that area. So, he can see modifications there. The shrubs go lower into the soil; however, he's not a landscape architect. He doesn't know if the applicant is able to address that a little bit better. He asked the applicant to address the landscaping, on why some of the plantings are proposed in the areas on the plan. Stephens stated let's say they aren't able to meet the requirements; didn't we recently update our Code that they have to pay some sort of fee so we can plant the trees elsewhere. Mroska stated that's something he has discussed with the applicant. If they're unable to plant those trees on site, they have brought up the possibility if there is a fund they can pay into in order to meet that number. That's something we're working on. As a condition of approval, we require seeing a final landscaping plan prior to the issuance of a building permit; however, the applicant realizes that is a standard, we addressed that with him, that we like to see that number come up. However, we understand the site constraints with the pipeline. Mroska stated he'd let the applicant talk more about where they are in revising the plan.

Frazier stated he made a note of the applicant speaking, but before we get to that, we'll finish questions from the commissioners.

Fisher stated back to the parking lot, let's say that Flint Hills has to access the pipeline; is there going to be some sort of written document saying who tears it up, who puts it back together, all of those different things. Mroska replied that the applicant will have to enter into an encroachment agreement with Flint Hills; that agreement will specify in case of an emergency how cars will be moved, etc. He knows the applicant has to work with the tenants to notify them in case an emergency happens that they can move cars. That's the worst-case scenario, as there are easements all over the place. It's the applicant's responsibility to work with their tenants on that.

Bhat asked regarding their request for increasing the height of the building. He wasn't sure who should answer this question, maybe the applicant, but can't they change the footprint of the building. They have the horseshoe shape, they can maybe take out the sides or maybe the bottom U there, and thereby decrease the height. Mroska stated he'd let the applicant address

that question, as he believed they had their architect here. They can talk about the site plan and how they reconfigured it.

Rasmussen stated just to clarify, The Legends of Cottage Grove is two buildings, it's not the White Pine, it's the one next to it. Mrosia replied White Pine are the two buildings adjacent to the property; The Legends is a larger facility a little bit down the road. Rasmussen stated all right, so from an elevation standpoint, The Legends is the tallest building in that grouping, and this one will be slightly below that. Mrosia replied yes, and it's also worth noting that we have contacted White Pine, with emails, phone calls, we've knocked on doors; we've done everything we can to try to get input, but we have not heard anything. So, we followed the normal procedures with every application, but to this point, we have not heard any comments or any concerns. He knows the applicant has reached out as well, trying to get their input.

Frazier asked if the applicant would like to step to the podium.

Travis Fauchald, Development Associate, Roers Companies, 2 Carlson Parkway, Plymouth, Minnesota, 55447, stated they're a multifamily developer and have been around for just about 11 years. They predominantly do affordable housing and new construction projects in and around the Twin Cities and all over the country. Here, we're proposing a workforce project, with a number of units being unrestricted, at market-rate rents, 20 percent of units at 60 percent AMI, and 5 percent of units at 50 percent AMI. We're really excited to present this project, as we think it meets a lot of the City's goals in the Comprehensive Plan. It is quite a challenging site, which is why we're seeking some flexibility here. With our landscaping plan and tree count, the site is constrained; on the north part of the site, over by White Pine and the park land to the north, there's a really sharp hill. What we're ultimately doing to get to the 144 units is having to carve out a little bit, so, we're proposing a retaining wall that is just north of our building that will run alongside the trail. That is kind of the site constraint to the north, and we want to plant trees and conserve trees on that hill, but also plant trees in a place that they're going to survive. The site constraints on the south part of the site are an access easement he believes that's granted to the City to allow access to the stormwater on the northwest part of the site; he doesn't believe a meaningful number of trees can be planted there. In the stormwater, we are unable to plant there, and are unable to plant a certain type of tree that is in that gas pipeline easement. Mrosia has provided feedback to our design team, and we'll certainly be working to get as many trees as we can to set them up for long-term success. Otherwise, we'll find a way that will be satisfactory to the City to make sure we're paying our fair share to meet Code with the trees. So, there will be some revisions made to the landscaping plan, and we'll make sure that's in a spot that works for everyone, prior to formal approval.

Fauchald addressed comments on the gas pipeline easement. If something were to go wrong, we would obviously preserve the right to have Flint Hills' repair team into the site. We'll preserve and record an easement that will provide them access to make sure nothing is ever going to be in the way of their access to the pipeline. If something were to go wrong, they would need their excavators to come in and repair it; ultimately, that would be our expense. Once the pipeline is fixed, we would as a long-term owner operator, repair that and redo the parking lot if anything were to happen, God forbid it doesn't.

Fauchald stated they're long-term owner operators; they have an inhouse property management company that will manage this site so we're not going anywhere. We're hoping to be really good partners, neighbors, and really good members of the community.

Fauchald stated on the building height, they're seeking a height variance due to the site constraints mentioned earlier. Ultimately, we are unable to expand our building footprint and increase the parking garage horizontally as we are constrained by the site boundary and the hill; we would have to dig out a lot more of the site, which is really expensive, and we're really unable to go south or west with our site line. With that gas pipeline easement, we are unable to go further down to get more underground parking as there is bedrock underneath the surface. Those are the site constraints we're working with to ultimately get to 144 units. If we were to remove a floor from our building and go a story shorter, the project, unfortunately, wouldn't be financially feasible. So, that's the background as to why we are building it at that height.

Fauchald stated he'd be happy to answer any other questions. Our local architects, Kass-Wilson are here, they've done other projects in Cottage Grove. Loucks is our civil engineer and landscape architect. So, if there are any questions he can't answer, he'll defer to the experts. Fauchald stated he appreciated their time and thanked them for their consideration.

Frazier asked if there were any questions for the applicant.

Rasmussen said with Fauchald's experience with this development type, is it worth giving a little flexibility to 1.5 cars per unit; he asked if he's pretty comfortable with that, that you're going to be able to handle all of your parking at peak times. Fauchald replied yes, as across our other projects in the State of Minnesota, at this market rate or workforce project type, we see fewer drivers with those affordable units. Oftentimes, with one-or-two bedrooms, we see a single parent or parents with children; so, there might be only one driver or no drivers. Ultimately, there are some site constraints, but we have done projects at a lower parking count. We're trying to get 1.5 and we will not provide anything less than that. As a long-term owner operator, we want to set this project up for success. Our property management team and the neighbors are not going to tolerate on-street parking. We feel comfortable there, we would like to propose something that's going to work for us as well as the community. We've done projects at lower parking ratios, but ultimately feel comfortable at 1.5.

Frazier opened the public hearing. No one spoke. Frazier closed the public hearing.

Rasmussen stated he knew this was a pretty challenging site, kind of a specialty site with high visibility, so it's very important to our community. It seems like this fits in there pretty well, and they've done a pretty good job working with the site constraints, so he thinks it will be a good fit.

Stephens stated she'd just add with all of her tree questions that it's nice to see that you're also asking for reduced parking. Many times we see tons of extra parking, but then there's not enough room for trees or stormwater. So, she thinks it's nice to see that in general you are actually constrained, and it seems like you're doing what you can to fit in what you can.

Frazier stated when he was reviewing this, the thing that jumped into his head was it's interesting that some of these things that they're asking for, they're not just asking for a variance, because he thinks there's probably the factor there to get a variance. Instead of that, the applicant worked with the City to do a PDO so it benefits everybody; the City's getting some of the things that we would like to see out of this project and you're getting some flexibility. So, he thinks that's also a good sign for a continuing relationship with the City and the community is that this

isn't a we just need help, it's a how can we make this work for everybody. He appreciates that, too. Stephens asked if he meant a PUD; Frazier said yes, maybe he said PDO.

Brittain made a motion to approve the preliminary plat, site plan review, and planned unit development for a proposed 144-unit mixed-income apartment building subject to the conditions stipulated in the staff report. Rasmussen seconded. Motion passed unanimously (7-to-0 vote).

Approval of Planning Commission Minutes of October 23, 2023

Knable made a motion to approve the minutes of the October 23, 2023, Planning Commission meeting. Fisher seconded. Motion passed unanimously (7-to-0 vote).

Reports

8.1 Recap of November and December 2023 City Council Meetings

Schmitz provided a summary of actions taken at the City Council meetings on November 1, November 15, and December 6, 2023.

Director Schmitz wished the Planning Commissioners a happy holiday season and stated she was glad we were able to get back together before the end of the year. Before we know it, we'll be in 2024, and we look forward to more big things.

Khambata thanked Schmitz. stated Frazier had said PDO but that shows his length of tenure, because we don't use that term anymore. PUD and PDO are kind of synonymous, Planned Development Overlay vs. Planned Unit Development. He caught that and it's okay. He announced there is a new Council Member, Monique Garza, who was sworn in at our last meeting. She's lived in our community for nearly ten years, she's got a husband and kids in the community. She's responsible for Movies with Mo, the outdoor movies that we host in Highlands Park in the summertime, so she's been active in volunteering in our community. She's really looking forward to being able to help make a difference on the Council as well. He thanked the Planning Commissioners again for their time; he knows December especially gets to be busy for a lot of people, and he's glad that he got to see all of their lovely faces again. With that, he said he'd stand for any questions that they might have.

Frazier thanked Council Member Khambata, and said PDO is etched into his brain, and so it will never change. He will try, but he can't make any promises. He asked if there were any questions for Council Member Khambata, but none were asked.

8.2 Response to Planning Commission Inquiries

Frazier stated we had some inquiries from our October meeting. We received an email approximately a week later with those responses, so he'll consider that filled.

8.3 Planning Commission Requests

None.

Adjournment

Rasmussen made a motion to adjourn the meeting. Brittain seconded. Motion passed unanimously (7-to-0 vote). The meeting was adjourned at 8:04 p.m.



City Council Action Request

7.F.

Meeting Date	2/7/2024		
Department	Administration		
Agenda Category	Action Item		
Title	Response to Open Forum Question - January 17, 2024		
Staff Recommendation	Accept the response letter replying to the request to link the South District Street & Utility Improvements Phase 2 Feasibility Report to Agenda Item 7.J. from the January 17, 2024, City Council meeting open forum.		
Budget Implication	N/A		
Attachments	<table border="1"><tr><td>1.</td><td>2024-01-17 - Matter Open Forum Response</td></tr></table>	1.	2024-01-17 - Matter Open Forum Response
1.	2024-01-17 - Matter Open Forum Response		

Date: January 19, 2024

Ms. Bonnie Matter
6649 Inskip Avenue South
Cottage Grove, MN 55016

Subject: Open Forum Question: Request to Link the South District Street & Utility Improvements – Phase 2 Feasibility Report to Agenda Item 7.J at the January 17, 2024, meeting.

Dear Ms. Matter,

This letter acknowledges your request to link the Feasibility Report from the March 16, 2022, City Council meeting Item 07.A. to the January 17, 2024, meeting item 7.J. We appreciate your continued interest in this important project.

However, upon reviewing your request, we find formally linking the 2022 report to the January 17, 2023, meeting is not necessary and is not legally required.

Our decision is based on the following key factors:

1. **Public Accessibility:** The complete feasibility report for the South District Street & Utility Improvements – Phase 2 is already readily available on the City Council website at [City Council \(cottagegrovemn.gov\)](http://City Council (cottagegrovemn.gov)). It features comprehensive details regarding the project, potential benefits, and associated costs. Public access to this information ensures transparency. The memo for item 07.J. stated the date the 2022 feasibility report was approved for easy reference.
2. **Meeting Efficiency:** To ensure balanced consideration for all agenda items, allocating time to review the previously approved 2022 feasibility report in a meeting might not be the most efficient approach. Prioritizing items on the agenda while still making the report readily accessible for residents to review online seems more practical and a better use of time.
3. **Redundancy:** Presenting the already accessible and approved report formally within the agenda might be perceived as redundant and could detract from the focus on more immediate needs regarding the project.

We recognize the importance of open communication and transparency, and we remain available to answer questions and address any concerns raised by the City Council or the public. We encourage interested individuals to access the report online or contact us directly for further information.

Thank you for your understanding and continued commitment to the well-being of our community.

Sincerely,

Tamara Anderson
City Clerk



City Council Action Request

7.G.

Meeting Date	2/7/2024
Department	Administration
Agenda Category	Action Item
Title	Reappointing Commissioners and CVB Directors
Staff Recommendation	Appoint Commissioners and CVB Directors to their assigned Commissions listed in the memo.
Budget Implication	N/A
Attachments	None



TO: Honorable Mayor and City Council
Jennifer Levitt, City Administrator

FROM: Tammy Anderson

DATE: February 7, 2024

RE: Reappointing Commissioners and CVB Directors

Discussion

This memo recommends the reappointment of commissioners and CVB Directors to various City Commissions. All commissioners may serve sets of term limits of four consecutive two-year terms as outlined in the city code (2-1-2). These term limits have two possible exceptions.

- Time served filling an unexpired term: Up to one year served to complete another commissioner's term does not count towards the individual's own term limit.
- COVID-19 pandemic exception: Some commissioners may have benefited from a temporary provision invoked during the pandemic, where service in 2021 did not count towards their term limit.

Exceptions are noted in the graph below.

Commissioner Reappointment Recommendations:

Commission	Commissioner	Dates Served	COVID Year	Recommendation
Advisory Committee on Historic Preservation	Joseph Gall	3/1/17 thru 2/29/24	Yes	Appoint 3/1/24 thru 2/28/26
Parks & Recreation Commission	Samanthia Crabtree	3/1/17 thru 2/29/24	Yes	Appoint 3/1/24 thru 2/28/26
Parks & Recreation Commission	David Olson	3/1/22 thru 2/29/24	No	Appoint 3/1/24 thru 2/28/26

Parks & Recreation Commission	Shane Waterman	3/1/22 thru 2/29/24	No	Appoint 3/1/24 thru 2/28/26
Planning Commission	Evan Frazier	9/6/17 thru 2/29/24	Yes	Appoint 3/1/24 thru 2/28/26
Planning Commission	Jessica Fisher	3/1/21 thru 2/29/24	Yes	Appoint 3/1/24 thru 2/28/26
Planning Commission	Eric Knable	3/1/20 thru 2/29/24	Yes	Appoint 3/1/24 thru 2/28/26
Public Service Commission	Lisa Kons	3/1/22 thru 2/29/24	No	Appoint 3/1/24 thru 2/28/26
Public Service Commission	Lise' Rediske	3/1/22 thru 2/29/24	No	Appoint 3/1/24 thru 2/28/26

The Cottage Grove Convention and Visitors Bureau Board is made up of 7 Directors. These Directors may also serve four consecutive two-year terms as outlined in the city code (2-1-2) and have the same exceptions (COVID & unexpired terms) as listed above. However, the CVB terms expire on December 31 of their term year.

Director Reappointment Recommendations:

Commision	Director	Dates Served	COVID Year Appointment	
Convention and Visitors Bureau	Erik Olsen	10/18/2023 thru 12/31/23 Filled Empty Seat	No	Appoint 1/1/24 thru 12/31/26
Convention and Visitors Bureau	Laurie Levine	5/6/20 thru 12/31/23	Yes	Appoint 1/1/24 thru 12/31/26
Convention and Visitors Bureau	Druscilla Nute	6/15/22 thru 12/31/23	No	Appoint 1/1/24 thru 12/31/26

Recommendation

Appoint Commissioners and CVB Directors to their assigned Commissions listed in the memo.

Attachments

None



City Council Action Request

7.H.

Meeting Date	2/7/2024		
Department	Administration		
Agenda Category	Action Item		
Title	Transcribing Agreement		
Staff Recommendation	Authorize entering into an agreement with Judith Graf for transcription services for 2024.		
Budget Implication	Included in the 2024 Budget. No increase in Public Safety transcription; \$150 hourly rate - Meetings held in Council Chambers; \$300 hourly rate - Meetings held outside of Council Chambers.		
Attachments	<table border="1"><tr><td>1.</td><td>Agreement for Professional Services 2024 - Judith Graf (Transcriptionist Services) clean</td></tr></table>	1.	Agreement for Professional Services 2024 - Judith Graf (Transcriptionist Services) clean
1.	Agreement for Professional Services 2024 - Judith Graf (Transcriptionist Services) clean		



TO: Honorable Mayor and City Council
Jennifer Levitt, City Administrator

FROM: Tammy Anderson

DATE: February 7, 2024

RE: Transcribing Agreement

Discussion

For many years, Judith Graf has been providing transcription services for the City of Cottage Grove. This includes transcribing minutes for the City Council, Economic Development Authority, Convention and Visitors Bureau, Planning Commission and Public Services Commission meetings and Public Safety statements and phone calls.

Most meetings Ms. Graf transcribes are held in the Council Chambers and video recorded by SWCTC. This is a nice tool for transcribing because it allows Ms. Graf to see who is speaking. However, there are special meetings and workshops held by the Council in city meeting rooms that are not video recorded and use an audio recorder. Ms. Graf experiences a significant increase in the time required to type these minutes. Instead of billing the City based on the duration of her transcription process, Ms. Graf invoices per audio meeting minute. In order to receive fair compensation, the 2024 agreement reflects a rate of \$150 per audio hour for meetings that are video recorded in the Council Chamber, and \$300 per audio hour for meetings held outside the Council Chamber without video.

For the Public Safety portion of the 2024 agreement, the prices will remain the same as 2023 at \$3.50 per audio minute transcribed for Public Safety phone calls and \$4.00 per audio minute transcribed for STAT transcription requests or audio files where two or more people speak throughout the audio and requires a certificate of accuracy of the transcription.

The staff are very happy with the services Ms. Graff provides for the City and will continue to provide her with materials and documents to make her job as efficient as possible.

Recommendation

Authorize entering into an agreement with Judith Graf for transcription services for 2024.

Attachments

1.	Agreement for Professional Services 2024 - Judith Graf (Transcriptionist Services) clean
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AGREEMENT FOR PROFESSIONAL SERVICES

THIS AGREEMENT ("Agreement") is made and executed this ___ day of _____, 2024, by and between the City of Cottage Grove, 12800 Ravine Parkway, Cottage Grove, Minnesota 55016, ("City") and Judith Graf, P.O. Box 432, New Richmond, Wisconsin 54017 ("Consultant").

WHEREAS, the City has accepted the proposal of the Consultant for certain professional Services; and

WHEREAS, Consultant desires to perform the Services for the City under the terms and conditions set forth in this Agreement.

NOW THEREFORE, in consideration of the mutual consideration contained herein, it is hereby agreed as follows:

1. SERVICES.

- a. City agrees to engage Consultant as an independent contractor for the purpose of performing audio transcription services ("Services") for the City. Consultant agrees to provide the following services:
 - i. Verbatim transcription of all digital audio files provided to Consultant by the City.
 - ii. Upon request, Consultant shall provide an official certification as to the accuracy of the transcription.
- b. Consultant covenants and agrees to provide Services to the satisfaction of the City and in a timely fashion, subject to Section 7 of this Agreement. At the time a request for transcription services is made by the City, the City and Consultant shall agree upon a completion and delivery date for the transcript and the format in which the transcript must be prepared.

2. PAYMENT.

- a. City agrees to pay and Consultant agrees to receive and accept payment for Services as set forth in this Agreement at the following rates:
 - i. \$3.50 per audio minute transcribed for Public Safety Department statements and telephone calls.
 - ii. \$4.00 per audio minute transcribed for STAT transcription requests or audio files where two or more people speak throughout the audio recording and requires a certificate of accuracy of the transcription. STAT transcriptions require a turnaround time of less than twelve (12)

hours.

- iii. \$150.00 per audio hour transcribed for City Council, Economic Development Authority, Convention and Visitors Bureau, Planning Commission, and Public Services Commission meetings.
 - iv. For any of the aforementioned meetings, which take place outside of the City Council Chambers (in the Training Room and/or Conference Room) for which there is no South Washington County Telecommunications Commission ("SWCTC") video, the per audio hour rate for such transcriptions will be \$300.00.
 - b. Any changes in the scope of the work of the Services that may result in an increase to the compensation due the Consultant shall require prior written approval by the authorized representative of the City or by the City Council. The City will not pay additional compensation for Services that do not have prior written authorization.
 - c. Consultant shall submit itemized bills for Services provided to City on a monthly basis. Bills submitted shall be paid in the same manner as other claims made to City.
3. TERM. The term of this Agreement shall commence on the date written in the initial paragraph of this Agreement to December 31, 2024, unless terminated prior to that date pursuant to Section 4. This Agreement may be extended upon the written mutual consent of the parties for such additional periods as they deem appropriate, and upon the same terms and conditions as herein stated.
4. TERMINATION.
- a. Termination by Either Party. This Agreement may be terminated by either party upon fourteen (14) days' written notice delivered to the other party to the addresses listed in Section 14 of this Agreement. Upon termination under this provision, if there is no default by the Consultant, Consultant shall be paid for Services rendered and reimbursable expenses until the effective date of termination.
 - b. Termination Due to Default. This Agreement may be terminated by either party upon written notice in the event of substantial failure by the other party to perform in accordance with the terms of this Agreement. The non-performing party shall have fifteen (15) calendar days from the date of the termination notice to cure or to submit a plan for cure that is acceptable to the other party.
5. SUBCONTRACTORS. Consultant shall not enter into subcontracts for any of the Services provided for in this Agreement without the express written consent of the City. The Consultant shall pay any subcontractor involved in the performance of this

Agreement within ten (10) days of the Consultant's receipt of payment by the City for undisputed services provided by the subcontractor.

6. STANDARD OF CARE. In performing its Services, Consultant will use that degree of care and skill ordinarily exercised, under similar circumstances, by reputable members of its profession in the same locality at the time the Services are provided. No warranty, express or implied, is made or intended by Consultant's undertaking herein or its performance of Services.
7. DELAY IN PERFORMANCE. Neither City nor Consultant shall be considered in default of this Agreement for delays in performance caused by circumstances beyond the reasonable control of the nonperforming party. For purposes of this Agreement, such circumstances include, but are not limited to, abnormal weather conditions; floods; earthquakes; fire; epidemics; war, riots, and other civil disturbances; strikes, lockouts, work slowdowns, and other labor disturbances; sabotage; judicial restraint; and inability to procure permits, licenses or authorizations from any local, state, or federal agency for any of the supplies, materials, accesses, or services required to be provided by either City or Consultant under this Agreement. If such circumstances occur, the nonperforming party shall, within a reasonable time of being prevented from performing, give written notice to the other party describing the circumstances preventing continued performance and the efforts being made to resume performance of this Agreement. Consultant will be entitled to payment for its reasonable additional charges, if any, due to the delay.
8. CITY'S REPRESENTATIVE. The City has designated Jennifer Levitt to act as the City's representative with respect to the Services to be performed under this Agreement. She shall have complete authority to transmit instructions, receive information, interpret, and define the City's policy and decisions with respect to the Services covered by this Agreement.
9. PROJECT MANAGER AND STAFFING. The Consultant has designated Judith Graf to be the primary contact for the City in the performance of the Services. She shall be assisted by other staff members as necessary to facilitate the completion of the Services in accordance with the terms established herein. Consultant may not remove or replace the designated staff without the approval of the City.
10. INDEMNIFICATION.
 - a. Consultant and City each agree to indemnify, and hold harmless each other, its agents and employees, from and against legal liability for all claims, losses, damages, and expenses to the extent such claims, losses, damages, or expenses are caused by its negligent acts, errors, or omissions. In the event claims, losses, damages, or expenses are caused by the joint or concurrent negligence of Consultant and City, they shall be borne by each party in proportion to its own negligence.
 - b. Consultant shall indemnify City against legal liability for damages arising out of

claims by Consultant's employees. City shall indemnify Consultant against legal liability for damages arising out of claims by City's employees.

- c. The obligations of this section, including the obligation to defend and indemnify the City, shall survive the termination of this Agreement and shall continue until the expiration of any applicable statute of limitations period.

11. OWNERSHIP OF DOCUMENTS. Professional documents, drawings, and specifications prepared by the Consultant as part of the Services shall become the property of the City when Consultant has been compensated for all Services rendered, provided, however, that Consultant shall have the unrestricted right to their use. Consultant shall retain its rights in its standard drawing details, specifications, databases, computer software, and other proprietary property. Rights to proprietary intellectual property developed, utilized, or modified in the performance of the Services shall remain the property of the Consultant.

12. EQUIPMENT. Consultant agrees to use her own computer hardware, router, and software programs and maintain an internet connection sufficient to perform the Services of this Agreement. Consultant's computer equipment must have automatically updating anti-virus and spyware protection software and active firewall protection. If any computer equipment owned by the Consultant must be repaired, all City data including digital audio files, transcribed documents, and connection configuration files, must be removed from the computer equipment prior to any repairs.

13. CONFIDENTIALITY.

- a. In order to perform the Services of this Agreement, City may disclose, and Consultant may be in possession of, certain information or data that is confidential. Confidential information means any data or information that is designated as not public by Minnesota statute or federal law applicable to the data. Consultant agrees to use any confidential information it receives solely in connection with the Services provided in this Agreement and not for any purpose other than as authorized by this Agreement or without prior written consent of the authorized representative of the City or City Council. All use of confidential information by the Consultant shall be for the benefit of the City and any modifications and improvements thereof by the Consultant shall be the sole property of the City. No other right or license, whether express or implied, in any confidential information is granted to the Consultant under this Agreement.
- b. To ensure the security of any confidential information in its possession, Consultant agrees to not discuss or share any confidential information verbally or in any format with anyone other than the City. Consultant shall take the following security precautions when performing any Service under this Agreement:

- i. Use closed headphones when transcribing digital audio files.

- ii. Keep all transcribed documents and digital audio files on a password protected computer with password protected files.
 - iii. Close all transcription programs, documents or files when temporarily away from the computer.
 - iv. Keep any printed transcription documents in a secure location.
- c. Consultant shall return to the City or destroy all digital audio files, documents and transcripts thirty (30) days after the completion or termination of any individual project, termination of this Agreement or at such time as the City may request, whichever occurs first.

14. NOTICES. Notices shall be communicated to the following addresses:

If to City: City of Cottage Grove
 12800 Ravine Parkway
 Cottage Grove, MN 55016
 Attention: City Administrator

Or emailed: jlevitt@cottagegrovemn.gov

If to Consultant: Judith Graf
 P.O. Box 432
 New Richmond, WI 54017-0432

Or emailed: jgraf@mnisp.com

15. INDEPENDENT CONTRACTOR STATUS. All services provided by Consultant, its officers, agents and employees pursuant to this Agreement shall be provided as employees of Consultant or as independent contractors of Consultant and not as employees of the City for any purpose.

16. GENERAL PROVISIONS.

- a. Assignment. This Agreement is not assignable without the mutual written agreement of the parties.
- b. Waiver. A waiver by either City or Consultant of any breach of this Agreement shall be in writing. Such a waiver shall not affect the waiving party's rights with respect to any other or further breach.
- c. Governing law. This Agreement shall be construed in accordance with the laws of the State of Minnesota and any action must be venued in Washington County District Court.

- d. Severability. If any term of this Agreement is found to be void or invalid, such invalidity shall not affect the remaining terms of this Agreement, which shall continue in full force and effect.
- e. Data Practices Compliance. Consultant agrees to abide by the applicable provisions of the Minnesota Government Data Practices Act, Minnesota Statutes, Chapter 13, and all other applicable state or federal rules, regulations or orders pertaining to privacy or confidentiality. Consultant understands that all of the data created, collected, received, stored, used, maintained or disseminated by Consultant in performing those functions that City would perform as a government entity, is subject to the requirements of Chapter 13, and Consultant must comply with those requirements as if it were a government entity. This does not create a duty on the part of Consultant to provide the public with access to public data if the public data is available from the government entity, except as required by the terms of this Agreement.
- f. Entire Agreement. This Agreement constitutes the entire agreement of the parties and supersedes all prior communications, understandings and agreements relating to the subject matter hereof, whether oral or written.

THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK

CITY OF COTTAGE GROVE

By: _____
Myron Bailey, Mayor

By: _____
Tamara Anderson, City Clerk

Date: _____

CONSULTANT

By:_____

Its:_____

Date:_____



City Council Action Request

7.I.

Meeting Date 2/7/2024

Department Community Development

Agenda Category Action Item

Title Rental License Approvals

Staff Recommendation Approve the issuance of rental licenses to the properties in the attached table.

Budget Implication N/A

Attachments

1.	Rental License Approvals CC Memo
2.	Rental License Approvals Table

TO: Honorable Mayor and City Council
Jennifer Levitt, City Administrator

FROM: Samantha Drewry, Code Enforcement Officer

DATE: January 31, 2024

RE: Rental License Approvals

Background/Discussion

Rental licenses are required for nonowner-occupied residential properties (City Code Title 9-13, Property Maintenance, and Title 9-14, Rental Licensing) and are issued on a biennial basis. The licensing process includes submittal of the rental license application, payment of \$180, and public criminal history report. Rental inspections are conducted on all rental properties as part of the licensing process. Once all information has been submitted and the inspection satisfactorily completed, the Council must approve the license prior to it being issued.

The properties listed in the attached table have completed the licensing process and are ready to have their licenses issued following Council approval.

Recommendation

Approve the issuance of rental licenses to the properties in the attached table.

2024 RENTAL LICENSES
CITY COUNCIL APPROVAL - FEBRUARY 7, 2024

RENTAL LICENSE NUMBER	PROPERTY STREET #	PROPERTY STREET NAME	PROPERTY OWNER
RENT-001914	6844	Meadow Grass Lane South	Sun, Xiaoguang
RENT-001921	6776	Meadow Grass Lane South	Homes for Now
RENT-001931	8313	Foothill Road South	Sumida, Kathy
RENT-001951	6784	Meadow Grass Lane South	Sun, Xiaoguang
RENT-001982	9242	East Point Douglas Lane South	Borst, Sandra
RENT-002020	7354	Timber Crest Drive South	Bakewell, Mary
RENT-002021	7350	Timber Crest Drive South	Bakewell, Mary
RENT-002026	7936	Gresham Lane South	Thies, Jason
RENT-002030	9288	Indian Boulevard South	Borst, Gary
RENT-002124	8610	Hinton Avenue South	Pace, Bridget
RENT-002131	7346	Timber Crest Drive South	West, David
RENT-002137	7762	79th Street South	Molde, Troy
RENT-002138	8976	92nd Street South	Mao, Guoping
RENT-002143	8827	92nd Street South	Liu, Lei
RENT-002144	6841	Pine Crest Trail South	Homes for Now
RENT-002145	6754	Meadow Grass Lane South	Homes for Now
RENT-002155	8979	92nd Street South	Chen, Ning
RENT-002169	8800	Hillside Trail South	IH3 Property Minnesota L.P.
RENT-002233	8348	Hadley Avenue South	Olafson, Erik
RENT-002234	10998	Point Douglas Drive South	Smallidge, Eugene

MULTI-FAMILY:

The View, 7675 Hardwood Avenue South: 1 Building, 31 Units



City Council Action Request

7.J.

Meeting Date	2/7/2024		
Department	Finance		
Agenda Category	Resolution		
Title	Accept donations received in the 4th Quarter 2023		
Staff Recommendation	Adopt Resolution 2024-14, accepting donations received in the 4th Quarter 2023.		
Budget Implication	N/A		
Attachments	<table border="1"><tr><td>1.</td><td>Resolution 2024-14 4th Quarter 2023 Donations</td></tr></table>	1.	Resolution 2024-14 4th Quarter 2023 Donations
1.	Resolution 2024-14 4th Quarter 2023 Donations		

CITY OF COTTAGE GROVE, MINNESOTA
CITY COUNCIL
RESOLUTION 2024-14
RESOLUTION ACCEPTING DONATIONS RECEIVED IN THE 4th QUARTER
2023

WHEREAS, the businesses and individuals listed below have made donations to the City of Cottage Grove between October 1, 2023 and December 31, 2023;

Received From	Purpose	Amount
Cottage Grove Athletic Association	7 AED units and 5 SaveStation units (Lamar, Highlands, Kingston, Hamlet, and sports building at CG Middle School)	\$40,300
Stantec	Reindeer at Hometown Holiday Celebration	\$2,200
First Response Fire & Safety, Inc.	Hose Roller System	3,900

And WHEREAS, the City of Cottage Grove gratefully accepts these donations and recommends that they be used for the purposes intended by the donors.

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of Cottage Grove, County of Washington, State of Minnesota, that the donations received in the fourth quarter of the 2023 fiscal year, listed in this resolution, and totaling \$46,400 be accepted on behalf of the city operations that they were designated to support, with the sincere thanks of the City Council.

Passed this 7th day of February 2024.

Myron Bailey, Mayor

Attest:

Tamara Anderson, City Clerk



City Council Action Request

7.K.

Meeting Date 2/7/2024

Department Finance

Agenda Category Action Item

Title Abatement of utility billing certification

Staff Recommendation Adopt Resolution 2024-15, authorizing the abatement of utility billing certifications in the amount of \$1,095.98.

Budget Implication N/A

Attachments

1.	CC Memo Utility Billing Certification Removal 02-07-2024
2.	Resolution 2024-15 Abatement of Utility Bill Certification



To: Mayor and City Council Members
Jennifer Levitt, City Administrator

From: Brenda Malinowski, Finance Director

Date: February 7, 2024

Subject: Abatement of Utility Billing Certification

Introduction

When parcels are subdivided and developed, the underlying parcel number is made inactive and the County issues individual parcel numbers for the new parcels in the development.

Discussion

Five parcels were subdivided and developed, but the original parcel was not removed from the utility billing system when the new parcels were added to the utility billing system. These original parcels were inadvertently certified and should be removed from certification since the parcel and parcel number no longer exist.

Action Requested

Adopt resolution 2024-15, authorizing the abatement of utility billing certification in the amount of \$1,095.98.

RESOLUTION NO. 2024-15

**RESOLUTION AUTHORIZING ABATEMENT OF UTILITY BILLING CERTIFICATIONS
IN THE AMOUNT OF \$1,095.98**

WHEREAS, the City Council adopted Resolution 2023-160 certifying delinquent utility accounts; and

WHEREAS, five of the property identification numbers were no longer active due to the properties being subdivided for development;

Parcel Number	Subdivision	Certification Amount
03.027.21.21.0002	Northwick Park	\$221.89
03.027.21.22.0002	Cardinal Reserve	\$190.83
03.027.21.24.0003	Ravine Meadows	\$245.12
03.027.21.41.0008	Glacial Valley	\$191.85
08.027.21.24.0002	Villas of Hidden Valley	\$246.29

NOW THEREFORE BE IT RESOLVED, the City Council of the City of Cottage Grove, County of Washington, State of Minnesota, abates utility billing certifications in the amount of \$1,095.98.

Passed this 7th Day of February 2024.

Myron Bailey, Mayor

Attest:

Tamara Anderson, City Clerk



City Council Action Request

7.L.

Meeting Date	2/7/2024				
Department	Public Safety				
Agenda Category	Action Item				
Title	HERO Center Joint Powers Agreement (JPA) Amendments				
Staff Recommendation	Approve the second amended Joint Powers Agreement between the City of Cottage Grove and the City of Woodbury for the East Metro Public Safety Training Facility (HERO Center).				
Budget Implication	N/A				
Attachments	<table><tr><td>1.</td><td>Second Amendment to JPA for HERO Center - redline</td></tr><tr><td>2.</td><td>Second Amendment to JPA for HERO Center - clean</td></tr></table>	1.	Second Amendment to JPA for HERO Center - redline	2.	Second Amendment to JPA for HERO Center - clean
1.	Second Amendment to JPA for HERO Center - redline				
2.	Second Amendment to JPA for HERO Center - clean				



TO: Honorable Mayor and City Council
Jennifer Levitt, City Administrator

FROM: Pete Koerner

DATE: February 7, 2024

RE: HERO Center Joint Powers Agreement (JPA) Amendments

Discussion

The City of Cottage Grove and City of Woodbury entered into the Joint Powers Agreement to operate the HERO Center in 2018. It has only been amended once, in 2019. The JPA has been serving the parties very well since its original adoption.

We recently inquired with the League of Minnesota Insurance Trust (LMCIT) if it would insure the HERO Center as its own entity. After its initial review of the JPA, LMCIT declined, and raised some questions about whether the HERO Center was truly acting as a joint powers entity, or if the real decision-making authority rested with the two cities. City Attorney Kori Land spoke with the attorney at LMCIT about the practices and operations of the HERO Center and was able to explain that the governing Board (FOC) has the authority to make all operational decisions, enter into contracts, approve spending, adopt a budget, etc. Based on the actual operations, LMCIT agreed that the HERO Center met the requirements of a “joint powers entity” for insurance purposes. However, if the HERO Center intends to carry its own coverages, then LMCIT suggested some changes to the JPA to make it clearer that it truly acts as a joint power entity.

For insurance coverages, the HERO Center could carry liability, property and Work Comp. coverages. The covered parties would include the HERO Center itself, its employees, the FOC, the two cities, the City Councils, and city employees. Currently Cottage Grove carries the Work Comp. coverage and if the employees remain employees of Cottage Grove, then the Work Comp. coverage remains with the City of Cottage Grove. If the FOC decides at some point in the future to hire the employees under the entity of the HERO Center, then the HERO Center would need to add Work Comp coverage to the insurance package.

As long as we were reviewing the JPA to incorporate the suggested revisions from LMCIT, it seemed appropriate to remove outdated provisions in the agreement at this time. To that end, we proposed the following revisions:

Insurance Related Revisions:

- Article III Section 3.7: The additional listed powers provide reassurance to LMCIT that the JPA creates an insurable joint powers entity.
- Article V Section 5.5: This new language makes it clear that each parties' employees are covered by their own Work Comp. claims.
- Article VI, Section 6.1: LMCIT insures both cities and has an exclusion in each city's policy for claims that arise out of a JPA. Therefore, the HERO Center must agree to defend and indemnify the individual members of the JPA.
- Article VII, Section 7.1: When there is a 3rd party claim that is covered by insurance, LMCIT will appoint an attorney to defend the HERO Center, so this provision stating that the parties will recommend an attorney is unnecessary.
- Article IX: Insurance: This was added by LMCIT to list the specific insurance coverages required.

Other Recommended Revisions:

- Article V, Delete Sections 5.1 and 5.2. We recommend deleting these sections, which were solely related to the construction of the facility. This also allows the deletion of Exhibit A, which identified the Project Costs.
- Article V, Delete Section 5.6 and Revise 5.7. These sections were specific to the operating budget for calendar years 2018, 2019 and 2020. Now that there is an established cost-sharing formula, we can simplify the language.
- Article XV, Delete Section 15.10: Delete the reference to the 2016 Memorandum of Understanding.

On January 17, 2024, at the HERO Center's Facility Operation Committee (FOC) meeting, City Attorney Kori Land presented the suggested revisions to the JPA. Woodbury's City Attorney also reviewed. After discussion, the FOC unanimously approved the revisions to the JPA and recommended sending to each City's Councils.

Recommendation

Approve the second amended Joint Powers Agreement between the City of Cottage Grove and the City of Woodbury for the East Metro Public Safety Training Facility (HERO Center).

Attachments

1.	Second Amendment to JPA for HERO Center - redline
2.	Second Amendment to JPA for HERO Center - clean

**SECOND AMENDED JOINT POWERS AGREEMENT
BETWEEN THE CITY OF COTTAGE GROVE AND THE CITY OF WOODBURY
FOR THE EAST METRO PUBLIC SAFETY TRAINING FACILITY (HERO CENTER)**

THIS SECOND AMENDED JOINT POWERS AGREEMENT, (“Agreement”) is made and entered into as of the _____ day of _____, 2024, (“Effective Date”) by and between the City of Cottage Grove (“Cottage Grove”), a Minnesota municipal corporation, and the City of Woodbury (“Woodbury”), a Minnesota municipal corporation (each sometimes hereinafter called “Party” and both sometimes collectively called “Parties”).

RECITALS

- A. The Parties entered into a Memorandum of Agreement on April 28, 2016 for the operation, maintenance, design and construction of the East Metro Public Safety Training Facility (now known as the Health and Emergency Response Occupations Center or “HERO Center”), and a Joint Powers Agreement Between the City of Cottage Grove and the City of Woodbury for the East Metro Public Safety Training Facility, dated August 2018, (“Joint Powers Agreement”) which was amended by the First Amended Joint Powers Agreement Between the City of Cottage Grove and the City of Woodbury for the East Metro Public Safety Training Facility, dated November 6, 2019 (“First Amended Joint Powers Agreement”) for the joint use, responsibility and ownership of the HERO Center; and
- B. The Parties now desire to amend the First Amended Joint Powers Agreement regarding insurance-related articles to provide clarity of responsibilities and to remove obsolete provisions that are no longer relevant.

NOW THEREFORE, in consideration of the mutual promises and agreements contained herein and the authority provided by Minnesota Statutes, Section 471.59 to enter into this Second Amendment, the Parties hereby agree that the Joint Powers Agreement and First Amended Joint Powers Agreement are hereby replaced in their entirety as follows:

**ARTICLE I
USE AND OWNERSHIP**

- 1.1 The HERO Center shall be used as a regional public safety training center to meet the training and skills development needs of multiple municipal law enforcement and emergency responder agencies, the regional medical community and state university partners. The HERO Center will allow for technical and advance training of police and emergency responders and allow for the Parties to work in collaboration for other pre-employment, continuing education and various in-service trainings.
- 1.2 The HERO Center will be constructed on real property located in the City of Cottage Grove, legally described as Lot 1, Block 1, HERO Center Addition, Washington County, Minnesota (“the Property”), which is owned by Cottage Grove.

- 1.3 The HERO Center will be jointly and equally maintained, operated and managed by Cottage Grove and Woodbury, subject to the specific rights and obligations related to the use of the HERO Center as specified in this Agreement.

Cottage Grove will own the HERO Center, including all buildings, physical structures, all equipment, fixtures and furnishings to the extent required by the MMB Grant Agreement.

1.4

ARTICLE II TERM

- 2.1 The initial Term of the Agreement shall be for a period of 10 years, commencing on August 21, 2018 (“Commencement Date”) and ending on August 22, 2028 (“Initial Term”). This Agreement shall be automatically renewed for additional 5-year terms, unless Cottage Grove notifies Woodbury, or Woodbury notifies Cottage Grove, in writing of cancellation at least one year prior to the expiration of the Initial Term or any renewal term, or unless it is otherwise terminated in accordance with this Agreement.

ARTICLE III FACILITY OPERATIONS COMMITTEE

- 3.1 There shall be a Facility Operations Committee (“Committee”) with six (6) members consisting of the City Administrator from each Party, the public safety director from each Party and one (1) city staff member from each Party, or their designees.
- 3.2 The purpose of the Committee is to coordinate the joint use and operation of the HERO Center. The Committee is authorized to exercise such authority as is necessary and proper to fulfill its purpose and perform its duties, as provided in this Agreement or as directed by the city councils of each Party. The Committee is charged with developing a Facility Operations Plan that must be adopted by each city council. Once a Facility Operations Plan is adopted, the Committee or designees from each Party are responsible for the day-to-day operations of the HERO Center and responsible for the effective and responsive day-to-day coordination of activities in the HERO Center, consistent with the requirements of this Agreement and the Facility Operations Plan.
- 3.3 Each member shall serve until replaced as determined by the City Administrators.
- 3.4 A quorum of the Committee shall consist of four (4) members, not less than two members from each city.
- 3.5 The Committee shall annually appoint a Chair to preside at all meetings. The Chair shall alternate between a Cottage Grove representative and a Woodbury representative each year.
- 3.6 Each member of the Committee shall have one (1) vote on any matter presented for approval. In matters of a tie vote, that item shall not be deemed as approved. The Committee shall meet as needed, but must meet at least one time per year. It may adopt such rules of procedure as

it deems necessary.

- 3.7 The Committee may hire employees, apply for, and receive grants, and enter into contracts, including agreements for the purchase and rental of real or personal property, incur expenses and make expenditures necessary and incidental to the effectuation of its purpose and consistent with its powers. The Committee's ongoing duties include, but are not limited to: meeting annually to review and recommend updates for the Facility Operations Plan; recommending an administrator or manager of the HERO Center; recommending the pay plan for employees who work at the HERO Center; monitoring the finances, including but not limited to, regular budget to actual expenditures, for the operations of the HERO Center; approve agreements for the operations, care and management of the HERO Center; advising the City Administrators on related financial matters as deemed appropriate; to resolve disputes that may arise with regard to the Facility Operations Plan or issues that may not be addressed therein; to coordinate fees for the Parties as well as for other users; and to bring issues or recommendations to the attention of each Parties for informational purposes or for approval to oversee the maintenance, management and use of the HERO Center; and to recommend an annual budget and a capital improvement plan to the City Administrators.

ARTICLE IV FACILITY OPERATIONS PLAN

- 4.1 The Facility Operations Committee will develop a written Facility Operations Plan for the day-to-day use and operation of the HERO Center, including, but not limited to: cost sharing and allocation percentages of received revenues above Operating Costs; appropriate users; the use of the space for events; the use and maintenance of the common areas; the use by one Party of the other Party's space; hours of operation; reservations and financial procedures; custodial and housekeeping responsibilities and standards; building access; procedures for reviewing and recommending capital improvements; policies for gifts, donations and grants for the HERO Center; and other issues necessary for coordinating the efficient and effective operation of the HERO Center.
- 4.2 The Facility Operations Plan shall be annually reviewed and updated as necessary by the Facility Operations Committee.
- 4.3 The Facility Operations Committee shall establish a schedule of uniform fees for the use of the HERO Center by users other than the Parties, as well as the use of the revenues resulting from the fees. Such fees and revenue shall be set forth in the Facility Operations Plan.
- 4.4 Both Parties have equal authority and fiscal responsibility for the exterior maintenance of the HERO Center; exterior and interior repair of the HERO Center; and the long-term maintenance of the HERO Center (e.g. a new roof or furnace) and future capital improvements. Each Party may provide input with regard to such decisions through the Facility Operations Committee and as necessary, the city councils. Needed repair caused by the negligence or intentional acts of one Party, its employees and users will be paid for by the negligent Party. A capital improvement made for the sole benefit of one Party shall be paid for by the benefiting Party.

ARTICLE V FINANCIAL CONTRIBUTIONS

~~5.1 Construction Management. Cottage Grove will enter into construction contract(s) for the construction of the HERO Center and will provide all management services and be the primary point of contact during the construction. Change orders that increase the cost beyond the Project Costs shall not be allowed without written consent of each Party. Cottage Grove will use ordinary and prudent efforts to ensure that the HERO Center is constructed in compliance with approved plans and specifications and completed with all reasonable promptness in accordance with the construction contracts and schedule adopted pursuant thereto. During construction, Woodbury representatives will be given access to the construction site at reasonable times.~~

~~5.2 Project Costs. "Project Costs" means all costs related to the real property, construction and equipping of the HERO Center.~~

~~5.2.1 Each Party shall equally contribute toward the Project Costs, as identified on Exhibit A, attached hereto. Cottage Grove shall be given a credit toward its portion of the Project Costs for its contribution of the fair market value of the Property and public infrastructure improvements, in the amount of \$1,500,000.~~

~~5.2.2 Woodbury agrees to reimburse Cottage Grove for its portion of the Project Costs within 30 days after receiving an invoice from Cottage Grove.~~

~~5.2.3 Neither Party shall be allowed to withdraw from the Agreement until such Project Costs are paid in full. In addition to Cottage Grove's retention of the amount of Project Costs already paid, any remaining amount to be paid by Woodbury for the Project Costs shall be immediately due and payable if:~~

~~5.2.3.1 Woodbury terminates this Agreement prior to the Initial Term; or~~

~~5.2.3.2 Cottage Grove notifies Woodbury that it intends to terminate this Agreement because Woodbury has failed to make a payment required by this Agreement and within 30 days of receiving such notice, Woodbury has not paid the amount due or notified Cottage Grove that it disputes the amount due. Failure to dispute an amount due within 30 days waives the dispute.~~

~~5.2.4 The Parties agree that Project Costs shall not constitute an Operating Cost and all payments made by Woodbury as part of Project Costs shall not be treated as revenue.~~

5.35.1 Operating Costs. "Operating Costs" means all expenses and costs incurred and normally required with respect to the repair, replacement, maintenance and operation of the HERO Center, including the equipment, improvements, sidewalks, driveways and parking lots. It includes, but is not limited to the following:

5.3.45.1.1 Wages, salaries, benefits and related expenses of all on-site employees engaged in the operation, management, maintenance and security of the HERO Center;

5.3.25.1.2 All supplies and materials used in the operation and maintenance of the HERO Center;

5.3.35.1.3 Cost of utilities, including, but not limited to water, sewer, heating, lighting, electricity, air conditioning and ventilation for the HERO Center;

5.3.45.1.4 Maintenance and service agreements for the HERO Center, including the maintenance, service and replacement of any equipment or parking lots;

5.3.55.1.5 Costs of all insurance for the HERO Center, including, but not limited to premiums, deductibles and the costs to purchase and maintain fire, property, casualty and liability insurance;

5.3.65.1.6 Any and all common area maintenance costs related to the public areas of the HERO Center, including but not limited to all bathrooms, sidewalks, landscaping, driveways and service areas;

5.3.75.1.7 All taxes, special assessments or similar charges, ordinary and extraordinary, foreseen and unforeseen of any kind which are assessed, levied, charged, confirmed or imposed by any public authority upon the HERO Center, its operation or on the Property;

5.3.85.1.8 Capital expenditures, including, but not limited to, the cost to maintain, repair or replace all structural components of the HERO Center, fixtures, equipment and site improvements on the Property.

5.3.95.1.9 Woodbury agrees to reimburse Cottage Grove for its portion of the Operating Costs within 30 days after receiving an invoice from Cottage Grove.

5.4 Annual Budget. On or before June 30th of each year, the Facility Operations Committee shall approve and submit an annual operating budget ("Operating Budget") to each City Administrator for the estimated revenue and Operating Costs for the HERO Center for the upcoming calendar year.

5.55.2

5.6 ~~For the 2018 and 2019 Operating Budgets, each Party's share of the Operating Costs shall be determined by dividing the authorized number of full time sworn peace officers as of April 30, 2018, by the total number of authorized full time sworn peace officers of both Parties to fix the percentage share ("Percentage Share") of each Party and then multiplying the Percentage Share times the Operating Costs, as identified in the Operating Budget.~~

5.75.3 To determine the 2020 Operating Budget, each Party's share of the Operating Costs shall be determined by dividing the authorized number of full time sworn peace officers as of April

~~30th, 2019. For each year thereafter, each Party's share of the Operating Costs shall be determined by dividing the authorized number of full time sworn peace officers as of April 30th of the previous year by the total number of authorized full time sworn peace officers of both Parties to fix the percentage share ("Percentage Share") of each Party and then multiplying the Percentage Share times the Operating Costs, as identified in the Operating Budget. This shall be known as the "Equity Formula".~~

~~5.85.4~~ Any revenues derived from the operations and management of the HERO Center shall be retained within the HERO Operating Fund.

~~5.95.5~~ In carrying out their respective obligations under this Agreement, each Party shall be responsible for payment to their own employees. Employees carrying out such obligations shall remain employees of their respective Party and all such employees shall remain under the direction and control of their employer. Each Party shall be responsible for injuries to or death of its own personnel. Each Party will maintain workers' compensation insurance or self-insurance coverage, covering its own personnel. Each Party waives the right to, and agrees that it will not, bring any claim or suit against the HERO Center or the other Party for any workers' compensation benefits paid to its own employee or dependents, that arise out of HERO Center operations or activities, even if the injuries were caused wholly or partially by the negligence of any other Party or its officers, employees, or volunteers.

~~5.105.6~~ Unanticipated Expenses. "Unanticipated Expenses" are expenditures that are not included in the Operating Budget but are necessary for the continued operation of the HERO Center. The Facility Operations Committee shall attempt to meet and determine the necessity of approving and incurring an Unanticipated Expense. If such meeting is not possible in a timely manner and approval of the Unanticipated Expense is considered critical and time-sensitive Cottage Grove shall have sole discretion in approving and incurring an Unanticipated Expense. Each Party agrees to pay its Percentage Share of all Unanticipated Expenses approved prospectively or retroactively by the Facility Operations Committee. Cottage Grove will invoice Woodbury for its portion of the approved Unanticipated Expenses and payment will be due within 30 days after receiving an invoice from Cottage Grove.

ARTICLE VI INDEMNIFICATION

6.1 The HERO Center agrees to defend and indemnify the Parties for any liability claims arising from HERO Center activities or operations, and decisions of the Committee. Nothing in this Agreement shall constitute a waiver of the statutory limits on liability set forth in Minnesota Statutes, Chapter 466 or a waiver of any available immunities or defenses. For purposes of determining total liability for damages, both Parties are considered a single governmental unit, pursuant to the authority in Minn. Stat. 471.59, subd. 1a(b), and the total liability for the Parties shall not exceed the limits on governmental liability for a single governmental unit as specified in Minnesota Statutes, Section 466.04 subd. 1. Nothing herein shall be construed to provide insurance coverage or indemnification to an officer, employee, or volunteer of any party for any act or omission for which the officer, employee, or volunteer is guilty of malfeasance in office, willful neglect of duty, or bad faith. Each Party to this Agreement shall

~~be liable for its own acts, the acts of its officers, employees and agents and the results thereof to the extent authorized by law and shall not be responsible for the acts of the other Party, its officers, employees or agents. For purposes of determining total liability for damages, both Parties are considered a single governmental unit, pursuant to the authority in Minn. Stat. 471.59, subd. 1a(b), and the total liability for the Parties shall not exceed the limits on governmental liability for a single governmental unit as specified in Minnesota Statutes, Section 466.04 subd. 1. Each Party hereby agrees to indemnify, hold harmless and defend the other, its officers, employees and agents against any and all liability, loss, costs, damages, expenses, claims or actions, including attorney's fees which the other, its officers, employees or agents may hereafter sustain, incur or be required to pay, arising out of or by reason of any act or omission of the Party, its officers, employees or agents, in the execution, performance, or failure to adequately perform its obligations pursuant to this Agreement. Minnesota Statutes Chapter 466 will govern each Party's liability.~~ Any excess or uninsured liability shall be borne equally by all the Parties, but this does not include the liability of any individual officer, employee, or agent which arises from his or her own malfeasance, willful neglect of duty, or bad faith.

ARTICLE VII THIRD-PARTY CLAIMS

- 7.1 "Claims" as used in this paragraph, means all third-party claims, losses, damages and expenses, including attorney's fees, resulting from personal injury, death, violation of civil rights, and/or property damage.

~~The Parties agree that one attorney may represent both Parties in any third-party claims brought against both Parties, even though there may be a dispute regarding the share of liability for each of the Parties.~~

ARTICLE VIII DISPUTE RESOLUTION

- 8.1 In the event the Parties are unable to reach agreement regarding interpretation of the rights and obligations of the Parties under this Agreement, the Parties shall submit to non-binding mediation prior to the initiation of litigation. The mediator shall be a disinterested third party with professional training in alternative dispute resolution who is mutually agreeable to the Parties. Mediation shall commence within 15 days after receipt of notice of the dispute, unless otherwise agreed to by the Parties.

ARTICLE IX INSURANCE

- 9.1 ~~The Parties agree that in order to protect themselves under the terms of this Agreement, including the indemnity provisions set forth above, Cottage Grove shall procure and maintain policies of insurance covering all term(s) of this Agreement, including Section 9.3 below, which shall include Woodbury as an additional insured. Such policies of insurance shall apply~~

~~to the extent of, but not as a limitation upon or in satisfaction of, the indemnity provisions herein. The costs of such insurance shall be considered an Operating Cost.~~The Committee will maintain liability coverage with the League of Minnesota Cities Insurance Trust ("LMCIT") with a limit of at least \$2,000,000 per occurrence, under standard LMCIT liability coverage forms.

9.2 As an alternative to Section 9.1, the Committee may maintain equivalent private liability insurance coverage. Such private liability insurance policies must comply with the following requirements:

9.2.1 Each policy shall have a limit of at least \$2,000,000 per occurrence. If a policy contains general aggregate limit, the general aggregate limit shall not be less than \$2,000,000.

9.2.2 The liability insurance shall cover liability arising from premises, operations, independent contractors, products-complete operations, personal injury and advertising injury, and contractually-assumed liability.

9.2.3 Each Party, and each Party's officers, employees, and volunteers, shall be named as additional covered parties on each policy for all claims arising from HERO Center activities or operations.

9.3 The Committee may in its discretion procure coverage for auto liability and damage to or loss of property. If the Committee at any time hires employees, it will immediately acquire and maintain workers' compensation coverage.

~~9.19.4~~ During the term(s) of this Agreement, if the HERO Center is damaged by an insured event, the proceeds from the insurance will be used to restore the HERO Center, unless otherwise agreed to by the Parties.

~~9.29.5~~ In the event of termination of this Agreement, the Parties agree that ~~Cottage Grove~~the HERO Center shall purchase tail coverage for up to seven (7) years beyond the date of termination, the costs of which shall be paid according to its Percentage Share of the Operating Costs.

ARTICLE X WITHDRAWAL AND TERMINATION

10.1 Neither Party shall be allowed to withdraw from this Agreement during the Initial Term. Following the Initial Term, Woodbury may withdraw from this Agreement by sending a written notice of withdrawal at least one year in advance to the authorized representative of Cottage Grove.

- 10.2 If Woodbury withdraws, Cottage Grove may elect to continue or dissolve the HERO Center. Cottage Grove shall notify Woodbury during the one-year notice period of its intent to continue or dissolve the HERO Center. If Cottage Grove chooses to dissolve the HERO Center, Cottage Grove shall follow the procedures set forth in Section 3.01 of the MMB Grant Agreement and sell the HERO Center for fair market value. Proceeds from the sale shall be disbursed pursuant to Article IV of the MMB Grant Agreement. Any remaining proceeds after full disbursement pursuant to Article IV of the MMB Grant Agreement shall be disbursed to each Party according to the equity formula agreed to by the Parties.
- 10.3 If both Parties desire to dissolve the HERO Center, then Cottage Grove shall follow the procedures set forth in Section 3.01 of the MMB Grant Agreement to sell the HERO Center for fair market value. The proceeds from the sale shall be disbursed pursuant to Article IV of the MMB Grant Agreement. Any remaining proceeds after full disbursement is made in order to comply with Article IV of the MMB Grant Agreement shall be disbursed to each Party according to the equity formula agreed to by the Parties.
- 10.4 If Woodbury elects to withdraw from this Agreement under this Article:
- 10.4.1 Woodbury shall send a written notice of withdrawal to the Cottage Grove authorized representative specifying the effective date of withdrawal and containing a copy of Woodbury's action approving its withdrawal. Woodbury's withdrawal shall be effective on the last day of the fiscal year that Woodbury sends its notice of withdrawal, unless it specifies a later date in its notice. A notice of withdrawal may be rescinded at any time prior to the effective date of the withdrawal.
- 10.4.2 Woodbury shall be responsible for its proportionate share of outstanding Operating Costs of the HERO Center through the end of the calendar year in which it gives notice of intent to withdraw, including continuing liability coverage for Woodbury's acts during the Agreement.
- 10.4.3 Woodbury shall not be relieved of responsibility for any foreseen or unforeseen liabilities that may have accrued while it was a Party, including, but not limited to the cost of clean-up of any hazardous substance from the HERO Center or the Property upon which it is located.
- 10.4.4 Woodbury shall have no claim to any assets of the HERO Center, including but not limited to movable and non-movable fixtures, infrastructure, or equipment, fees, revenues or rents collected.
- 10.4.5 Woodbury shall cooperate with Cottage Grove and shall use its best efforts to achieve an orderly and efficient transfer of responsibilities for maintenance and operations.

ARTICLE XI

FORCE MAJEURE

Neither Party shall be held responsible for delay or failure to perform when such delay or failure is due to any of the following unless the act or occurrence could have been foreseen and reasonable action could have been taken to prevent the delay or failure: fire, flood, epidemic, strikes, wars, acts of God, unusually severe weather, acts of public authorities, or delays or defaults caused by public carriers; provided the defaulting Party gives notice as soon as possible to the other Party of the inability to perform.

ARTICLE XII DEFAULT AND TERMINATION

12.1 The following shall constitute events of default:

12.1.1 Any payment required by this Agreement remains unpaid for 30 days after written notice; or

12.1.2 Failure to comply with any terms and conditions of this Agreement, which failure continues for 30 days after written notice.

12.2 Upon the occurrence of any of the events of default, a non-defaulting Party may elect to exercise any of the following remedies at law or in equity, the exercise of one remedy not precluding the exercise of any other available remedy:

12.2.1 Termination of the Agreement and recovery of damages, including, but not limited to paying or refunding of unpaid portions of Operating Costs pursuant to the Facility Operations Plan, paying or refunding any Project Costs or any paying or refunding of other sums of money as may be determined fair and equitable by the court having jurisdiction over the matter.

~~12.2.2~~ If the default cannot be cured by the expenditure of money, then specific performance may be required by a court of law.

ARTICLE XIII AUTHORIZED REPRESENTATIVES

The following named persons are designated the Authorized Representatives of the Parties for purposes of this Agreement. These persons have authority to bind the Party they represent and to consent to modifications and subcontracts, except that, as to the Parties, the authorized representative shall have only the authority specifically or generally granted by the respective city councils. Notification required to be provided pursuant to this Agreement must be provided to the following named persons and addresses unless otherwise stated in this Agreement, or in a modification of this Agreement.

Cottage Grove: Cottage Grove City Administrator
12800 Ravine Parkway
Cottage Grove, MN 55016

Woodbury: Woodbury City Administrator
8301 Valley Creek Road
Woodbury, MN 55125

ARTICLE XIV NOTICES

All notices and demands by either Party to the other, must be in writing and must be made by personal service or certified mail (postage prepaid and return receipt requested). Notice must be given to each Party's Authorized Representative.

ARTICLE XV GENERAL PROVISIONS

- 15.1 Modification of this Agreement. Unless otherwise specified in this Agreement, any alterations, variations, modifications, or waivers of the provisions of this Agreement shall only be valid when they have been reduced to writing and approved by the city councils of Cottage Grove and Woodbury, or their respective designees.
- 15.2 Assignment. Neither Party may assign its rights or obligations under this Agreement without the prior written consent of the other Party.
- 15.3 Compliance with Laws/Standards. The Parties shall abide by all Federal, State or local laws, statutes, ordinances, rules and regulations now in effect or hereafter adopted pertaining to this Agreement or to the facilities, programs and staff for which they are responsible.
- 15.4 Minnesota Law to Govern. This Agreement shall be governed by and construed in accordance

with the substantive and procedural laws of the State of Minnesota, without giving effect to the principles of conflict of laws. All proceedings related to this Agreement shall be venued in Washington County District Court.

- 15.5 Waiver. Waiver of any default shall not be deemed to be a waiver of any subsequent default. Waiver of breach of any provision of this Agreement shall not be construed to be modification for the terms of this Agreement unless stated to be such in writing and signed by authorized representatives of each Party.
- 15.6 Severability. The provisions of this Agreement shall be deemed severable. If any part of this Agreement is rendered void, invalid, or unenforceable, such rendering shall not affect the validity and enforceability of the remainder of this Agreement unless the part or parts which are void, invalid or otherwise unenforceable shall substantially impair the value of the entire Agreement with respect to either Party.
- 15.7 Time is of the Essence. Failure by a Party to perform its obligations in a timely manner may be considered by the other Party as a material breach.
- 15.8 MMB Grant Agreement Prevails. The Parties acknowledge the existence of the MMB Grant Agreement, which imposes further conditions and restrictions upon the construction, ownership, use and operation of the HERO Center, and agree that the terms and conditions of the MMB Grant Agreement shall prevail over any inconsistent terms in this Agreement. Special provisions include, but are not limited to the following:
- 15.8.1 The Parties agree, upon direction from the Commissioner of Minnesota Management and Budget (“Commissioner”), to take such actions and furnish such documents as the Commissioner deems necessary to ensure that the interest to be paid on the G.O. Bonds is exempt from federal taxation.
- 15.8.2 Woodbury and Cottage Grove agree not to create or allow, without the prior written consent of the State of Minnesota and the Commissioner, any voluntary lien or encumbrance or involuntary lien or encumbrance that can be satisfied by the payment of monies and which is not being actively contested against the HERO Center property or the HERO Center, Cottage Grove’s ownership interest in the HERO Center Property or the HERO Center or Woodbury’s or Cottage Grove’s shared interest in this Agreement, whether such lien or encumbrance is superior or subordinate to the Declaration. Provided, however, the State and the Commissioner will consent, in writing, to any such lien or encumbrance that secures the repayment of a loan the repayment of which will not impair or burden the funds needed to operate the portion of the HERO Center Property and the HERO Center that is the subject of this Agreement in the manner specified in MMB Grant Agreement Section 2.04 and for which the entire amount is used (i) to acquire additional real estate that is needed to so operate the HERO Center Property and the HERO Center in accordance with the requirements imposed under MMB Grant Agreement Section 2.04 and will be included in and as part of Cottage Grove’s ownership interest in the HERO Center Property and the HERO Center, and/or (ii) to pay for

capital improvements that are needed to so operate the HERO Center Property and the HERO Center in accordance with the requirements imposed under MMB Grant Agreement Section 2.04.

15.9 The Recitals are incorporated herein and made part of this Agreement.

~~15.10 The Memorandum of Understanding entered into on April 28, 2016 is hereby terminated upon the Effective Date of this Agreement.~~

[remainder of page intentionally blank]

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the day and year first above written.

CITY OF COTTAGE GROVE

By: _____
Myron Bailey
Mayor

By: _____
Tamara Anderson
City Clerk

Dated: _____

CITY OF WOODBURY

By: _____
Anne Burt
Mayor

By: _____
Clinton P. Gridley
City Administrator

Dated: _____

|

EXHIBIT A

PROJECT COSTS

HERO CENTER						
Project budget						
Funding sources:	Budget w/o land	Land Costs	MMB	Woodbury	Cottage Grove	
MMB	8,750,000	750,000	750,000			750K to CG
City of Woodbury	4,375,000	375,000		375,000		375K to CG
City of Cottage Grove	4,375,000	375,000			375,000	
	17,500,000	1,500,000	750,000	375,000	375,000	
Other funding sources:						
SWWD grant	152,000					
SWCTC Virtual training funding	577,000					
	729,000					
Total Funding Sources	18,229,000	City Contributions:		Woodbury	Cottage Grove	
Funding uses:		Budget w/o land		4,375,000	4,375,000	
Land	-	Land Costs		375,000	375,000	
Construction	17,483,750	Land Reimb from MMB			(750,000)	
1% for the arts	175,000	Land Reimb from Woodbury			(375,000)	
Fees - Park dedication	48,000	CG Portion of Land already paid for			(375,000)	
SAC	37,250					
construction testing	50,000	Respective Bond Issuance Amount		4,750,000	3,250,000	
low voltage-card access	50,000					
office furniture - procure/install	22,000					
conference room etc. - procure/install	12,000					
training furniture - procure/install	65,000					
lobby furniture	15,000					
workbenches	2,000					
Simulator - procure/install	200,000					
3rd party commissioning	39,000					
building envelope & curtainwall testing	10,000					
Contingency	20,000					
Total Funding Uses	18,229,000					
Other project costs incurred not included in funding:						
legal & title - DCA	2,284					
BRKW appraisal	2,200					
legal - Cottage Grove	1,738					
survey work	31,851					
lobbyist	40,000					
interact group	20,000					
	98,073					

**SECOND AMENDED JOINT POWERS AGREEMENT
BETWEEN THE CITY OF COTTAGE GROVE AND THE CITY OF WOODBURY
FOR THE EAST METRO PUBLIC SAFETY TRAINING FACILITY (HERO CENTER)**

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- A. The Parties entered into a Memorandum of Agreement on April 28, 2016 for the operation, maintenance, design and construction of the East Metro Public Safety Training Facility (now known as the Health and Emergency Response Occupations Center or “HERO Center”), and a Joint Powers Agreement Between the City of Cottage Grove and the City of Woodbury for the East Metro Public Safety Training Facility, dated August 2018, (“Joint Powers Agreement”) which was amended by the First Amended Joint Powers Agreement Between the City of Cottage Grove and the City of Woodbury for the East Metro Public Safety Training Facility, dated November 6, 2019 (“First Amended Joint Powers Agreement”) for the joint use, responsibility and ownership of the HERO Center; and
- B. The Parties now desire to amend the First Amended Joint Powers Agreement regarding insurance-related articles to provide clarity of responsibilities and to remove obsolete provisions that are no longer relevant.

NOW THEREFORE, in consideration of the mutual promises and agreements contained herein and the authority provided by Minnesota Statutes, Section 471.59 to enter into this Second Amendment, the Parties hereby agree that the Joint Powers Agreement and First Amended Joint Powers Agreement are hereby replaced in their entirety as follows:

**ARTICLE I
USE AND OWNERSHIP**

- 1.1 The HERO Center shall be used as a regional public safety training center to meet the training and skills development needs of multiple municipal law enforcement and emergency responder agencies, the regional medical community and state university partners. The HERO Center will allow for technical and advance training of police and emergency responders and allow for the Parties to work in collaboration for other pre-employment, continuing education and various in-service trainings.
- 1.2 The HERO Center will be constructed on real property located in the City of Cottage Grove, legally described as Lot 1, Block 1, HERO Center Addition, Washington County, Minnesota (“the Property”), which is owned by Cottage Grove.

- 1.3 The HERO Center will be jointly and equally maintained, operated and managed by Cottage Grove and Woodbury, subject to the specific rights and obligations related to the use of the HERO Center as specified in this Agreement.
- 1.4 Cottage Grove will own the HERO Center, including all buildings, physical structures, all equipment, fixtures and furnishings to the extent required by the MMB Grant Agreement.

ARTICLE II TERM

- 2.1 The initial Term of the Agreement shall be for a period of 10 years, commencing on August 21, 2018 (“Commencement Date”) and ending on August 22, 2028 (“Initial Term”). This Agreement shall be automatically renewed for additional 5-year terms, unless Cottage Grove notifies Woodbury, or Woodbury notifies Cottage Grove, in writing of cancellation at least one year prior to the expiration of the Initial Term or any renewal term, or unless it is otherwise terminated in accordance with this Agreement.

ARTICLE III FACILITY OPERATIONS COMMITTEE

- 3.1 There shall be a Facility Operations Committee (“Committee”) with six (6) members consisting of the City Administrator from each Party, the public safety director from each Party and one (1) city staff member from each Party, or their designees.
- 3.2 The purpose of the Committee is to coordinate the joint use and operation of the HERO Center. The Committee is authorized to exercise such authority as is necessary and proper to fulfill its purpose and perform its duties, as provided in this Agreement or as directed by the city councils of each Party. The Committee is charged with developing a Facility Operations Plan that must be adopted by each city council. Once a Facility Operations Plan is adopted, the Committee or designees from each Party are responsible for the day-to-day operations of the HERO Center and responsible for the effective and responsive day-to-day coordination of activities in the HERO Center, consistent with the requirements of this Agreement and the Facility Operations Plan.
- 3.3 Each member shall serve until replaced as determined by the City Administrators.
- 3.4 A quorum of the Committee shall consist of four (4) members, not less than two members from each city.
- 3.5 The Committee shall annually appoint a Chair to preside at all meetings. The Chair shall alternate between a Cottage Grove representative and a Woodbury representative each year.
- 3.6 Each member of the Committee shall have one (1) vote on any matter presented for approval. In matters of a tie vote, that item shall not be deemed as approved. The Committee shall meet as needed, but must meet at least one time per year. It may adopt such rules of procedure as it deems necessary.

- 3.7 The Committee may hire employees, apply for, and receive grants, and enter into contracts, including agreements for the purchase and rental of real or personal property, incur expenses and make expenditures necessary and incidental to the effectuation of its purpose and consistent with its powers. The Committee's ongoing duties include, but are not limited to: meeting annually to review and recommend updates for the Facility Operations Plan; recommending an administrator or manager of the HERO Center; recommending the pay plan for employees who work at the HERO Center; monitoring the finances, including but not limited to, regular budget to actual expenditures, for the operations of the HERO Center; approve agreements for the operations, care and management of the HERO Center; advising the City Administrators on related financial matters as deemed appropriate; to resolve disputes that may arise with regard to the Facility Operations Plan or issues that may not be addressed therein; to coordinate fees for the Parties as well as for other users; and to bring issues or recommendations to the attention of each Parties for informational purposes or for approval to oversee the maintenance, management and use of the HERO Center; and to recommend an annual budget and a capital improvement plan to the City Administrators.

ARTICLE IV FACILITY OPERATIONS PLAN

- 4.1 The Facility Operations Committee will develop a written Facility Operations Plan for the day-to-day use and operation of the HERO Center, including, but not limited to: cost sharing and allocation percentages of received revenues above Operating Costs; appropriate users; the use of the space for events; the use and maintenance of the common areas; the use by one Party of the other Party's space; hours of operation; reservations and financial procedures; custodial and housekeeping responsibilities and standards; building access; procedures for reviewing and recommending capital improvements; policies for gifts, donations and grants for the HERO Center; and other issues necessary for coordinating the efficient and effective operation of the HERO Center.
- 4.2 The Facility Operations Plan shall be annually reviewed and updated as necessary by the Facility Operations Committee.
- 4.3 The Facility Operations Committee shall establish a schedule of uniform fees for the use of the HERO Center by users other than the Parties, as well as the use of the revenues resulting from the fees. Such fees and revenue shall be set forth in the Facility Operations Plan.
- 4.4 Both Parties have equal authority and fiscal responsibility for the exterior maintenance of the HERO Center; exterior and interior repair of the HERO Center; and the long-term maintenance of the HERO Center (e.g. a new roof or furnace) and future capital improvements. Each Party may provide input with regard to such decisions through the Facility Operations Committee and as necessary, the city councils. Needed repair caused by the negligence or intentional acts of one Party, its employees and users will be paid for by the negligent Party. A capital improvement made for the sole benefit of one Party shall be paid for by the benefiting Party.

ARTICLE V FINANCIAL CONTRIBUTIONS

- 5.1 Operating Costs. “Operating Costs” means all expenses and costs incurred and normally required with respect to the repair, replacement, maintenance and operation of the HERO Center, including the equipment, improvements, sidewalks, driveways and parking lots. It includes, but is not limited to the following:
- 5.1.1 Wages, salaries, benefits and related expenses of all on-site employees engaged in the operation, management, maintenance and security of the HERO Center;
 - 5.1.2 All supplies and materials used in the operation and maintenance of the HERO Center;
 - 5.1.3 Cost of utilities, including, but not limited to water, sewer, heating, lighting, electricity, air conditioning and ventilation for the HERO Center;
 - 5.1.4 Maintenance and service agreements for the HERO Center, including the maintenance, service and replacement of any equipment or parking lots;
 - 5.1.5 Costs of all insurance for the HERO Center, including, but not limited to premiums, deductibles and the costs to purchase and maintain fire, property, casualty and liability insurance;
 - 5.1.6 Any and all common area maintenance costs related to the public areas of the HERO Center, including but not limited to all bathrooms, sidewalks, landscaping, driveways and service areas;
 - 5.1.7 All taxes, special assessments or similar charges, ordinary and extraordinary, foreseen and unforeseen of any kind which are assessed, levied, charged, confirmed or imposed by any public authority upon the HERO Center, its operation or on the Property;
 - 5.1.8 Capital expenditures, including, but not limited to, the cost to maintain, repair or replace all structural components of the HERO Center, fixtures, equipment and site improvements on the Property.
 - 5.1.9 Woodbury agrees to reimburse Cottage Grove for its portion of the Operating Costs within 30 days after receiving an invoice from Cottage Grove.
- 5.2 Annual Budget. On or before June 30th of each year, the Facility Operations Committee shall approve and submit an annual operating budget (“Operating Budget”) to each City Administrator for the estimated revenue and Operating Costs for the HERO Center for the upcoming calendar year.
- 5.3 To determine the Operating Budget, each Party’s share of the Operating Costs shall be

determined by dividing the authorized number of full time sworn peace officers as of April 30th of the previous year by the total number of authorized full time sworn peace officers of both Parties to fix the percentage share ("Percentage Share") of each Party and then multiplying the Percentage Share times the Operating Costs, as identified in the Operating Budget. This shall be known as the "Equity Formula".

- 5.4 Any revenues derived from the operations and management of the HERO Center shall be retained within the HERO Operating Fund.
- 5.5 In carrying out their respective obligations under this Agreement, each Party shall be responsible for payment to their own employees. Employees carrying out such obligations shall remain employees of their respective Party and all such employees shall remain under the direction and control of their employer. Each Party shall be responsible for injuries to or death of its own personnel. Each Party will maintain workers' compensation insurance or self-insurance coverage, covering its own personnel. Each Party waives the right to, and agrees that it will not, bring any claim or suit against the HERO Center or the other Party for any workers' compensation benefits paid to its own employee or dependents, that arise out of HERO Center operations or activities, even if the injuries were caused wholly or partially by the negligence of any other Party or its officers, employees, or volunteers.
- 5.6 Unanticipated Expenses. "Unanticipated Expenses" are expenditures that are not included in the Operating Budget but are necessary for the continued operation of the HERO Center. The Facility Operations Committee shall attempt to meet and determine the necessity of approving and incurring an Unanticipated Expense. If such meeting is not possible in a timely manner and approval of the Unanticipated Expense is considered critical and time-sensitive Cottage Grove shall have sole discretion in approving and incurring an Unanticipated Expense. Each Party agrees to pay its Percentage Share of all Unanticipated Expenses approved prospectively or retroactively by the Facility Operations Committee. Cottage Grove will invoice Woodbury for its portion of the approved Unanticipated Expenses and payment will be due within 30 days after receiving an invoice from Cottage Grove.

ARTICLE VI INDEMNIFICATION

- 6.1 The HERO Center agrees to defend and indemnify the Parties for any liability claims arising from HERO Center activities or operations, and decisions of the Committee. Nothing in this Agreement shall constitute a waiver of the statutory limits on liability set forth in Minnesota Statutes, Chapter 466 or a waiver of any available immunities or defenses. For purposes of determining total liability for damages, both Parties are considered a single governmental unit, pursuant to the authority in Minn. Stat. 471.59, subd. 1a(b), and the total liability for the Parties shall not exceed the limits on governmental liability for a single governmental unit as specified in Minnesota Statutes, Section 466.04 subd. 1. Nothing herein shall be construed to provide insurance coverage or indemnification to an officer, employee, or volunteer of any party for any act or omission for which the officer, employee, or volunteer is guilty of malfeasance in office, willful neglect of duty, or bad faith. Any excess or uninsured liability shall be borne equally by all the Parties, but this does not include the liability of any

individual officer, employee, or agent which arises from his or her own malfeasance, willful neglect of duty, or bad faith.

ARTICLE VII THIRD-PARTY CLAIMS

- 7.1 “Claims” as used in this paragraph, means all third-party claims, losses, damages and expenses, including attorney’s fees, resulting from personal injury, death, violation of civil rights, and/or property damage.

ARTICLE VIII DISPUTE RESOLUTION

- 8.1 In the event the Parties are unable to reach agreement regarding interpretation of the rights and obligations of the Parties under this Agreement, the Parties shall submit to non-binding mediation prior to the initiation of litigation. The mediator shall be a disinterested third party with professional training in alternative dispute resolution who is mutually agreeable to the Parties. Mediation shall commence within 15 days after receipt of notice of the dispute, unless otherwise agreed to by the Parties.

ARTICLE IX INSURANCE

- 9.1 The Committee will maintain liability coverage with the League of Minnesota Cities Insurance Trust (“LMCIT”) with a limit of at least \$2,000,000 per occurrence, under standard LMCIT liability coverage forms.
- 9.2 As an alternative to Section 9.1, the Committee may maintain equivalent private liability insurance coverage. Such private liability insurance policies must comply with the following requirements:
- 9.2.1 Each policy shall have a limit of at least \$2,000,000 per occurrence. If a policy contains general aggregate limit, the general aggregate limit shall not be less than \$2,000,000.
- 9.2.2 The liability insurance shall cover liability arising from premises, operations, independent contractors, products-complete operations, personal injury and advertising injury, and contractually-assumed liability.
- 9.2.3 Each Party, and each Party’s officers, employees, and volunteers, shall be named as additional covered parties on each policy for all claims arising from HERO Center activities or operations.
- 9.3 The Committee may in its discretion procure coverage for auto liability and damage to or loss of property. If the Committee at any time hires employees, it will immediately acquire and maintain workers’ compensation coverage.

- 9.4 During the term(s) of this Agreement, if the HERO Center is damaged by an insured event, the proceeds from the insurance will be used to restore the HERO Center, unless otherwise agreed to by the Parties.
- 9.5 In the event of termination of this Agreement, the Parties agree that the HERO Center shall purchase tail coverage for up to seven (7) years beyond the date of termination, the costs of which shall be paid according to its Percentage Share of the Operating Costs.

ARTICLE X WITHDRAWAL AND TERMINATION

- 10.1 Neither Party shall be allowed to withdraw from this Agreement during the Initial Term. Following the Initial Term, Woodbury may withdraw from this Agreement by sending a written notice of withdrawal at least one year in advance to the authorized representative of Cottage Grove.
- 10.2 If Woodbury withdraws, Cottage Grove may elect to continue or dissolve the HERO Center. Cottage Grove shall notify Woodbury during the one-year notice period of its intent to continue or dissolve the HERO Center. If Cottage Grove chooses to dissolve the HERO Center, Cottage Grove shall follow the procedures set forth in Section 3.01 of the MMB Grant Agreement and sell the HERO Center for fair market value. Proceeds from the sale shall be disbursed pursuant to Article IV of the MMB Grant Agreement. Any remaining proceeds after full disbursement pursuant to Article IV of the MMB Grant Agreement shall be disbursed to each Party according to the equity formula agreed to by the Parties.
- 10.3 If both Parties desire to dissolve the HERO Center, then Cottage Grove shall follow the procedures set forth in Section 3.01 of the MMB Grant Agreement to sell the HERO Center for fair market value. The proceeds from the sale shall be disbursed pursuant to Article IV of the MMB Grant Agreement. Any remaining proceeds after full disbursement is made in order to comply with Article IV of the MMB Grant Agreement shall be disbursed to each Party according to the equity formula agreed to by the Parties.
- 10.4 If Woodbury elects to withdraw from this Agreement under this Article:
- 10.4.1 Woodbury shall send a written notice of withdrawal to the Cottage Grove authorized representative specifying the effective date of withdrawal and containing a copy of Woodbury's action approving its withdrawal. Woodbury's withdrawal shall be effective on the last day of the fiscal year that Woodbury sends its notice of withdrawal, unless it specifies a later date in its notice. A notice of withdrawal may be rescinded at any time prior to the effective date of the withdrawal.
- 10.4.2 Woodbury shall be responsible for its proportionate share of outstanding Operating Costs of the HERO Center through the end of the calendar year in which it gives notice of intent to withdraw, including continuing liability coverage for Woodbury's acts during the Agreement.

10.4.3 Woodbury shall not be relieved of responsibility for any foreseen or unforeseen liabilities that may have accrued while it was a Party, including, but not limited to the cost of clean-up of any hazardous substance from the HERO Center or the Property upon which it is located.

10.4.4 Woodbury shall have no claim to any assets of the HERO Center, including but not limited to movable and non-movable fixtures, infrastructure, or equipment, fees, revenues or rents collected.

10.4.5 Woodbury shall cooperate with Cottage Grove and shall use its best efforts to achieve an orderly and efficient transfer of responsibilities for maintenance and operations.

ARTICLE XI FORCE MAJEURE

Neither Party shall be held responsible for delay or failure to perform when such delay or failure is due to any of the following unless the act or occurrence could have been foreseen and reasonable action could have been taken to prevent the delay or failure: fire, flood, epidemic, strikes, wars, acts of God, unusually severe weather, acts of public authorities, or delays or defaults caused by public carriers; provided the defaulting Party gives notice as soon as possible to the other Party of the inability to perform.

ARTICLE XII DEFAULT AND TERMINATION

12.1 The following shall constitute events of default:

12.1.1 Any payment required by this Agreement remains unpaid for 30 days after written notice; or

12.1.2 Failure to comply with any terms and conditions of this Agreement, which failure continues for 30 days after written notice.

12.2 Upon the occurrence of any of the events of default, a non-defaulting Party may elect to exercise any of the following remedies at law or in equity, the exercise of one remedy not precluding the exercise of any other available remedy:

12.2.1 Termination of the Agreement and recovery of damages, including, but not limited to paying or refunding of unpaid portions of Operating Costs pursuant to the Facility Operations Plan, paying or refunding any Project Costs or any paying or refunding of other sums of money as may be determined fair and equitable by the court having jurisdiction over the matter.

12.2.2 If the default cannot be cured by the expenditure of money, then specific performance may be required by a court of law.

ARTICLE XIII AUTHORIZED REPRESENTATIVES

The following named persons are designated the Authorized Representatives of the Parties for purposes of this Agreement. These persons have authority to bind the Party they represent and to consent to modifications and subcontracts, except that, as to the Parties, the authorized representative shall have only the authority specifically or generally granted by the respective city councils. Notification required to be provided pursuant to this Agreement must be provided to the following named persons and addresses unless otherwise stated in this Agreement, or in a modification of this Agreement.

Cottage Grove: Cottage Grove City Administrator
12800 Ravine Parkway
Cottage Grove, MN 55016

Woodbury: Woodbury City Administrator
8301 Valley Creek Road
Woodbury, MN 55125

ARTICLE XIV NOTICES

All notices and demands by either Party to the other, must be in writing and must be made by personal service or certified mail (postage prepaid and return receipt requested). Notice must be given to each Party's Authorized Representative.

ARTICLE XV GENERAL PROVISIONS

- 15.1 Modification of this Agreement. Unless otherwise specified in this Agreement, any alterations, variations, modifications, or waivers of the provisions of this Agreement shall only be valid when they have been reduced to writing and approved by the city councils of Cottage Grove and Woodbury, or their respective designees.
- 15.2 Assignment. Neither Party may assign its rights or obligations under this Agreement without the prior written consent of the other Party.
- 15.3 Compliance with Laws/Standards. The Parties shall abide by all Federal, State or local laws, statutes, ordinances, rules and regulations now in effect or hereafter adopted pertaining to this Agreement or to the facilities, programs and staff for which they are responsible.
- 15.4 Minnesota Law to Govern. This Agreement shall be governed by and construed in accordance

with the substantive and procedural laws of the State of Minnesota, without giving effect to the principles of conflict of laws. All proceedings related to this Agreement shall be venued in Washington County District Court.

- 15.5 Waiver. Waiver of any default shall not be deemed to be a waiver of any subsequent default. Waiver of breach of any provision of this Agreement shall not be construed to be modification for the terms of this Agreement unless stated to be such in writing and signed by authorized representatives of each Party.
- 15.6 Severability. The provisions of this Agreement shall be deemed severable. If any part of this Agreement is rendered void, invalid, or unenforceable, such rendering shall not affect the validity and enforceability of the remainder of this Agreement unless the part or parts which are void, invalid or otherwise unenforceable shall substantially impair the value of the entire Agreement with respect to either Party.
- 15.7 Time is of the Essence. Failure by a Party to perform its obligations in a timely manner may be considered by the other Party as a material breach.
- 15.8 MMB Grant Agreement Prevails. The Parties acknowledge the existence of the MMB Grant Agreement, which imposes further conditions and restrictions upon the construction, ownership, use and operation of the HERO Center, and agree that the terms and conditions of the MMB Grant Agreement shall prevail over any inconsistent terms in this Agreement. Special provisions include, but are not limited to the following:
- 15.8.1 The Parties agree, upon direction from the Commissioner of Minnesota Management and Budget (“Commissioner”), to take such actions and furnish such documents as the Commissioner deems necessary to ensure that the interest to be paid on the G.O. Bonds is exempt from federal taxation.
- 15.8.2 Woodbury and Cottage Grove agree not to create or allow, without the prior written consent of the State of Minnesota and the Commissioner, any voluntary lien or encumbrance or involuntary lien or encumbrance that can be satisfied by the payment of monies and which is not being actively contested against the HERO Center property or the HERO Center, Cottage Grove’s ownership interest in the HERO Center Property or the HERO Center or Woodbury’s or Cottage Grove’s shared interest in this Agreement, whether such lien or encumbrance is superior or subordinate to the Declaration. Provided, however, the State and the Commissioner will consent, in writing, to any such lien or encumbrance that secures the repayment of a loan the repayment of which will not impair or burden the funds needed to operate the portion of the HERO Center Property and the HERO Center that is the subject of this Agreement in the manner specified in MMB Grant Agreement Section 2.04 and for which the entire amount is used (i) to acquire additional real estate that is needed to so operate the HERO Center Property and the HERO Center in accordance with the requirements imposed under MMB Grant Agreement Section 2.04 and will be included in and as part of Cottage Grove’s ownership interest in the HERO Center Property and the HERO Center, and/or (ii) to pay for

capital improvements that are needed to so operate the HERO Center Property and the HERO Center in accordance with the requirements imposed under MMB Grant Agreement Section 2.04.

15.9 The Recitals are incorporated herein and made part of this Agreement.

[remainder of page intentionally blank]

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the day and year first above written.

CITY OF COTTAGE GROVE

By: _____
Myron Bailey
Mayor

By: _____
Tamara Anderson
City Clerk

Dated: _____

CITY OF WOODBURY

By: _____
Anne Burt
Mayor

By: _____
Clinton P. Gridley
City Administrator

Dated: _____



City Council Action Request

7.M.

Meeting Date 2/7/2024

Department Parks and Recreation

Agenda Category Action Item

Title Kingston Park Building Final Design Service Agreement

Staff Recommendation Authorize service agreement with Oertel Architects for Kingston Park Building Project final design services.

Budget Implication \$185,500 in 2025 CIP for project from the Park Improvement Fund

Attachments

1.	1-Memo-Kingston Plan Development
2.	Kingston Park Service Agreement



To: Honorable Mayor and City Council
Jennifer Levitt, City Administrator

From: Zac Dockter, Parks and Recreation Director

Cc:

Date: January 22, 2024

Subject: Kingston Park Building Final Design Service Agreement

Introduction

In January, City Council reviewed the Kingston Park building conceptual designs with the project team and responded favorably. City Council directed staff to prepare a service agreement for final design services with Oertel Architects.

Background

The Kingston Park conceptual design was thoroughly reviewed by the project team, stakeholder groups and City Council. The following modifications to the conceptual design have been recorded for incorporation into final design work:

1. Increase kitchenette serving window size to the outside.
2. Consider traffic flow for events that may utilize kitchenette and portable grills or food stations.
3. Maximize picnic space and flow.
4. Address site electrical needs for larger events including below surface outlets for food stations/trucks, audio setups or other mobile event needs.
5. Vertical entry monument received favorable response for its unique stature but imagery and/or words should be modified to perhaps include directional signage, art imagery or other unique elements. No extruding or climbable pieces should be on the sign.

Staff has worked with Oertel Architects to secure a proposal for final design services. The scope of services includes:

1. Design Development
2. Development of Construction Documents
3. Project Fee Projections

Exhibit A within the service agreement details the work, specialties and deliverables from each service scope listed above. The cost for architectural services is \$124,500.

Further, the proposal also includes cost estimates for bidding and construction administrative work should City Council order the project. These include:

1. Completion of Bidding Documents
2. Bidding Process Administration
3. Construction and Contract Administration

Costs for bidding and construction services is estimated at \$61,000. Because Oertel contracts engineering services, these fees are subject to change based on final project schedule. Without a firm construction schedule from the City, Oertel is protecting itself from a financial commitment that may be

impacted by a delayed construction start date. We would expect minimal increases to the proposed fees if the project is ordered within the next two years. If the project is delayed beyond two years, staff will negotiate this portion of the fee structure by comparing professional service rates to industry standards.

Staff Recommendation

Authorize service agreement with Oertel Architects for Kingston Park Building Project final design services.

AGREEMENT FOR PROFESSIONAL SERVICES

THIS AGREEMENT ("Agreement") is made and executed this ____ day of _____, 20____, by and between the City of Cottage Grove, 12800 Ravine Parkway, Cottage Grove, Minnesota 55016, ("City") and Oertel Architects, 1795 St. Clair Avenue, St. Paul, MN 55105 ("Consultant").

WHEREAS, the City has accepted the proposal of the Consultant for certain professional Services; and

WHEREAS, Consultant desires to perform the Services for the City under the terms and conditions set forth in this Agreement.

NOW THEREFORE, in consideration of the mutual consideration contained herein, it is hereby agreed as follows:

1. SERVICES.

- a. City agrees to engage Consultant as an independent contractor for the purpose of performing certain professional Services ("Services"), as defined in the following documents:

- i. A proposal dated January 22, 2024, incorporated herein as Exhibit A;
- ii. Kingston Park Conceptual Designs, incorporated herein as Exhibit B.

(Hereinafter "Exhibits.") Where terms and conditions of this Agreement and those terms and conditions included in the Exhibits specifically conflict, the terms of this Agreement shall apply.

- b. Consultant covenants and agrees to provide Services to the satisfaction of the City in a timely fashion, as set forth in the Exhibits, subject to Section 7 of this Agreement.

2. PAYMENT.

- a. City agrees to pay and Consultant agrees to receive and accept payment for Services as set forth in the Exhibits.
- b. Any changes in the scope of the work of the Services that may result in an increase to the compensation due the Consultant shall require prior written approval by the authorized representative of the City or by the City Council. The City will not pay additional compensation for Services that do not have prior written authorization.

- c. Consultant shall submit itemized bills for Services provided to City on a monthly basis. Bills submitted shall be paid in the same manner as other claims made to City.
3. TERM. The term of this Agreement is identified in the Exhibits. This Agreement may be extended upon the written mutual consent of the parties for such additional period as they deem appropriate, and upon the same terms and conditions as herein stated.
4. TERMINATION.
 - a. Termination by Either Party. This Agreement may be terminated by either party upon 30 days' written notice delivered to the other party to the addresses listed in Section 13 of this Agreement. Upon termination under this provision, if there is no default by the Consultant, Consultant shall be paid for Services rendered and reimbursable expenses until the effective date of termination.
 - b. Termination Due to Default. This Agreement may be terminated by either party upon written notice in the event of substantial failure by the other party to perform in accordance with the terms of this Agreement. The non-performing party shall have fifteen (15) calendar days from the date of the termination notice to cure or to submit a plan for cure that is acceptable to the other party.
5. SUBCONTRACTORS. Consultant shall not enter into subcontracts for any of the Services provided for in this Agreement without the express written consent of the City, unless specifically provided for in the Exhibits. The Consultant shall pay any subcontractor involved in the performance of this Agreement within the ten (10) days of the Consultant's receipt of payment by the City for undisputed services provided by the subcontractor.
6. STANDARD OF CARE. In performing its Services, Consultant will use that degree of care and skill ordinarily exercised, under similar circumstances, by reputable members of its profession in the same locality at the time the Services are provided. No warranty, express or implied, is made or intended by Consultant's undertaking herein or its performance of Services.
7. DELAY IN PERFORMANCE. Neither City nor Consultant shall be considered in default of this Agreement for delays in performance caused by circumstances beyond the reasonable control of the nonperforming party. For purposes of this Agreement, such circumstances include, but are not limited to, abnormal weather conditions; floods; earthquakes; fire; epidemics; war, riots, and other civil disturbances; strikes, lockouts, work slowdowns, and other labor disturbances; sabotage; judicial restraint; and inability to procure permits, licenses or authorizations from any local, state, or federal agency for any of the supplies, materials, accesses, or services required to be provided by either City or Consultant under this Agreement. If such circumstances occur, the nonperforming party shall, within a reasonable time of being prevented from performing, give written notice to the other party describing the circumstances preventing continued performance and the efforts being made to resume

performance of this Agreement. Consultant will be entitled to payment for its reasonable additional charges, if any, due to the delay.

8. CITY'S REPRESENTATIVE. The City has designated Zac Dockter, Parks and Recreation Director, to act as the City's representative with respect to the Services to be performed under this Agreement. He or she shall have complete authority to transmit instructions, receive information, interpret, and define the City's policy and decisions with respect to the Services covered by this Agreement.
9. PROJECT MANAGER AND STAFFING. The Consultant has designated Andrew Cooper, Principal to be the primary contact for the City in the performance of the Services. They shall be assisted by other staff members as necessary to facilitate the completion of the Services in accordance with the terms established herein. Consultant may not remove or replace these designated staff without the approval of the City.
10. INDEMNIFICATION.
 - a. Consultant and City each agree to indemnify, and hold harmless each other, its agents and employees, from and against legal liability for all claims, losses, damages, and expenses to the extent such claims, losses, damages, or expenses are caused by its negligent acts, errors, or omissions. In the event claims, losses, damages, or expenses are caused by the joint or concurrent negligence of Consultant and City, they shall be borne by each party in proportion to its own negligence.
 - b. Consultant shall indemnify City against legal liability for damages arising out of claims by Consultant's employees. City shall indemnify Consultant against legal liability for damages arising out of claims by City's employees.
11. INSURANCE. During the performance of the Services under this Agreement, Consultant shall maintain the following insurance:
 - a. General Liability Insurance, with a limit of \$2,000,000 for any number of claims arising out of a single occurrence;
 - b. Professional Liability Insurance, with a limit of \$2,000,000 for any number of claims arising out of a single occurrence.
 - c. Workers' Compensation Insurance in accordance with statutory requirements.
 - d. Automobile Liability Insurance, with a combined single limit of \$1,000,000 for each person and \$1,000,000 for each accident.

Consultant shall furnish the City with certificates of insurance, which shall include a provision that such insurance shall not be canceled without written notice to the City. The City shall be named as an additional insured on the General Liability Insurance policy.

12. OWNERSHIP OF DOCUMENTS. Professional documents, drawings, and specifications prepared by the Consultant as part of the Services shall become the property of the City when Consultant has been compensated for all Services rendered, provided, however, that Consultant shall have the unrestricted right to their use. Consultant shall retain its rights in its standard drawing details, specifications, databases, computer software, and other proprietary property. Rights to proprietary intellectual property developed, utilized, or modified in the performance of the Services shall remain the property of the Consultant.

13. NOTICES. Notices shall be communicated to the following addresses:

If to City: City of Cottage Grove
12800 Ravine Parkway
Cottage Grove, MN 55016
Attention: City Administrator

Or e-mailed:

If to Consultant: Oertel Architects
1795 St. Clair Avenue
St. Paul, MN 55105
Attn: Andrew Cooper, Principal

Or emailed:

14. INDEPENDENT CONTRACTOR STATUS. All services provided by Consultant, its officers, agents and employees pursuant to this Agreement shall be provided as employees of Consultant or as independent contractors of Consultant and not as employees of the City for any purpose.

15. GENERAL PROVISIONS.

- a. Assignment. This Agreement is not assignable without the mutual written agreement of the parties.
- b. Waiver. A waiver by either City or Consultant of any breach of this Agreement shall be in writing. Such a waiver shall not affect the waiving party's rights with respect to any other or further breach.
- c. Governing Law. This Agreement shall be construed in accordance with the laws of the State of Minnesota and any action must be venued in Washington County District Court.
- d. Amendments. Any modification or amendment to this Agreement shall require a written agreement signed by both parties.

- e. Severability. If any term of this Agreement is found be void or invalid, such invalidity shall not affect the remaining terms of this Agreement, which shall continue in full force and effect.
- f. Data Practices Compliance. All data collected by the City pursuant to this Agreement shall be subject to the Minnesota Government Data Practices Act, Minnesota Statutes, Chapter 13.
- g. Entire Agreement. This Agreement constitutes the entire agreement of the parties and supersedes all prior communications, understandings and agreements relating to the subject matter hereof, whether oral or written.

CITY OF COTTAGE GROVE

By: _____
Myron Bailey, Mayor

By: _____
Tamara Anderson, City Clerk

CONSULTANT

By:_____

Its:_____

Date:_____

City of Cottage Grove – Kingston Park Building.

Date: January 22, 2024

To: Zac Docter, Park and Recreation Director, City of Cottage Grove

CC:

Project: Kingston Park Pavilion Project

RE: Final Design Cost Proposals and Scope

Purpose

This memorandum is providing the City of Cottage Grove a fee proposal for “final design” phases to advance the accepted conceptual design for Kingston Park Building. This fee proposal will provide an overview to describe work efforts and tasks that are being assumed and included in the design scope to establish the proposed fee.

Project Understanding

The advancement of this project into “Final Design” is based on the City Council general acceptance of the conceptual design and desire to further advance the project. Oertel understands that funding for the construction of the project is not currently scheduled or available. However, there is a desire to advance the design further to provide a more detailed design that can result in a more detailed cost opinion to help facilitate funding the project for construction.

To that goal, Oertel is providing two separate design fees for Final Design milestones at 60% total design completion and 90% design completion. In both cases, full building engineering is being provided. This includes structural engineering, plumbing and HVAC engineering and electrical engineering. As discussed with city staff, site / civil engineering will be provided by City Staff where it will be required. Based on the scope of work proposed in the Conceptual Design process, the site / civil design work will be limited and much of the work can be incorporated into Architectural site plans. The level of engineering for each design milestone will be briefly described in the following scope of work description.

Scope of Work – Final Design Stages

60% Design Completion – Design Development

Project Coordination Activities

- Monthly Owner check-ins – 45 minute progress updates
- Bi-Weekly Design Team Progress Meetings – Coordination Meetings for Progress and Quality Control
- Coordination of Owner provided services.
 - Legal Survey (as required)

- Geotechnical Survey and Report
- Security / Low Voltage
- Communications (Fiber/IT/WiFi)
- Audio Visual Equipment
- Sustainability Design Charrette and Goal Setting
 - Initial Design meeting to set goals and objectives.
- Construction Cost Opinion

Architectural Design Activities

- Code analysis and Summary.
- Existing Site and Building Conditions, including general demolition, protection, and capping notes.
- Architectural Site Plan, including enlarged plans for detailed design scopes.
- Restoration and landscaping plans.
- Monument Sign / Signage Feature Design.
- Building Plans and Drawings
 - Floor Plans, including enlarged plans of critical areas.
 - Exterior Elevations, illustrating specific material choices and critical dimensions for scoping.
 - Building Sections, illustrating general construction methodology.
 - Wall Sections, illustrating construction methodology and critical details that will critically influence the potential cost of the work.
 - Interior Elevations, illustrating specific material choices and scope of interior finish.
 - Room Finish Schedule.

Structural Design Activities

The Conceptual Design illustrated a wood structure for columns, beams, and decking.

- Initial foundation size and schedule.
- Structural Grid Layout
- Wall Framing
- Initial Roof Framing and Column Support
- Initial Wood Beam Design and Decking designs and scoping potential
- Establishment of delegated design requirements

Mechanical / Electrical / Fire Protection Design Activities

For the design of these building systems, our design team has assumed that the building is a year-round operational facility. Thus, heating and cooling are required as part of the design, and thus

meeting Minnesota Energy Code will be required. Our team is assuming within this scope some initial analysis of renewable systems for review and pricing for inclusion into the building.

- MEP Systems Selection and Discussion
- Solar / PV panel layout and system potential study
- Geothermal Potential Analysis
- Initial Heating and Cooling Air Distribution and Return layouts.
- Plumbing layouts and fixture selection/scheduling
- Power and Lighting layout and Equipment sizing

90% Design Completion – Construction Documents

Project Coordination Activities

- Monthly Owner and Design Team Check-ins
- Construction Cost Opinion Update

Architectural Design Activities

- Advancement of all 60% performed deliverables.
- Building Plans and Drawings
 - All Drawings as previously noted.
 - Construction Details
 - Door Scheduling, including hardware consultation.
 - Security feature incorporation and coordination
 - Selection of final interior finishes
- Project Specifications and Manual

Structural Design Activities

- Final sizing of foundations
- Structural sections and details
- Structural specification review and redlining
- Scoping need for special inspections and construction testing (for budgetary purposes).

Mechanical / Electrical / Fire Protection Design Activities

- HVAC System detailing and coordination.
- Code Compliance (Com-Check)
- Fixture and equipment schedule (HVAC/Plumbing)
- Riser and Connection diagrams and details (Piping, Plumbing, and Power)
- Complete Schedules
- Project Specifications

Schedule

A tentative schedule could look like this: (Actual start date may vary and schedule is only for duration planning). **The schedule here assumes the full design scope of 90% is authorized at the onset of the project.** If the project is compartmentalized, the schedule would be extended.

Final Design Kick-Off Week of February 19th, 2024

60% Design – Design Development Up to 13 weeks

February 19 – May 10, 2024

Deliverable City Staff Review May 13-17, 2024.

Council Update Last Council Meeting in May 2024

90% Design – Construction Documents Up to 14 weeks

May 6 – August 2, 2024

Deliverable City Staff Review August 5-9, 2024.

Council Presentation Last Council Meeting in August 2024

Future Project Phases (For reference)

Complete Bid Documents – 100% Design and Bid Release 6 Weeks

Bidding and Acceptance 4 Weeks

Construction / Contract Administration 32 Weeks

Project Team

Oertel Architects Architecture / Sustainable Design Coordination

Andrew Cooper, Principal / Project Manager Primary Project Contact

Maddy Peters, Design Lead Primary design production

Jensen Reusch, Designer Deliverable development (plan graphics and 3-D imaging)

Janneke Schaap, Sustainability Coordinator & Designer Sustainable Design Lead

Meyer Borgman Johnson Structural Engineering

Emanuelson Podas Mechanical and Electrical Engineering

Scope of Fee

60% Design Completion \$66,350

Architecture	\$28,500
Sustainability Coordination	\$1,000
Structural Engineering	\$14,850
Mechanical and Electrical Engineering	\$16,000
Solar Study	\$3,000
Geothermal Feasibility Study	\$3,000

90% Design Completion \$57,400

Architecture	\$28,000
Sustainability Coordination	NIC
Structural Engineering	\$16,900
Mechanical and Electrical Engineering	\$12,500

Expenses \$750

This expense fee includes all expenses for mileage, deliverable production (printing / presentation boards, etc.)

Project Completion Fee Projections

Completion of Bid Documents	\$20,000*
Bidding Process	\$6,000*
Construction / Contract Administration	\$35,000*

***These fees are estimates. Oertel Architects did not solicit fees from engineers for these tasks. Fees are subject to schedule and rate increases for future time periods.**

For initial budgeting purposes at conceptual design, we anticipated a fee range between 13% - 15% of the construction cost. Our potential proposed total fee for final design through project construction and closeout as noted above is between 6% – 7% of the Conceptual Design Estimate.

Projects of this size and scope, while smaller in size and overall budget, still require design efforts similar to larger buildings, and often times with more care and attention to detail. Our fee proposed for this project is what we consider the minimum effort required and reflective of what we have engaged in recent similar projects currently under construction or completing construction.

Exclusions

The above fees and our proposed scope exclude the following:

1. Sustainable Building Rating or classification processes
2. Civil Engineering and Landscape Design (to be provided by City staff, coordinated by Oertel).
3. Special inspections and construction testing
4. Site survey
5. Regenerative energy source design (delegated to providers in bidding / construction phases).
6. Hazardous Material Assessment and Remediation coordination
7. Permit Fees and applications.

Conclusion

Our design team is extremely excited to continue to collaborate with you on this project. We have thoroughly enjoyed the process with Cottage Grove and look forward to advancing this project!

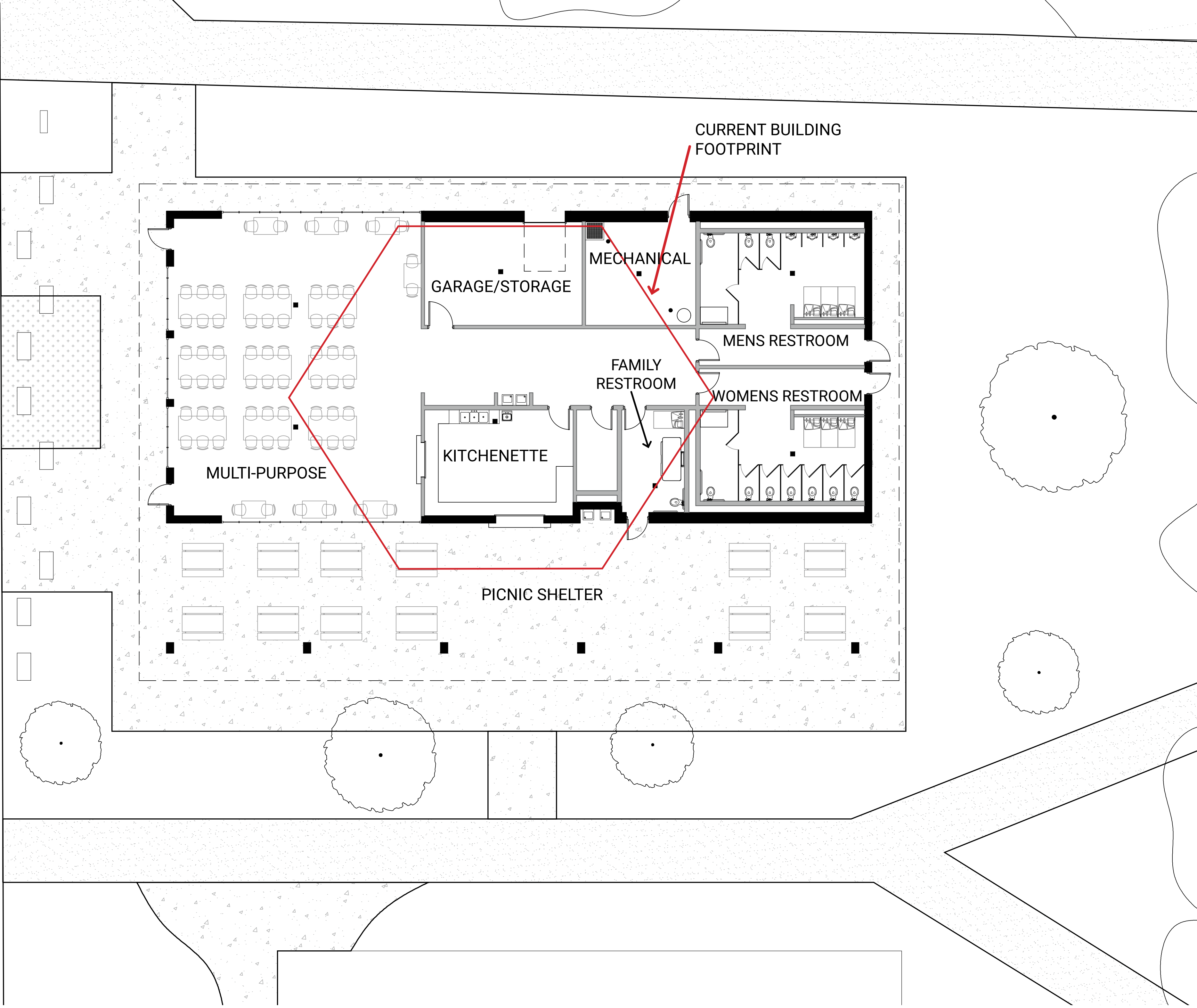
If you have any questions or need clarification, please contact me!

Sincerely,

Andrew Cooper, AIA – Principal, Oertel Architects

Accepted:

Signature / Printed Name / Title



PROPOSED PLAN

ENCLOSED BUILDING SF: 4,676
BUILDING W/ SHELTER SF: 8,034

EXISTING SITE



CURRENT PARK PAVILION





KINGSTON PARK





KINGSTON PARK





KINGSTON PARK





KINGSTON PARK





KINGSTON PARK





KINGSTON PARK





City Council Action Request

7.N.

Meeting Date	2/7/2024						
Department	Parks and Recreation						
Agenda Category	Action Item						
Title	Mississippi Dunes Building Concept Design						
Staff Recommendation	Authorize service agreement with ISG, Inc. for Mississippi Dunes building planning and concept design.						
Budget Implication	\$28,600 will be paid from the Park Trust Fund and the remainder from the CIP for park master planning.						
Attachments	<table><tr><td>1.</td><td>1-Memo - Concept Design Architect Agreement</td></tr><tr><td>2.</td><td>2-RFP - Dunes Building</td></tr><tr><td>3.</td><td>Dunes Architect Service Agreement Signed</td></tr></table>	1.	1-Memo - Concept Design Architect Agreement	2.	2-RFP - Dunes Building	3.	Dunes Architect Service Agreement Signed
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2.	2-RFP - Dunes Building						
3.	Dunes Architect Service Agreement Signed						



To: Honorable Mayor and City Council
Jennifer Levitt, City Administrator

From: Zac Dockter, Parks and Recreation Director

CC:

Date: February 1, 2024

Subject: Mississippi Dunes Building Concept Design Development

Introduction/Background

As active development plans for the former Mississippi Dunes Golf Course materialize, the park master plan for the site plays a critical role in the project's overall success. The 2021 Mississippi Dunes Park Master Plan does an excellent job of prioritizing and mapping recreational and natural amenities on the site. However, some site modifications have been proposed through development submittals. These modifications include a realignment of the entry road as well as an opportunity to acquire additional park property to the south and west of the original master planned site boundaries.

Because the building plays such a prominent role to the park site, staff is recommending development of concept designs. These concept designs will set the focus of the park site so that any planned parking lots, trails, landscaping and supporting recreational features can be tied together using the building as the activity hub. As concept plans are finalized, they can be used to steer direction for any potential site development and/or public improvements.

The staff project team highlights the following key directives to be considered during concept design:

1. Design focused on accentuating the natural and cultural history of the site.
2. Higher design standard than standard park inventory including accessibility designs.
3. Accentuate an adjacent picnic awning.
4. Public restrooms sized to serve smaller events and classroom style programs.
5. Standard multi-purpose room for year-round programming and rentals.
6. Small serving kitchen.
7. Natural and cultural interpretive elements inside the building.
8. Interpretive landscape design for beauty, education, functionality and habitat benefits.
9. Provision of options for environmentally friendly building features.

Staff completed a Request for Proposal process for concept design services in January. Proposals were reviewed and two architects, ISG and HGA, were interviewed by the staff project team on January 30. Both firm's proposals are included with this report, and both are well qualified for the project. After extensive review, the staff project team recommends the hiring of ISG for Mississippi Dunes concept design development.

Because this is a new park development, it is recommended that the \$28,600 project cost be paid from the Park Trust Fund. There is currently \$15,000 budgeted in the CIP from this funding source for park master planning.

Staff Recommendation

Authorize service agreement with ISG, Inc. for Mississippi Dunes building planning and concept design.



Proposal Request for Cottage Grove

Mississippi Dunes Park Reserve Building Conceptual Design

Objective

Hire an architectural consultant team to guide the City of Cottage Grove in developing conceptual designs for a future Mississippi Dunes Park Reserve building. The concept designs will guide park master planning for public recreational use, park land management, budgetary planning, and project/construction development.

Project Overview

Mississippi Dunes Park Reserve is approximately 30 acres of public park space with nearly 2,000 linear feet of Mississippi River shoreline. A park master plan exists for the site and is included with this request for proposal. The master plan provides both active recreational areas along with nearly 20 acres of habitat preservation. Additionally, this park is adjacent to the State of Minnesota's 238 acre Grey Cloud Dunes Scientific and Natural Area.

The building design is expected to reflect the unique characteristics of this site. The interior design should include interpretive elements that give nod to the natural and historical elements of the park. Exterior design should include outdoor recreational use connection opportunities (picnicking, resting, social areas, etc.) as well as complimentary interpretive and environmentally friendly landscaping.

Proposals will be accepted from multiple firms. Interviews may be scheduled based upon merit.

Scope of Services

1. *Planning and Programming* – Consultant team will identify and detail the size needs of spaces and provide appropriate calculations based on code requirements. Multiple meetings with the staff team may be needed to identify operational goals. Consultant will work intricately with staff and/or other project support consultants to review existing conditions to determine feasibility of construction. Inspirational imaging and comparable facilities should be presented to the staff team in early stages to understand aesthetic and building material/design goals that will support concept design.
2. *Concept Design* – Consultant will utilize planning, programming and response from aesthetic inspirations to develop at least two building/site plan options that fit within the context of

existing conditions. Review of those plans with the City project team as necessary to narrow scope to a preferred concept plan. Consultant will develop colored, three-dimensional renderings of the selected concept that shows context of building, form, material selection, site and patron use. The concept plan does not include any building engineering but verification of feasibility of construction elements is required.

3. *Final Design Phase and Construction Projections* – Consultant will provide the City with an analysis of project budget and final design/construction timeline.
4. *Schedule* – The City of Cottage Grove is expecting delivery of this project within 15 weeks of a kick-off meeting. That schedule may be modified as necessary based upon agreement between City and Consultant.

Proposal Approach and Work Plan

1. Provide written narrative based on the understanding of the project scope, goals and objectives.
2. Provide professional background of your firm including similar projects completed. Also include professional qualifications of those working on the project team.
3. Provide a detailed work plan identifying major project tasks, scope of work, City responsibilities and deliverables for each task.
4. Provide draft project schedule.
5. Provide professional fee quotation. Split fees into project phases. Include billable rates for service overages, reimbursable fees and any other potential fees that may impact final cost of the space needs study.

Proposal Submission

Submittals are due by January 17, 2024 at noon.

Please mail 4 hard copies or a digital file of the proposal to:

Cottage Grove Parks and Recreation
Attn: Zac Dockter
8635 W Pt Douglas Rd S
Cottage Grove, MN 55016
zdockter@cottagegrovemn.gov

AGREEMENT FOR PROFESSIONAL SERVICES

THIS AGREEMENT ("Agreement") is made and executed this 7th day of February, 2024, by and between the City of Cottage Grove, 12800 Ravine Parkway, Cottage Grove, Minnesota 55016, ("City") and ISG, Inc., 7900 International Drive, Suite 550, Minneapolis, MN 55425 ("Consultant").

WHEREAS, the City has accepted the proposal of the Consultant for certain professional Services; and

WHEREAS, Consultant desires to perform the Services for the City under the terms and conditions set forth in this Agreement.

NOW THEREFORE, in consideration of the mutual consideration contained herein, it is hereby agreed as follows:

1. SERVICES.

- a. City agrees to engage Consultant as an independent contractor for the purpose of performing certain professional Services ("Services"), as defined in the following documents:

- i. A proposal dated January 17, 2024, incorporated herein as Exhibit A;
- ii. Other documentation, incorporated herein as Exhibit B.

(Hereinafter "Exhibits.") Where terms and conditions of this Agreement and those terms and conditions included in the Exhibits specifically conflict, the terms of this Agreement shall apply.

- b. Consultant covenants and agrees to provide Services to the satisfaction of the City in a timely fashion, as set forth in the Exhibits, subject to Section 7 of this Agreement.

2. PAYMENT.

- a. City agrees to pay and Consultant agrees to receive and accept payment for Services as set forth in the Exhibits.
- b. Any changes in the scope of the work of the Services that may result in an increase to the compensation due the Consultant shall require prior written approval by the authorized representative of the City or by the City Council. The City will not pay additional compensation for Services that do not have prior written authorization.

- c. Consultant shall submit itemized bills for Services provided to City on a monthly basis. Bills submitted shall be paid in the same manner as other claims made to City.
3. TERM. The term of this Agreement is identified in the Exhibits. This Agreement may be extended upon the written mutual consent of the parties for such additional period as they deem appropriate, and upon the same terms and conditions as herein stated.
4. TERMINATION.
 - a. Termination by Either Party. This Agreement may be terminated by either party upon 30 days' written notice delivered to the other party to the addresses listed in Section 13 of this Agreement. Upon termination under this provision, if there is no default by the Consultant, Consultant shall be paid for Services rendered and reimbursable expenses until the effective date of termination.
 - b. Termination Due to Default. This Agreement may be terminated by either party upon written notice in the event of substantial failure by the other party to perform in accordance with the terms of this Agreement. The non-performing party shall have fifteen (15) calendar days from the date of the termination notice to cure or to submit a plan for cure that is acceptable to the other party.
5. SUBCONTRACTORS. Consultant shall not enter into subcontracts for any of the Services provided for in this Agreement without the express written consent of the City, unless specifically provided for in the Exhibits. The Consultant shall pay any subcontractor involved in the performance of this Agreement within the ten (10) days of the Consultant's receipt of payment by the City for undisputed services provided by the subcontractor.
6. STANDARD OF CARE. In performing its Services, Consultant will use that degree of care and skill ordinarily exercised, under similar circumstances, by reputable members of its profession in the same locality at the time the Services are provided. No warranty, express or implied, is made or intended by Consultant's undertaking herein or its performance of Services.
7. DELAY IN PERFORMANCE. Neither City nor Consultant shall be considered in default of this Agreement for delays in performance caused by circumstances beyond the reasonable control of the nonperforming party. For purposes of this Agreement, such circumstances include, but are not limited to, abnormal weather conditions; floods; earthquakes; fire; epidemics; war, riots, and other civil disturbances; strikes, lockouts, work slowdowns, and other labor disturbances; sabotage; judicial restraint; and inability to procure permits, licenses or authorizations from any local, state, or federal agency for any of the supplies, materials, accesses, or services required to be provided by either City or Consultant under this Agreement. If such circumstances occur, the nonperforming party shall, within a reasonable time of being prevented from performing, give written notice to the other party describing the circumstances preventing continued performance and the efforts being made to resume

performance of this Agreement. Consultant will be entitled to payment for its reasonable additional charges, if any, due to the delay.

8. CITY'S REPRESENTATIVE. The City has designated Zac Dockter to act as the City's representative with respect to the Services to be performed under this Agreement. He or she shall have complete authority to transmit instructions, receive information, interpret, and define the City's policy and decisions with respect to the Services covered by this Agreement.
9. PROJECT MANAGER AND STAFFING. The Consultant has designated Amanda Prosser to be the primary contact for the City in the performance of the Services. They shall be assisted by other staff members as necessary to facilitate the completion of the Services in accordance with the terms established herein. Consultant may not remove or replace these designated staff without the approval of the City.
10. INDEMNIFICATION.
 - a. Consultant and City each agree to indemnify, and hold harmless each other, its agents and employees, from and against legal liability for all claims, losses, damages, and expenses to the extent such claims, losses, damages, or expenses are caused by its negligent acts, errors, or omissions. In the event claims, losses, damages, or expenses are caused by the joint or concurrent negligence of Consultant and City, they shall be borne by each party in proportion to its own negligence.
 - b. Consultant shall indemnify City against legal liability for damages arising out of claims by Consultant's employees. City shall indemnify Consultant against legal liability for damages arising out of claims by City's employees.
11. INSURANCE. During the performance of the Services under this Agreement, Consultant shall maintain the following insurance:
 - a. General Liability Insurance, with a limit of \$2,000,000 for any number of claims arising out of a single occurrence;
 - b. Professional Liability Insurance, with a limit of \$2,000,000 for any number of claims arising out of a single occurrence.
 - c. Workers' Compensation Insurance in accordance with statutory requirements.
 - d. Automobile Liability Insurance, with a combined single limit of \$1,000,000 for each person and \$1,000,000 for each accident.

Consultant shall furnish the City with certificates of insurance, which shall include a provision that such insurance shall not be canceled without written notice to the City. The City shall be named as an additional insured on the General Liability Insurance policy.

12. OWNERSHIP OF DOCUMENTS. Professional documents, drawings, and specifications prepared by the Consultant as part of the Services shall become the property of the City when Consultant has been compensated for all Services rendered, provided, however, that Consultant shall have the unrestricted right to their use. Consultant shall retain its rights in its standard drawing details, specifications, databases, computer software, and other proprietary property. Rights to proprietary intellectual property developed, utilized, or modified in the performance of the Services shall remain the property of the Consultant.

13. NOTICES. Notices shall be communicated to the following addresses:

If to City: City of Cottage Grove
12800 Ravine Parkway
Cottage Grove, MN 55016
Attention: City Administrator

Or e-mailed:

If to Consultant: ISG
7900 International Drive, Suite 550
Minneapolis, MN 55425

Or emailed: amanda.prosser@isginc.com

14. INDEPENDENT CONTRACTOR STATUS. All services provided by Consultant, its officers, agents and employees pursuant to this Agreement shall be provided as employees of Consultant or as independent contractors of Consultant and not as employees of the City for any purpose.

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CITY OF COTTAGE GROVE

By: _____
Myron Bailey, Mayor

By: _____
Tamara Anderson, City Clerk

CONSULTANT

By: Amanda Prosser

Its: Vice President

Date: 1/30/2024

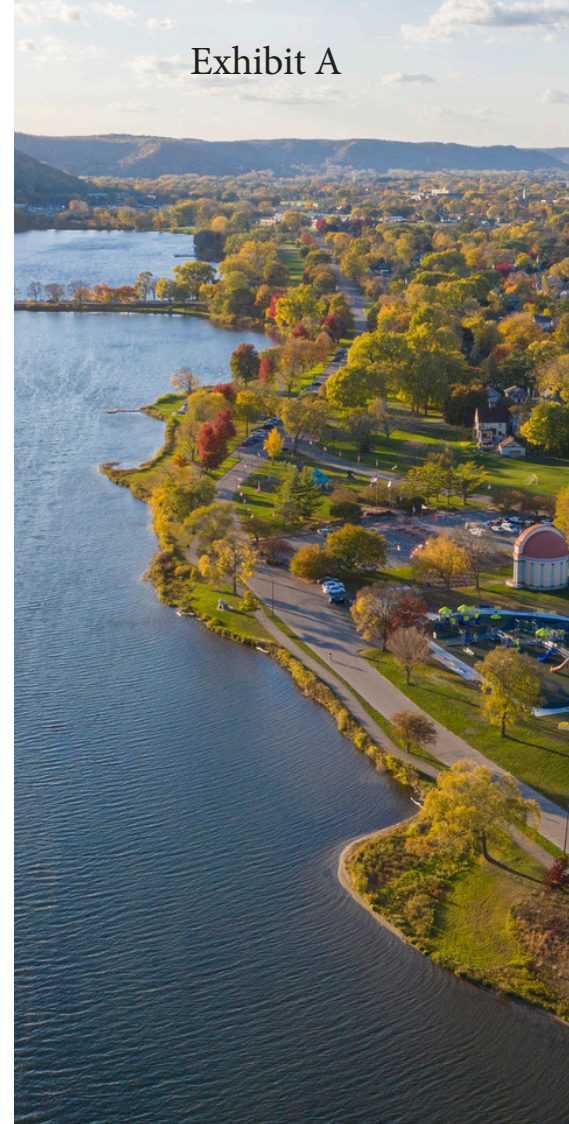


Exhibit A

Professional Services Proposal for

MISSISSIPPI DUNES PARK RESERVE BUILDING CONCEPTUAL DESIGN

January 17, 2024

FOR:

Zac Dockter
Parks and Recreation Director

City of Cottage Grove
8635 West Point Douglas Road South
Cottage Grove, MN 55016

651.458.2808
zdockter@cottagegrovemn.gov

FROM:

Adam Voth, AIA, Certified Revit Professional
Architect

ISG
7900 International Drive + Suite 550
Minneapolis, MN 55425

608.789.2034
Adam.Voth@ISGInc.com

Amanda Prosser, PLA
*Vice President, Sports + Recreation
Business Unit Leader*

952.426.0699
Amanda.Prosser@ISGInc.com

JANUARY 17, 2024

Zac Dockter

Parks and Recreation Director

Cottage Grove Parks
and Recreation
8635 West Point Douglas
Road South
Cottage Grove, MN 55016

651.458.2808

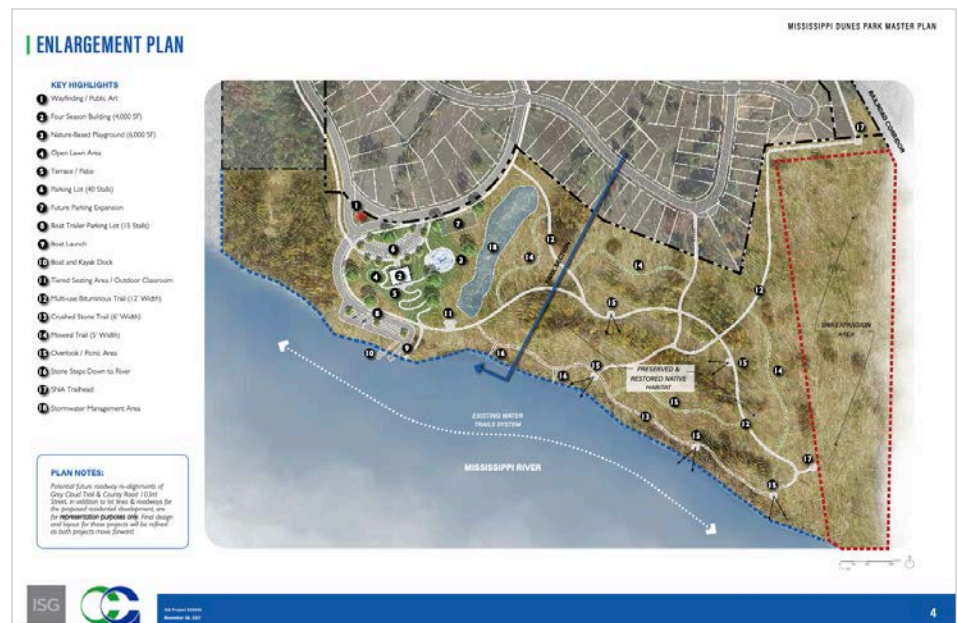
zdockter@cottagegrovemn.gov

RE: **Professional Services Proposal for Mississippi Dunes Park
Reserve Building Conceptual Design**
Cottage Grove, Minnesota

ISG

Zac,

As the City of Cottage Grove and ISG developed the Mississippi Dunes Master Plan together, we are excited to partner on this next phase of planning and development. The site of a former golf course adjacent to the Grey Cloud Dunes Scientific and Natural Area (SNA) offers a unique challenge and opportunity to rehabilitate, restore, and reconnect the community to the natural resource of the Mississippi River.



UNDERSTANDING

ISG understands that the City is seeking to engage an architectural consultant to assist in the development of conceptual designs for a future building within the Mississippi Dunes Park Reserve. Covering approximately 30 acres along the Mississippi River, the park includes active recreational areas and nearly 20 acres dedicated to habitat preservation. The conceptual building design, along with the previously completed master plan, will help guide the future development of the park.

The building design shall reflect the unique characteristics of the site, with an emphasis on integrating interpretive elements that highlight the natural and historical aspects of the park area. The exterior design will support outdoor recreational connections, such as picnicking and social areas, and incorporate native landscaping.

As a starting point to initiate conversations and ideas, we have generated a list of considerations as part of the planning effort:



Building Considerations

- New park building that is approximately 4,000 square feet that offers restrooms, storage, rentable gathering space, interpretive exhibits, etc.
- Introduce sustainable elements, systems, and natural materials (wood, stone, etc.) to complement existing site features and structures.
- Design an overhead shade structure and outdoor patio space(s) to offset and avoid blocking views from the interior community gathering spaces.
- Secure electronic card access and security cameras.
- Storage space for folding tables and chairs.
- Selection of flooring materials between spaces.
- Selection of roof materials, including sustainable options such as green roof systems and solar.
- Drinking fountain / bottle filler on the building, including a hose bib connection.
- Bird-friendly windows.

Site Considerations

- Light impact design, sensitive of proximity to Grey Cloud Dunes SNA.
- Park access location and entry road experience.
- Parking and circulation.
- Access to planned boat launch.
- Preserve views to the Mississippi River.
- Location of the building, orientation, egress and entry points, and integration within the existing landscape.
- Placement of the nature-based playground, open lawn areas, and terracing down to the river.
- Stormwater management and sustainability best practices.

Backed by multi-disciplinary professionals with vast parks and recreation industry experience, and a sound project understanding, ISG proposes to provide the following scope of services to meet your project needs.

SCOPE OF SERVICES

Phase 1: Project Kickoff + Programming

ISG will facilitate a kickoff meeting with the City to introduce team members, discuss project goals, and preferred processes and procedures. During this meeting, ISG will confirm project scope, timeline, and deliverables, and facilitate a visioning and programming discussion related to the building and surrounding site.



We will discuss the existing park system building inventory, user groups, needs, operations and maintenance, recreation programming, adjacent development considerations, site access, parking, sustainability, and overall vision and goals for Mississippi Dunes and Cottage Grove Park System.

A preliminary program will be developed, including approximate square footage and amenities needed to accommodate the community and meet desired capacities as provided by City staff. Additionally, other agency requirements and/or goals will be discussed to ensure they are included within the option as well.

Deliverables

- One (1) in-person City staff kickoff and programming meeting
- Meeting minutes
- Updated schedule
- Summary of proposed program and design standards, and agency requirements and goals

Phase 2: Conceptual Design

Based on information gathered in Phase 1, ISG will prepare two (2) sketch style concepts for the building and site, including product and material inspiration palletts. One (1) interior floor plan will be developed for each option to show general spatial organization and flow throughout the facility. One (1) schematic exterior elevation will be developed for each option to illustrate the proposed building opening locations and material selections. ISG will leverage our pre- and post-construction estimating expertise to prepare preliminary magnitude of cost to construct each option for comparison and informed decision making.

The schematic concepts will illustrate the park building interior and exterior spaces, access point(s), connections throughout the site, and adjacent outdoor amenities. A meeting with City staff will be facilitated to review the plan options and select a preferred plan.

Specific criteria affecting the concepts include:

- What are the ideal physical relationships between the proposed building and existing features on the site?
- What opportunities does the site present, and how can these be taken advantage of in the design?
- What plan layout and size of rooms will be the most functional for the requested program and number of expected visitors?
- What sustainable systems and elements can be incorporated into the overall design?
- What are the general concerns from a safety and ADA compliance standpoint that must be addressed?
- What general concerns or issues encountered from other park buildings do we want to address at this site?



Deliverables

- Concept Design Package
- One (1) in-person City Staff Review meeting
- Meeting minutes

Phase 3: Final Design Phase + Construction Projections

Once a preferred plan is identified, ISG will refine the design into a preliminary master plan. ISG will have a review meeting with City staff to present the preliminary master plan, including a preliminary opinion of probable cost, building floor plan and elevations, building and site materials palette exhibit. Once the preliminary master plan (site plan and floorplan) are approved, our team will develop up to three (3) 3D photo-realistic still images depicting bird's eye views and human level perspectives of the proposed facility.

The various scenes/views will be shared early on with the City to confirm all content is captured as desired. Once the renderings are complete, they will be emailed or uploaded to Bluebeam for the City to review and provide edits. One (1) comprehensive round of edits will be provided.

Deliverables

- Preliminary and Final Master Plan Package with one (1) round of revisions
- Three (3) 3D still image renderings
- Preliminary and final inspiration palettes
- Preliminary and final opinion of probable cost to construct
- Up to (2) virtual City staff review meetings
- Final design and construction timeline

City Responsibilities

At ISG, we view our projects as partnerships. To ensure the project adheres to the schedule and aligns with the City's desired due date, we require assistance in the following tasks and information gathering:

- Assistance with scheduling meetings
- Being responsive to requests and feedback
- Providing and gathering input / feedback
- Providing information regarding development of the area surrounding the park, etc.

PROPOSED SCHEDULE

ISG has the capacity to meet the desired deliverables schedule of 15 weeks from notice to proceed. The proposed schedule below outlines the tasks required in each phase. Note that the schedule assumes selection and contract approval of consultant in January.

- Phase 1: Project Kickoff + Programming - Early–Mid-February 2024
- Phase 2: Conceptual Design - Mid-February–Mid-March 2024
- Phase 3: Final Design Phase + Construction Projections - Mid-March–End of April

COMPENSATION

ISG proposes to provide the scope of work described within this proposal for compensation in accordance with the following schedule. Anticipated reimbursable expenses such as travel, mileage, and printing are included.

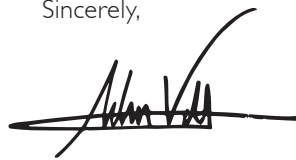
Phase	Compensation
Phase 1: Project Kickoff + Programming	\$5,600
Phase 2: Conceptual Design	\$12,000
Phase 3: Final Design Phase + Construction Projections	\$11,000
Total	\$28,600
Optional Additional Service	
In-person Meeting	\$900

ADDITIONAL SERVICES

ISG's goal for this proposal, like its services, is to be flexible with accommodating the requirements of this project. Upon request, ISG is able to provide a subsequent proposal to assist with additional professional design and construction phase services that will be necessary to facilitate this project as it moves forward.

ISG appreciates the opportunity to provide a solution tailored to the needs of the City of Cottage Grove. We look forward to providing you with responsive service, a collaborative approach, and timely delivery.

Sincerely,



Adam Voth, AIA, Certified Revit Professional
Architect



Amanda Prosser, PLA
Vice President,
Sports + Recreation Business Unit Leader

ATTACHMENTS

- Project Team
- Project Experience
- 2024 Hourly Rates

APPLICABLE CONTRACT

The General Terms and Conditions applicable to this Proposal are available at the link below and are hereby accepted and incorporated herein by reference. Upon acceptance of this Proposal, the parties can proceed with the project based on this signed Proposal, per its General Terms and Conditions, or for more complex projects, ISG, at its discretion, will prepare and require the use of an AIA or EJCDC Contract that will govern the project.

**General Terms + Conditions**

bit.ly/termsconditions_isg

ACKNOWLEDGMENT OF ACCEPTANCE

Accepted this _____ day of _____, 2024.

Company: _____
Print

Name: _____
Print

Title: _____
Print

Signature: _____

This proposal is valid for 30 days.

I PROJECT TEAM

Amanda Prosser, PLA

Vice President, Sports + Recreation
Business Unit Leader

ROLE: PRINCIPAL IN CHARGE



Amanda believes in design's power to enhance daily life, defining her nearly 20-year career as a Landscape Architect and leader of ISG's Sports and Recreation Business Unit. An outdoor enthusiast, she fosters authentic connections with her clients, who share her passion for holistic well-being.

With deep reverence for nature, she blends architectural and engineering design with the natural world, crafting inspiring landscapes. Whether urban plazas, trails, or community park facilities, her designs harmonize with surroundings. Her graphic design-rooted process employs high-level conceptual sketches that reflect intentional design and consider macro-level impacts. Projects such as Round Lake Park Building in Eden Prairie, MN and Glen Park in River Falls, WI, showcase how her big-picture planning skillset results in inviting and comfortable spaces.

EDUCATION

Bachelor of Landscape Architecture
Bachelor of Environmental Design
North Dakota State University
Fargo, ND

Adam Voth, AIA, Certified Revit Professional Architect



**ROLE: ARCHITECTURAL LEAD +
MAIN POINT OF CONTACT**

📍 Native of Cottage Grove

Having worked over eight years in the architecture industry, Adam has a vast range of project experience in the public sector. His design expertise includes government, cultural, sports, recreation, and education projects. Adam works directly with clients and team members through all phases of design, actively listening and identifying specific project requirements and broader contextual forces to establish the unique circumstances that inform and enhance each deliverable.

Adam approaches each project with the belief that architecture can create direct, meaningful impacts to all who engage with it. As a strong collaborator and communicator, Adam uses his architectural expertise to create thoughtful solutions for the communities ISG serves.

EDUCATION

Master of Architecture
Bachelor of Architecture
University of Minnesota
Minneapolis, MN

PROJECT EXPERIENCE

Mississippi Dunes Master Plan
Cottage Grove, MN

Round Lake Park Building
Eden Prairie, MN

Glen Park
River Falls, WI

Jay C. Hormel Nature Center
Austin, MN

PROJECT EXPERIENCE

Round Lake Park Building
Eden Prairie, MN

Onalaska Community Center
Onalaska, WI

Ney Nature Center
Henderson, MN

Winona Community Center Facility Study + Plan
Winona, MN

PROJECT TEAM

Brett Harris, PLA

Landscape Architect

ROLE: SITE DESIGN LEAD



Brett is a licensed landscape architect with over eight years of experience, specializing in parks and recreation design. He integrates a thorough understanding of natural resources at each site, guiding his design approach to optimize, enhance, and protect existing qualities. His expertise lies in crafting detailed site designs, with expertise in planting design for long-term growth and maintenance.

With a passion for innovative green infrastructure, Brett develops creative solutions that thrive in the built environment. His commitment to dynamic environments goes beyond aesthetics, creating spaces that connect people with nature while promoting habitat for pollinators and wildlife. Currently, Brett is driving engaging environments for the Mason City Bike Park, anticipated for completion in 2024.

EDUCATION

Master of Landscape Architecture

Illinois Institute of Technology

Chicago, IL

Bachelor of Environmental Design + Planning

University of Minnesota

Minneapolis, MN

Daniel Heckmann

Architectural Designer

ROLE: ARCHITECTURAL DESIGN SUPPORT



An emerging architect at ISG, Daniel is driven by a passion to make a meaningful impact. Viewing architecture as a catalyst for societal advancement, historical preservation, and cultural safeguarding, he uses the design process to positively influence the lives and environments of his clients. With a solid foundation in ethical, inclusive, and environmentally conscious design principles, he has contributed to numerous sports and recreation projects. His recent involvement in the indoor/outdoor expansion at the Children's Museum of Southern Minnesota reflects his commitment to enhancing user experiences.

Dan's design process is rooted in thorough research, experimentation, and the exploration of symbolism and intent. His personal passion for natural resources and horticulture aligns with his attraction to projects that seamlessly integrate science and architecture.

EDUCATION

Master of Architecture

Bachelor of Architecture

North Dakota State University

Fargo, ND

PROJECT EXPERIENCE

Mason City Bike Park

Mason City, IA

Hand Cut Hollow Campground

Bentonville, AR

Lundgaard Park

Appleton, WI

Meadows Park

Plymouth, MN

PROJECT EXPERIENCE

Children's Museum of Southern Minnesota

Mankato, MN

SCSU Husky Stadium Dome + Turf Replacement

St. Cloud, MN

Family + Children's Center Space Needs Assessment

La Crosse, WI

PROJECT EXPERIENCE



MISSISSIPPI DUNES MASTER PLAN

Cottage Grove, MN

Guiding a collaborative effort between multiple stakeholders, ISG led a unique and sensitive master planning process for the City of Cottage Grove, who recognized an opportunity to transform an abandoned golf course along the Mississippi River into a recreational waterfront destination in conjunction with plans for an adjacent residential development. Working closely with the City's Parks & Recreation and Planning Departments, ISG developed a conceptual master plan that parceled the site to meet various stakeholder needs and goals, while preserving and expanding the land's natural resources.

The primary element of the master plan was the riverfront public park design connecting people to the river, its many water trails, and new park amenities. Understanding that the City desired a more passive design approach to minimize land impact, ISG developed three concepts ranging from highly programmed options to more minimal site developments. The preferred concept clusters more active spaces around a new four-season park building, which includes parking, a nature-based playground, open lawn area, and terrace patio that takes advantage of the views to the Mississippi River. Closer to the river's edge, the boat launch and docks allow visitors to engage with the river in a way not previously possible. Further out, the site is minimally impacted, and simply enhanced with crushed stone and mowed trails, secluded picnicking nodes, and tiered stone river access points.



ROUND LAKE PARK BUILDING

Eden Prairie, MN

ISG worked with the City of Eden Prairie to develop a master plan to reimagine an existing park building scheduled for demolition near Round Lake. The new park building, which was completed in December 2023, supports a community event space for 50-75 people, provides restroom and changing room amenities for swimmers using the lake, nearby splash pad, and pool, and includes a warming house for winter activities. The modern park building was designed with angular forms and expansive windows to provide optimal views of the lake and park from every side of the building, including from the performance stage area that is used for the city's annual Fourth of July celebration. Wood elements and metal paneling provide a subtle tonal contrast and sophisticated aesthetic while blending into the natural themes of the park environment. **The design uses sustainable practices, including solar powered electrical systems, green roof fueled by stormwater, and geothermal technology.**

PROJECT EXPERIENCE



GLEN PARK

River Falls, WI

Glen Park nods to the history of the site through its architecture, dynamic natural landscapes, and recreation opportunities that include a series of nature and paved trails that connect to a greater trails system. With ISG's multi-disciplinary expertise and approach, the team was able to respect the history of the setting with traditional beauty and impart feedback from multiple stakeholder groups while providing expanded multi-generational amenities. Design included a FEMA-rated storm shelter with a four seasons pavilion, a splash pad, and pool and playground improvements. The reorganization of entry points, parking, and trail connections maximize available park space and minimize conflict between pedestrians and vehicles. Limited impact strategies were deployed to protect the extensive tree canopy. The team worked closely with the City to ensure design details and maintenance protocols supported long-term success. **Since construction, the park pavilion has seen enthusiastic approval by the community through frequent reservation, from weddings and class reunions to local classes and a high school gymnastics banquet. The City has tallied the pavilion's use at 219 reservations in 2021, and at 255 reservations in 2022—showing the great value of their investment.**

PROJECT EXPERIENCE



WEBSTER COUNTY NATURE CENTER

Fort Dodge, IA

Partnering with Webster County Conservation, ISG developed their Parks, Facilities, and Recreation Master Plan to maximize natural resources, support tourism, and revitalize the Des Moines riverfront. ISG's in-house planning team supported WCC with the submission of a \$4.5 million Destination Iowa Grant, allowing them to implement a nature play area, river walk, multiple water access points, and shoreline restoration. Construction of a new Webster County Nature Center is nearly completed, which will support community education, staffing growth, and city-wide redevelopment efforts.

Building designs for the center were oriented to take full advantage of the scenic Des Moines River views. Angled roof planes serve not only as a unique aesthetic feature, but direct water to bioretention cells that filter building and surface runoff before entering the river. Other sustainable design practices include native plantings, **high-efficiency HVAC system, occupancy and daylight sensors within the lighting system, and building preparation for future roof solar panels.** The 14,000-square foot building will serve as an **exhibition space to educate youth and visitors about water quality through interpretive displays that demonstrate** how water is treated before it enters waterways and the natural water cycle. The space also includes WCC administrative offices and indoor and outdoor classroom spaces to support student field trips and community gatherings.

PROJECT EXPERIENCE



JAY C. HORMEL NATURE CENTER

Austin, MN

From the beginning, the Jay C. Hormel Nature Center (JCHNC) and its 508-acre site was meant to inspire families to enjoy and appreciate the great outdoors. To demonstrate sustainability practices and educate visitors about the environment, ISG designed an interpretive center and developed a long-range master plan for phased site improvements.

Throughout the Center's design process, environmental values and sustainability goals shaped building plans. ISG incorporated energy and water efficiency practices, including an interconnected, ground mounted photovoltaic system to produce solar energy for the building. A ground loop geothermal system offers low maintenance, cost-effective heating/cooling. Educational opportunities throughout the space included habitat exhibits, live birds of prey, environmental interpretive signage, an aquarium containing Minnesota aquatic life, an early childhood space for sensory play, a natural history resource library, two classrooms, and a multi-purpose room.

With ideas for site development, JCHNC desired a long-range master plan to prioritize improvements and assist with budget planning. ISG facilitated an extensive engagement effort which garnered feedback focused on expanding programming opportunities to serve a wider demographic and draw in new users. The final master plan serves as a road map for annual improvements and provides direction regarding expansion and restoration efforts, additional programming, amenity improvements, and project phasing.

To complement the recently constructed Center, conceptual designs for the amphitheater integrated themes of natural wildlife and vegetation, and used natural materials such as river rock, wood/recycled lumber, and native plant materials. Cast stone tiered seating, a wood stage, and custom designed shade structures beautifully blend into the wild, picturesque landscape, offering visitors relaxing seating and gathering options. The conceptual designs for this reimagined amphitheater provide a compelling visual to help JCHNC staff fundraise to realize the vision.



NEY NATURE CENTER MASTER PLAN

Henderson, MN

The Ney Nature Center and Le Sueur County are collaborating on a park building project to enhance local engagement in nature programs, restoration initiatives, and community events. The site's rich history and nature amenities led to a linear building design for optimal views. The facility design prioritized accommodating large groups for events with a flexible layout for overflow seating and utilization of indoor and outdoor spaces. Accessibility improvements included an ADA trail around the pond and enhanced on-site parking for both vehicles and pedestrians. Programming challenges involved addressing topography issues around the pond and creating an ADA route. A zigzag-type trail was designed for an interactive stormwater educational experience, relying on existing topography for the pond trail. The playground was divided into flat and accessible spaces and areas inspired by natural play.

ISG presented the comprehensive master plan to the Ney Nature Center and Le Sueur County park boards, which emphasizes site views, linear layout, and accessibility. Recommendations focused on maximizing site views, adopting a linear layout to separate public and staff facilities, and balancing accessibility with topography challenges. Overflow parking within the proposed space was suggested to minimize impact, and stormwater collection systems were integrated to address elevation changes.

The client is securing grants to fund the project. The design aligns with the goals of Ney Nature Center and Le Sueur County and creatively addresses challenges, ensuring a sustainable integration of the building with the natural surroundings.

PROJECT EXPERIENCE



FLINT HILLS ATHLETIC COMPLEX PARK + TRAILHEAD BUILDING

Rosemount, MN



RESTFUL RETREAT FOR PARK
AND TRAIL USERS



MESKWAKI NATION RECREATION CENTER

Tama, IA

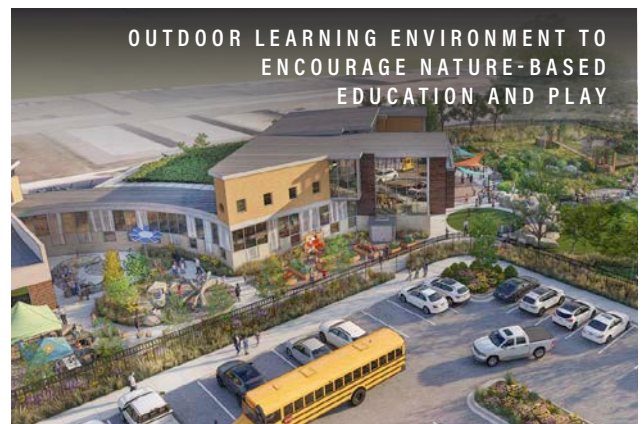


BUILDING AND SITE DESIGNED TO
HARMONIZE WITH NATURAL SURROUNDINGS



CHILDREN'S MUSEUM OF SOUTHERN MINNESOTA

Mankato, MN



OUTDOOR LEARNING ENVIRONMENT TO
ENCOURAGE NATURE-BASED
EDUCATION AND PLAY

STANDARD HOURLY RATES

Job Type	Hourly Rate	Job Type	Hourly Rate	Equipment	Hourly Rate
Administrative I-IV	\$75–145	Mechanical Engineer I-Senior	\$150–235	Survey Grade GPS/Robotics	\$62
Applied Technology Specialist I-Senior	\$105–160	Mechanical Designer I-Senior	\$120–185	Mapping Grade GPS	\$22
Architect I-Senior	\$125–225	Planner I-Senior	\$125–200	3D Laser Scanner	\$75
Architectural Designer I-Senior	\$115–175	Senior Process Engineer	\$220	Manhole Scanner	\$75
Business Developer I-Senior	\$145–220	Project Coordinator I-IV	\$125–175	Mobile Scanner**	Varies
Business Writer I-Senior	\$110–130	Project Manager I-Senior	\$135–225	R/C Boat + Sounding Equipment	\$58
Civil Engineer I-Senior	\$140–230	Refrigeration Engineer I-Senior	\$170–275	Surveillance Drone	\$56
Civil Designer I-Senior	\$110–175	Refrigeration Designer I-Senior	\$130–200	Photogrammetry Drone	\$138
Construction Administrator I-Senior	\$115–175	Senior Finance Consultant	\$190	Thermal Imaging Drone	\$193
Development Services Coordinator I-Senior	\$125–190	Senior Project Executive	\$280	LiDAR Drone**	Varies
Drone Specialist I-Senior	\$110–160	Structural Engineer I-Senior	\$145–230	All-Terrain Vehicle	\$27
Electrical Controls Designer	\$200	Structural Designer I-Senior	\$115–175	Traffic Counter	\$15
Electrical Engineer I-Senior	\$150–235	Technical Writer I-Senior	\$145–160	Pipe Crawler** (per linear foot)	Varies
Electrical Designer I-Senior	\$120–185	Technology Engineer I-Senior	\$130–210	Mileage reimbursement is at the IRS standard rate. Outside services are billed at cost plus 10%. **Project-specific rates—call for pricing	
Environmental Scientist/Engineer I-Senior	\$120–205	Technology Designer I-Senior	\$110–200		
General Counsel	\$350	Telecommunications Engineer I-Senior	\$150–230		
GIS Specialist I-Senior	\$125–195	Telecommunications Designer I-Senior	\$90–145		
Graphic Designer I-Senior	\$105–125	Visualization Specialist I-Senior	\$160–210		
IT Specialist I-Senior	\$125–190	Videographer	\$145		
Interior Designer I-Senior	\$125–190	Water/Wastewater Engineer I-Senior	\$145–230		
Land Surveyor I-Senior	\$115–200	Water/Wastewater Designer I-Senior	\$115–170		
Land Survey Specialist I-Senior	\$100–145	Water/Wastewater Project Manager I-Senior	\$135–225		
Landscape Architect I-Senior	\$130–205	Water/Wastewater Operator I-IV	\$110–125		
Landscape Designer I-Senior	\$110–160				
Marketing Consultant/Specialist I-Senior	\$120–190				

EXPERTISE

Architecture
Engineering
Environmental
Planning

WORK

Commercial
Education
Food + Industrial
Government + Cultural
Healthcare
Housing
Mining
Public Works
Sports + Recreation
Telecommunications + Energy
Transportation
Water

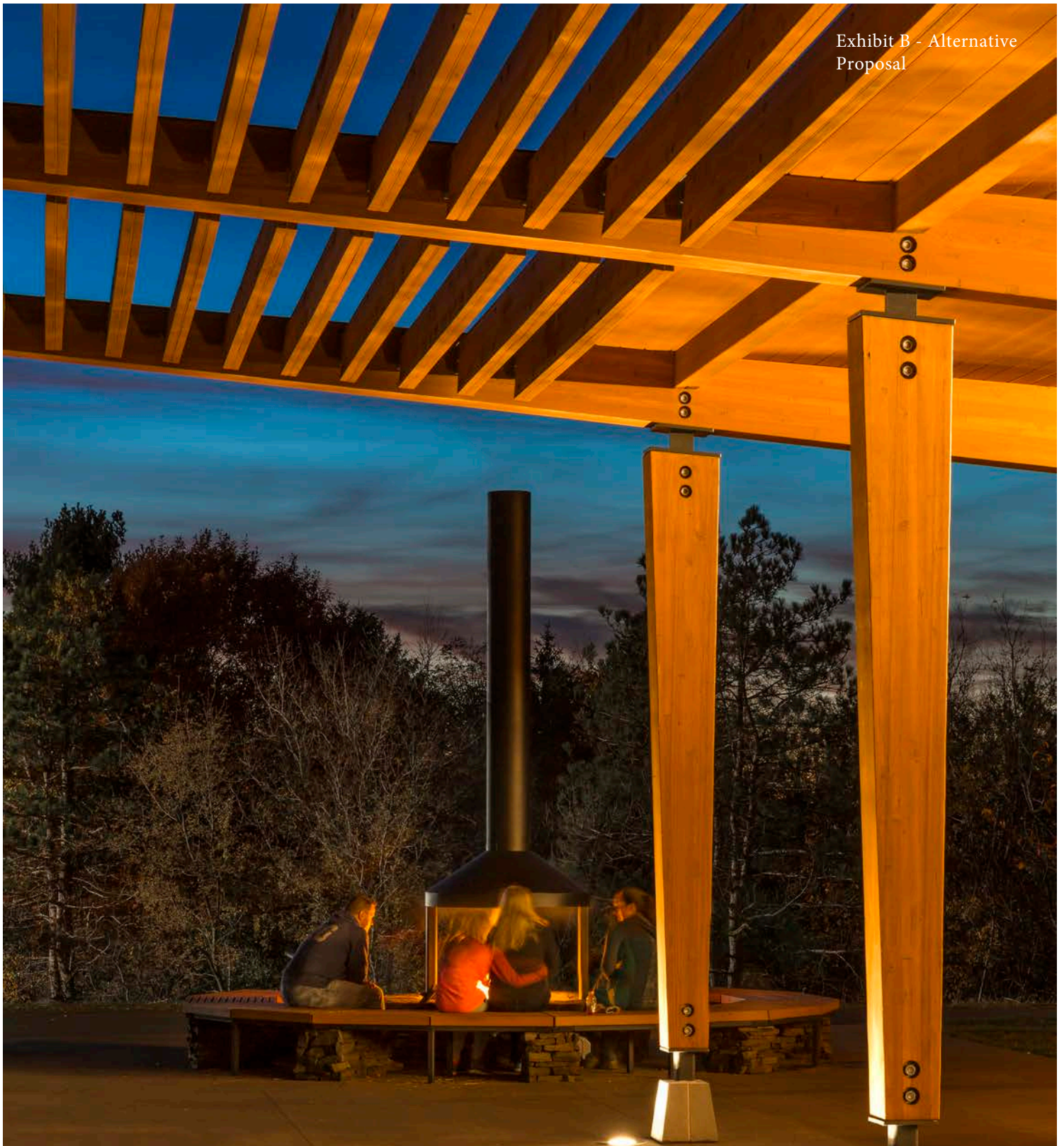


Rogers, AR
Des Moines, IA
Storm Lake, IA
Waterloo, IA
Bloomington, MN
Mankato, MN
Rochester, MN
St. Louis Park, MN
Pierre, SD
Sioux Falls, SD
Green Bay, WI
La Crosse, WI
Milwaukee, WI

ISGInc.com

On January 12, 2017, ISG formally announced its transition of firm ownership to a 100% employee stock ownership plan (ESOP). As a multi-disciplinary firm that started 50+ years ago, ISG has since grown to be a Top 500 Design Firm as recognized by Engineering News-Record (ENR), a Zweig Group Hot Firm, and PSMJ Circle of Excellence recipient, illustrating the progressive increase in talent, expertise, and market share.





HGA

CONCEPT DESIGN SERVICES PROPOSAL PREPARED FOR

MISSISSIPPI DUNES PARK
RESERVE BUILDING

January 17, 2024

Mr. Zac Dockter
Cottage Grove Parks and Recreation
8635 W. Pt Douglas Rd S
Cottage Grove, MN 55016
zdockter@cottagegrovemn.gov

Re: Concept Design Services for Mississippi Dunes Park Reserve Building

Dear Mr. Dockter and Members of the Selection Committee:

We are pleased to submit our proposal to conduct a concept design for Cottage Grove Mississippi Dunes Park Reserve Building. We view this as an extraordinary opportunity to be good stewards of the environment and to not only create a space that acknowledges and honors the history of the land and people, but also to create a connection to the Mississippi River shoreline. It would be our great honor to ensure river access for current and future generations of visitors to the park's recreational areas and surrounding preservation habitat.

We have proposed a clear process to achieve your goals, leveraging our expertise in programming, planning, concept design, sustainability, and cost estimating. Our proposal will highlight several distinguishing factors:

A Legacy of Impact in Our Community: From the beginning, HGA's cultural and community work has provided the foundation upon which our firm has grown and achieved national recognition. And while we've enjoyed significant success nationally, the heart of our operation remains here in the Twin Cities. We take great pride in being a part of this community and have played a distinct role in setting the stage for many of its most important gathering places. We are eager to bring this devotion and passion to this project, to support Cottage Grove's commitment to improve public access to the Mississippi River by creating a building with connection to adjacent amenities, active recreational areas, and to the expansive preservation habitat.

Specialized Expertise: HGA has a specialty practice group devoted to the planning and design of community facilities. We have extensive experience in and knowledge of the programmatic and technical requirements for gathering spaces, education, office, and outdoor recreation environments. The incredible depth of resources and expertise at HGA allows us to deliver highly creative, sustainable, and technically-superior solutions within the often challenging requirements of budget and schedule.

Sustainable Solutions: As an integrated architecture and engineering firm, we seamlessly collaborate across disciplines to make a positive environmental impact with our work. Our substantial experience will provide the City of Cottage Grove with a variety of opportunities to help you assess the right value and impact our solutions might provide.

In closing, each member of our team is personally invested in making the City of Cottage Grove Mississippi Dunes Park Building concept design a success. We are avid outdoor enthusiasts and community advocates who frequent the extraordinary amenities our community offers. We will bring an extraordinary personal passion—as well as our unparalleled expertise and experience—to this project. Our team is excited to begin working with you and are grateful for the opportunity to submit this proposal. We look forward to hearing from you soon.

Sincerely,



Nancy Blankfard, FAIA, LEED AP
Vice President, Principal
612.758.4390 | nblankfard@hga.com

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SECTION 1

PROJECT UNDERSTANDING

HGA's Park and Recreation Studio is composed of individuals who are passionate about community projects and have the expertise in public trail head design. We've brought this deep knowledge to Dakota County's Whitetail Woods Regional Park, Hennepin County's Theodore Wirth Park Trailhead, Washington County's Ravine Regional Park Lower Landing, and the Water Works Park on the Mississippi river in Minneapolis. We're excited to build on our past success to create with you a new and exciting legacy for Cottage Grove residents.

DESIGN OPPORTUNITY

The City of Cottage Grove has more riverfront shoreline than any other municipality in the Twin Cities area yet has very limited public river access. Further, being adjacent to both Grey Cloud Island and Grey Cloud Dunes Scientific and Natural Area (SNA), a deep ecological and indigenous heritage are present. This project presents a once in a lifetime opportunity for civic leaders to establish a public foothold along the Mississippi waterway and to provide a connection to the unique ecology and indigenous history of this area.

Named after the sister of Dakota Chief Wabasha (Mar-pi-ya-ro-to-win), Grey Cloud Island has a long history of indigenous settlement. The upper island was home to Mdewakanton band headed by Medicine Bottle and the lower island features the largest concentration of burial mounds in Washington County. The Mississippi Dunes Park Reserve Building overlooking Grey Cloud Island is an unparalleled gateway to this history and to the unique ecology that's allowed settlement to thrive.

Grey Cloud Dunes SNA is home to the Twin Cities' largest intact prairie system, with roiling sand hills, Oxbow scrub, and meandering drifts of bluestem. Dune ecosystems are extremely rare in Minnesota. As a result, this place is highly valued for its ecological and topographical diversity, as well as the proliferation of rare and unusual plant species. Bald eagles, lark sparrows, foxes, and northern long-eared bats all call this home. We believe this project is not only an opportunity to protect and maintain the ecosystem of the SNA, but also be a catalyst for site regeneration.

CONNECTING PEOPLE WITH PLACE

The architectural and site design should be as unique as the distinctive heritage and ecology of this area. The project should both be a vessel to tell stories about people and place; and act as a teaching tool for the public to share, engage, and inspire.

HOLISTIC DESIGN

Mississippi Dunes Park will be a sanctuary for people and wildlife. This project needs thoughtful and sensitive outcomes that respect the intrinsic value of this place. We believe the best outcomes are informed from multiple perspectives. This is reflected in our commitment to engagement and how we established our leadership team. HGA's team harnesses expertise in design anthropology, architecture, landscape architecture, equity, and sustainability to provide a holistic, integrated approach to design. All the competencies required to support the City of Cottage Grove and execute this project reside within HGA.

INTEGRATING INCLUSIVE AND ACCESSIBLE DESIGN

The very nature of this project is about access. It's about removing barriers and connecting the next generation of residents to the Mississippi. This extends to the site and building design, where Universal Design will be of utmost importance to ensure inclusivity for all. This endeavor will be supported by extensive research into the rich tapestry of backgrounds and abilities of Mississippi Dunes Park visitors.



Mississippi Dunes sketch by Landscape Architect Luke Nichols



PROJECT SCOPE

The Mississippi Dunes Park Reserve Building represents a rare opportunity to provide Cottage Grove with public access to the Mississippi River and the unique and beautiful ecology of this unusual site. There's a lot at stake with this project. Our team will guide you every step of the way, asking the right questions of the appropriate stakeholders. Several factors will be considered in our study, including:

- Assessment of usage, space needs, and site areas
- Program options and operational goals informed by staff and stakeholder engagement
- Site design options that include recreational use opportunities adjacent to the building
- Building design options that are unique, beautiful, and fulfill your programmatic needs
- Coordinating design/technical information for cost estimating site and building options
- Balancing current needs against future trends

The culmination of this study will be a comprehensive assessment that informs a final design concept that's uniquely Cottage Grove. A final presentation will provide the City with the guiding principles, research, design concept, and renderings needed to help make the right decisions for this project.

PROJECT APPROACH AND OBJECTIVES

The HGA team will work rigorously to understand and thoughtfully respond to the programmatic and physical context of the Mississippi Dunes Park Reserve Building. The team proposed to lead the project offers extensive experience in needs assessment, planning, and design. While each project approach is customized to the specific needs of the community, we offer the following process outline:

REVIEW OF EXISTING INFORMATION

The City may have captured information relevant to the study that the design team will want to include and understand as a data point in the overall concept design process. This information may include site surveys, site documentation, geotechnical reports, historical data, or other forms of information. Our team will use this information to inform concept design and project scope.

PROGRAMMING NEEDS

Stakeholder Interviews

- The project team will conduct interviews with staff and project stakeholders to evaluate the programmatic and operational vision and needs for a new building. Topics discussed will include overall community values, trends in programming and facilities, levels of service provided and desired, among others.
- Based on our current project understanding, stakeholder groups may include future building staff and city staff, but we will jointly identify prospective stakeholders.

Site and Building Program

Building on the data gathered, a quantitative building space program will be created. Such a program will quantify specific amenity spaces by establishing room quantity, size, and user capacity. As the building programs become defined and keeping in mind potential expansion footprints that will impact surrounding site features and amenities, the design team will propose holistic design solutions that maintain the integrity and intent of the Mississippi Dunes Park Master Plan.

PLANNING & CONCEPT DEVELOPMENT

Based on the building and site program, the team will explore design concepts, that represent the desired project scope. The explorations will be presented in site plan drawings and floor plan diagrams. Multiple options facilitate a process of cross-evaluations with all stakeholders to determine the optimal long-term solution. The intent of this phase is to seek consensus on an ideal design. The preferred design concept will be rendered in 3D that show the building's context, form, materiality, site, and visitor use.

PROJECT COST ESTIMATING

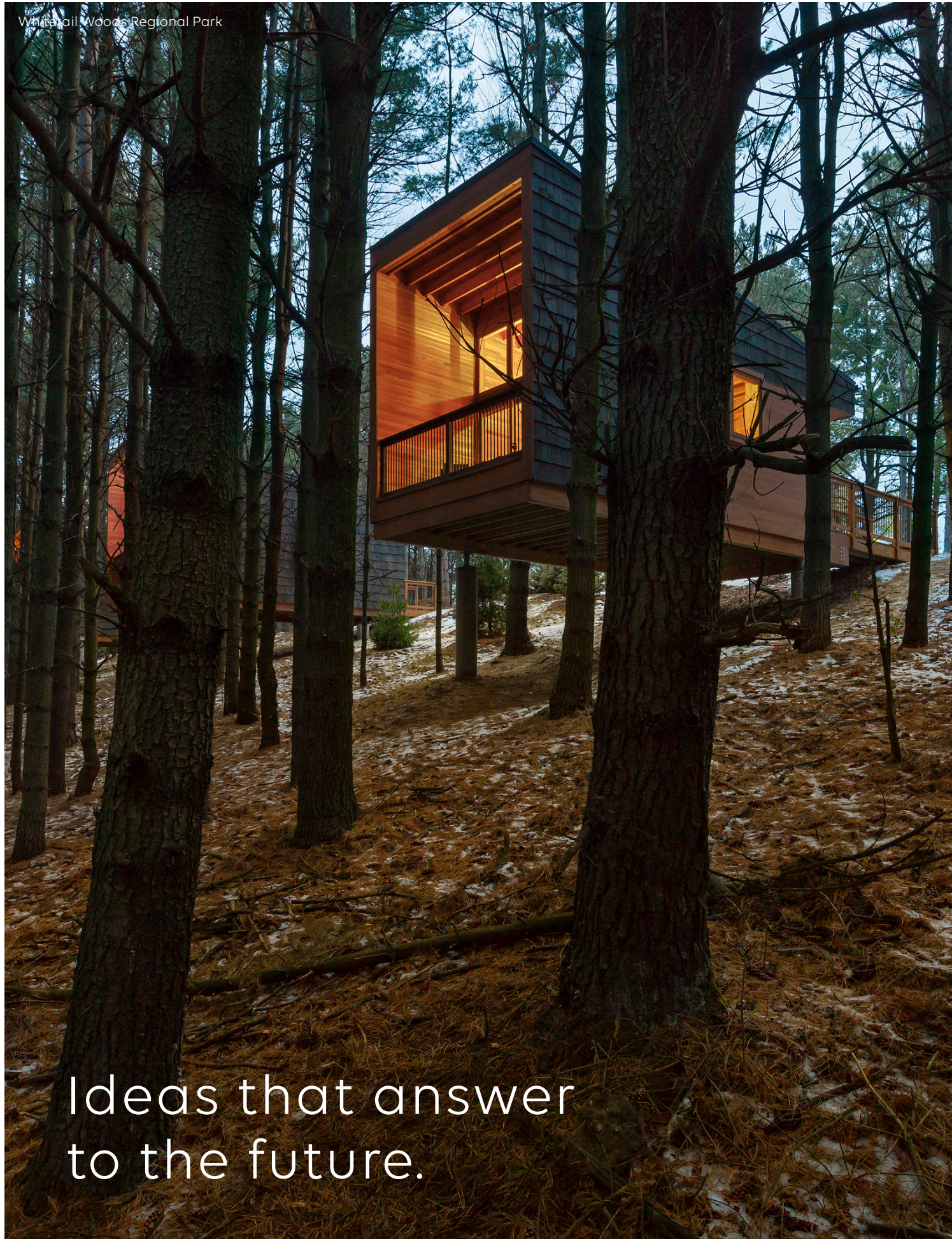
Leveraging HGA's cost estimating expertise, construction costs will be developed for the preferred design option. Hard construction costs and estimates for project-related soft costs, such as furnishings, will be combined to establish an overall project cost for the City's use in strategic planning. Key to accurate conceptual estimating is knowledge of the marketplace, historic cost data for similar projects, and coordination between the design team and the estimators – all things our team brings together for a reliable estimate.

FINAL PRESENTATION

The entire process will be aggregated into a final presentation that will provide comprehensive data and imagery for use by the City of Cottage Grove.

WHY OUR TEAM?

- We are a multidisciplinary team with a deep bench of expertise in architecture, engineering, cost estimating and sustainability—everything you need for a successful project.
- We are familiar with the trends, needs, and future of parks and recreation through participation in organizations such as MRPA and NRPA, as well as the design and construction industry.
- We understand the complex nature of stakeholder engagement and can facilitate a dynamic, collaborative process.
- We bring together optimal programming opportunities with award-winning community and recreation architecture.
- We are committed to creating meaningful places for community health and well-being.



Ideas that answer
to the future.

ENVIRONMENTAL STEWARDSHIP

Sustainable design is a core passion and philosophy at HGA; we believe our designs are stronger and more beautiful because of their environmental aspirations.

Over the years we have developed a design process that is informed and guided by environmental goals. Sustainable design is addressed at every level and by all our disciplines, from architectural design to engineering to estimating. Our commitment to delivering green buildings extends across time too; we begin thinking about it at the planning stage, through design and construction, into commissioning and operations, finally coming full circle to inform new designs and projects.

Our portfolio of sustainability-driven projects is extensive and diverse, encompassing everything from master plans to large scale new construction to small renovations. This wide range of experience, coupled with our internal capacity to deliver engineering as well as architectural design, has allowed us to develop a truly holistic approach to building design, and to do so cost-effectively.

Our approach to sustainable design typically includes:

- Working with our clients to develop key performance indicators specific to the project, and using these to inform and guide our design.
- Addressing multiple facets of sustainable design, including: energy, carbon, water, human health, longterm costs and savings, and social equity.
- Proactively engaging resiliency, including working with our clients to define and mitigate future risks, and using predictive weather profiles rather than industry-standard historical data.
- Modeling our designs early and iteratively, and allowing those models to inform one another—from cost to energy, to daylight, to water, to comfort. This approach allows us to capture synergies between systems and find the most effective solutions quickly and efficiently.

SELECT SUSTAINABLE PROJECT EXPERIENCE

The Zero Energy Certified **Westwood Hills Nature Center** is a "building as a teaching tool" for the City of St. Louis Park. The orientation and building form follow natural principles for energy efficiency, and annual energy use is offset with rooftop photovoltaics. The building itself becomes an integral part of the interpretive experience.

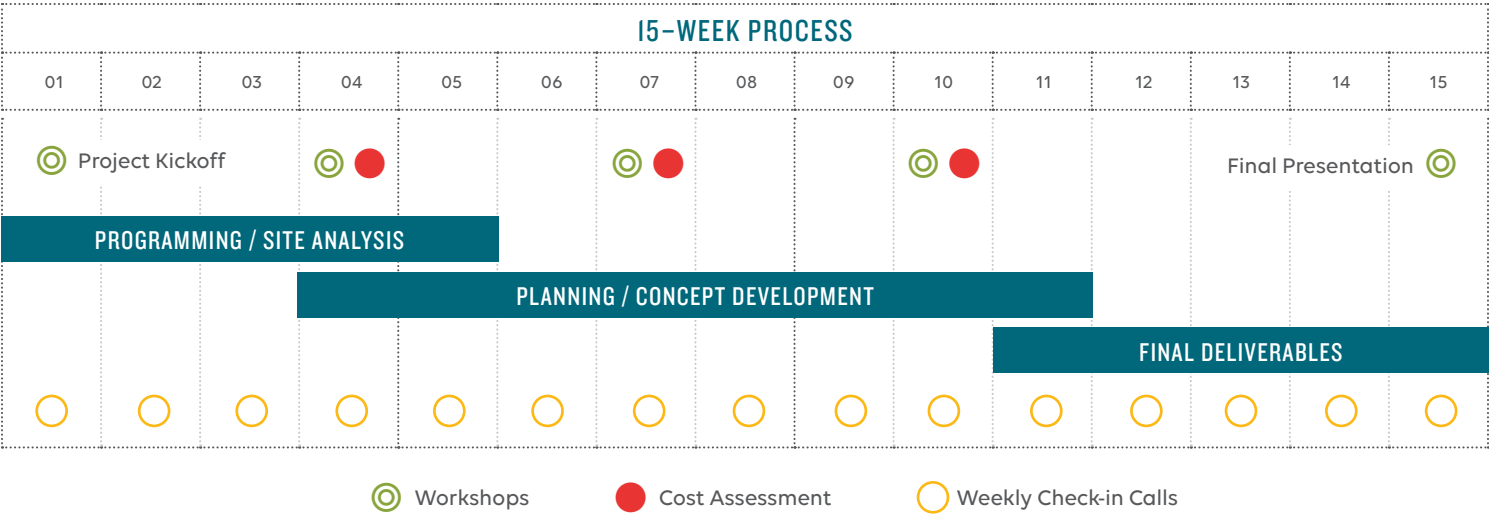
As a fully certified Living Building, the **Wolf Ridge Environmental Learning Center** in Finland, Minnesota embodies nature's teaching power and creates an inspiring "home away from home" living experience that is both physically and emotionally satisfying. The buildings are an integral part of the environmental learning process with visible, interactive sustainability features.

LEED Platinum Certified and targeting Net Zero Certification, the design for the **Los Angeles Harbor College Science Complex** in Wilmington, California mimics living biological organisms inspired by nature and incorporates concepts of sun, water, and wind.

- New Building Institute 2018 Report "Getting to Zero" named HGA one of the country's top Zero Energy firms
- 6 net zero energy projects in progress and certified
- 1 fully certified Living Building Challenge project
- Founding signatory of the Architecture 2030 Commitment; Signatory of SE2050 and MEP2040
- 15 LEED Platinum Certified projects
- 70 LEED Gold Certified projects
- 23 MN B3 projects
- 4 WELL & 12 WELL Health + Safety Seal projects
- 801 projects reported to Architecture 2030
- 210 LEED Professionals
- 17 WELL APs



PROPOSED SCHEDULE & WORK PLAN



PROGRAMMING / SITE ANALYSIS

- Discuss project vision, goals and objectives
- Hold stakeholder interviews to inform space needs
- Recommend a program based on findings and priorities
- Perform site analysis identifying possible sites for building location
- Early cost assessment based on cost per square feet of similar projects

PLANNING / CONCEPT DESIGN

- Create planning diagrams illustrating adjacencies, site capacity, form and flexibility
- Develop the project in 3 dimensions, discussing materials and maintenance
- Create two exterior renderings illustrating the architectural character of the project
- Create one interior rendering to share with stakeholders and build excitement for the project

COST ASSESSMENTS

- Provide cost estimates throughout process to inform decision making
- Provide cost estimate including site costs
- Costs to include both construction costs and project costs

FINAL PRESENTATION

- Outline next steps for further development
- Final deliverables to include:
 - Space needs spreadsheet
 - Site plan
 - Building plan diagram
 - Three renderings
 - Detailed cost estimate



Wayzata Sailing Center | Wayzata, Minnesota

SECTION 2

RELEVANT EXPERIENCE

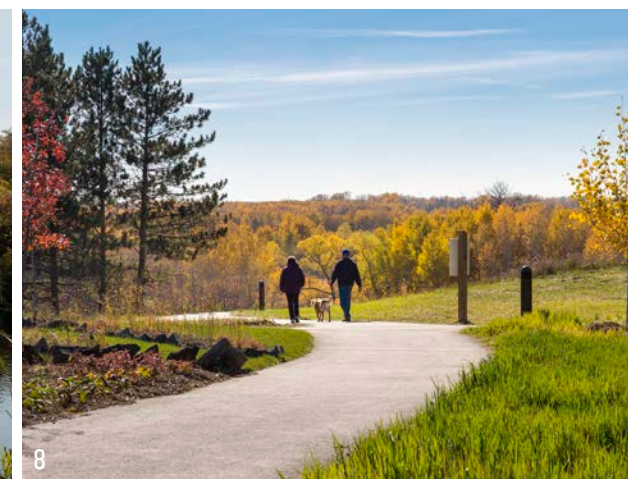
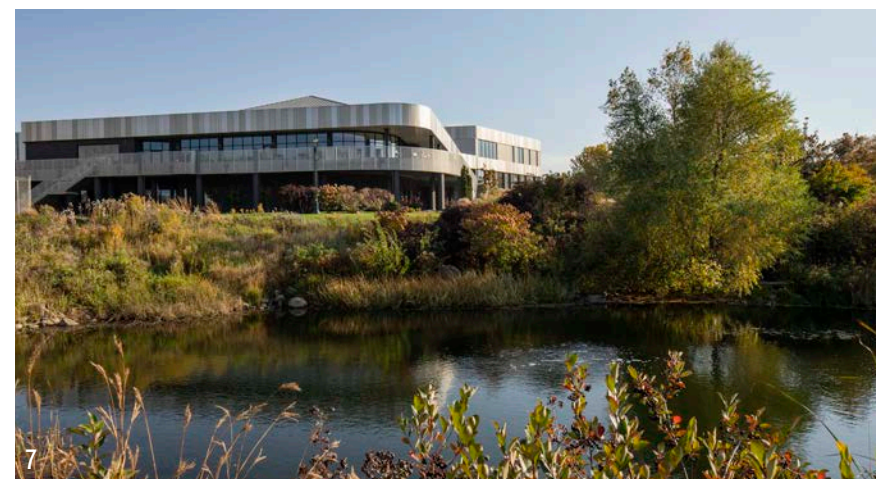
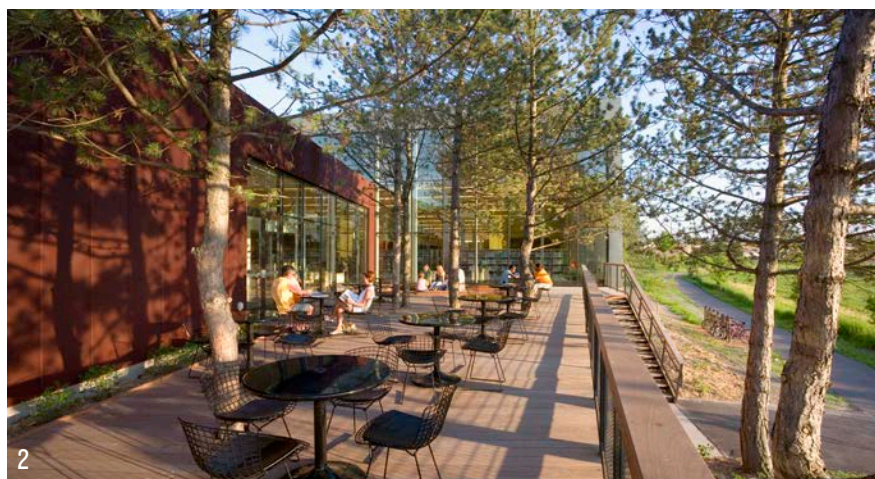
HGA is a national multidisciplinary design firm rooted in architecture and engineering. We believe that enduring, impactful design results from deep insight into the people and passions that animate each unique environment. We value empathy, are fueled by curiosity, and embrace the hard work that leads to innovation. Our responsibility is both inspiring and humbling: to create, along with our clients, a lasting impact in our communities. For the people who work, learn, heal, serve and gather in the spaces we shape, we strive to exceed expectations today, tomorrow and long into the future.

Park and recreation facilities often become the physical heart of their community. These spaces draw people together through social, spiritual, recreational, or educational activities. HGA's design approach requires that we delve deep into the mission, culture and personality of an institution as context for the design objective at hand.

For more than 70 years, HGA has been honored to work on some of the most important landmarks in our clients' communities—revitalizing, restoring, expanding, and building memorable spaces that become beloved icons. We understand that buildings must be designed with the long view in mind—able to embrace historic

forms but flexible enough to encourage and support what's next.

HGA is organized into multiple studios which focus on different areas of practice. Our Parks & Recreation studio is comprised of individuals who are passionate about community work, and whose expertise is centered on design of innovative public and community facilities. Our team is adept at working with multiple stakeholders and are excellent stewards of public funds, collaborating with our clients and builders to produce value. Our breadth and depth of experience and expertise gives us a unique perspective which creates a collective insight that results in meaningful solutions.



INSPIRED SPACES FOR BUILDING COMMUNITY & CONNECTING TO NATURE

- 1 TOWN GREEN BANDSHELL Maple Grove, Minnesota
- 2 MAPLEWOOD LIBRARY Maplewood, Minnesota
- 3 HEART OF THE ZOO Apple Valley, Minnesota
- 4 TEMPLE ISRAEL Minneapolis, Minnesota
- 5 SURLY BREWING COURTYARD Minneapolis, Minnesota

- 6 WHITETAIL WOODS REGIONAL PARK Farmington, Minnesota
- 7 PLYMOUTH COMMUNITY CENTER Plymouth, Minnesota
- 8 WHITETAIL WOODS REGIONAL PARK Farmington, Minnesota
- 9 EDEN PRAIRIE AQUATICS CENTER Eden Prairie, Minnesota
- 10 WOOD LAKE NATURE CENTER Wood Lake, Minnesota



“

The new facility, positioned at the end of the last parking lot near the lake, fits beautifully into the surrounding landscape and is the perfect addition to the park.

Bruce Karnick
Hastings Journal News



COTTAGE GROVE RAVINE REGIONAL PARK

WASHINGTON COUNTY | LOWER LANDING TRAILHEAD BUILDING | COTTAGE GROVE, MINNESOTA

A 522-acre park with steep ravines, rolling hills, and Ravine Lake, this park hosts pristine opportunities for hiking, fishing, cross-country skiing, and picnicking.

The new Trailhead building features Cross-Laminated Timber (CLT), and is the first installation of this mass timber product in the state of Minnesota. The wood framing sequesters carbon and promotes the client's sustainability goals. The innovative design takes advantage of the two-way spanning capabilities of CLT to form a thin cantilevered profile around the roof edge without the supplemental members that would have been necessary with conventional wood decking.

Careful coordination between disciplines allowed electrical work to be integrated with the roof to provide concealed conduit within the exposed structure. Lighting conduit was slotted into the top surface of the CLT in the shop prior to installation. The 6,000 SF roof was installed in just over one day and the entire mass timber structure was built in just one week.

The new facility features a warming lobby, parks and recreation office, a rentable multipurpose space with kitchenette, equitable restrooms, park storage, and a covered picnic area. The site design included rerouting the park's ski trail to further activate the building as well as adding two exterior gathering spaces that orient park visitors to the trail.

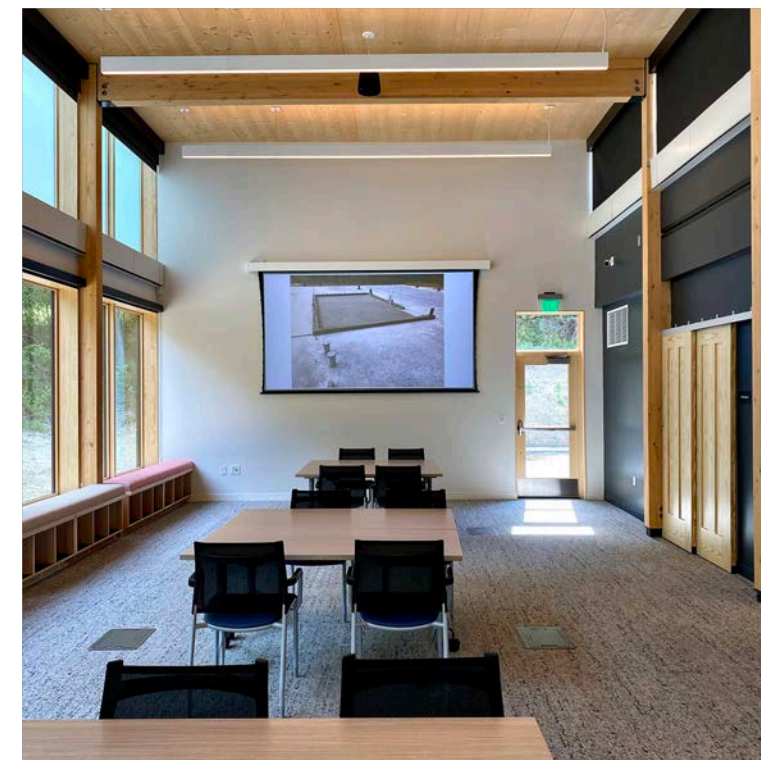
PROJECT DATA

Services Provided: architectural/design, engineering (civil, electrical, mechanical, MEP, structural), landscape, and lighting design

Size: 6,045 SF

Cost: \$2.8M

Completion: 2021





WATER WORKS

MINNEAPOLIS PARK & RECREATION BOARD | WATER WORKS | MINNEAPOLIS, MINNESOTA

Minnesota is home to a 72-mile-long national park, the Mississippi National River and Recreation Area, that runs through the urban cores of both Minneapolis and St. Paul. As part of a plan to enhance the experience of the iconic St. Anthony Falls area for tourists and residents alike, the Minneapolis Parks Foundation, the Minneapolis Park and Recreation Board (MPRB), with restaurant partner The Sioux Chef, entered a public/private partnership to develop the land. Now dubbed Water Works, a three-acre site within Mill Ruins Park, the project features greenspace with native foliage and a two-story pavilion that includes outdoor plazas, visitor amenities, and a new restaurant.

Formerly a vacant, distressed industrial parcel in downtown Minneapolis, the Water Works Park Pavilion and park project is one of the initial projects of the RiverFirst Initiative, started in 2010 by MPRB in partnership with the Minneapolis Parks Foundation, a vision for transforming an 11-mile stretch of land nestled along both sides of the Mississippi Riverfront. To help shape their vision of the future while understanding the design reverence needed for the project, the MPRB selected Damon Farber Landscape Architects to lead the project with the national interdisciplinary design firm HGA.

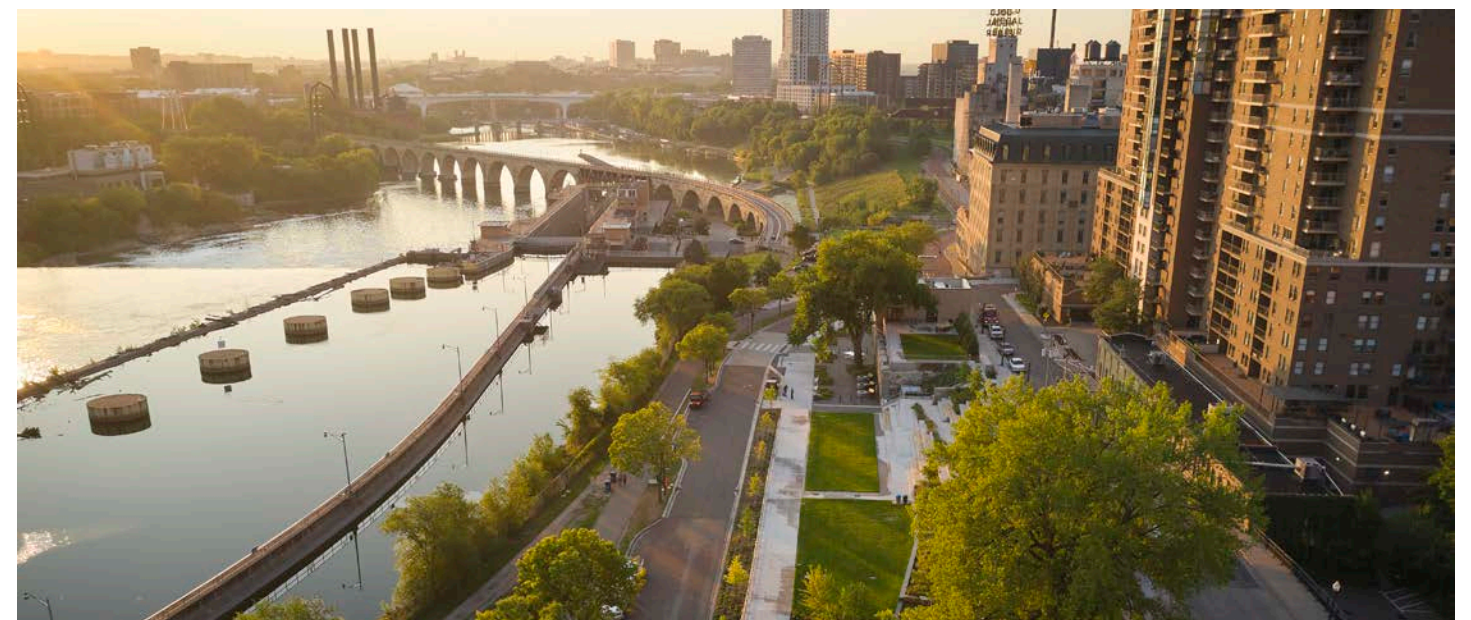
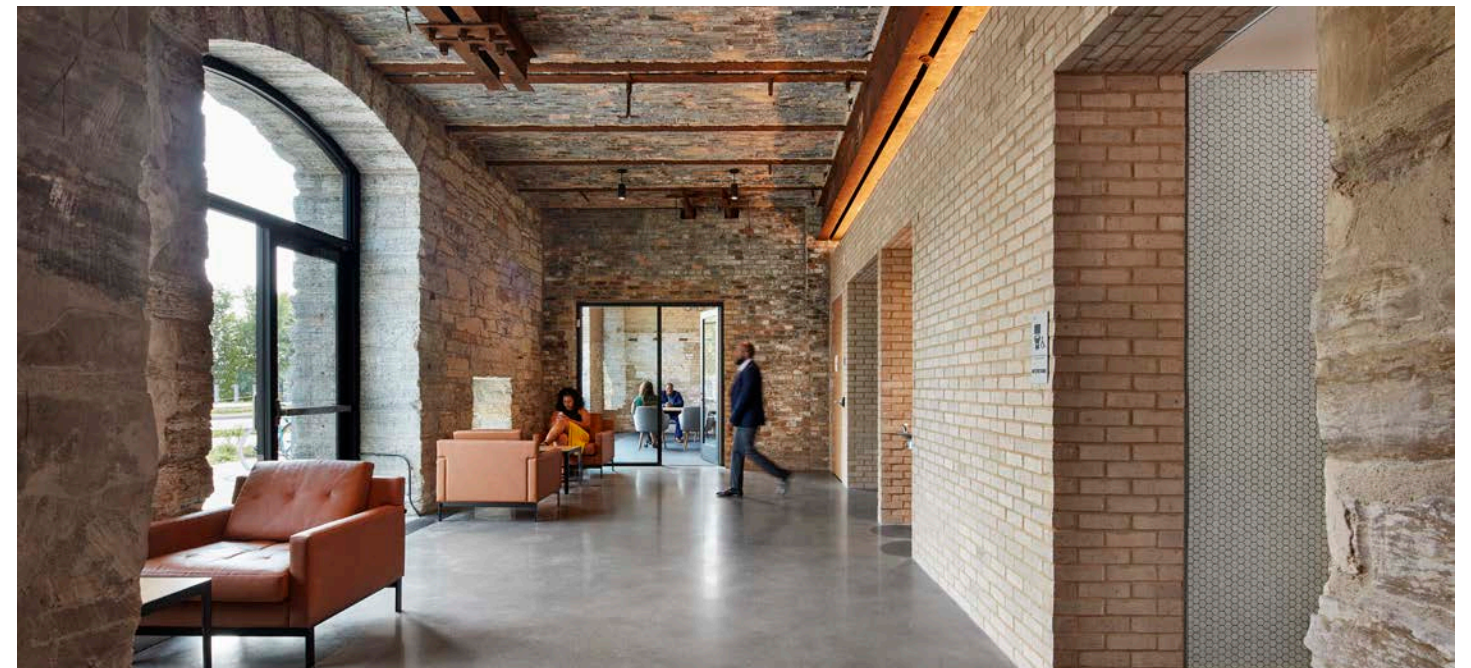
PROJECT DATA

Size: 3 acres / 9,000 SF

Scope: Full A/E services, Interior/Design, Telecom/Security

Cost: \$24M

Completion Date: 2020





WESTWOOD HILLS NATURE CENTER

CITY OF ST. LOUIS PARK | ST. LOUIS PARK, MINNESOTA

Westwood Hills Nature Center (WHNC) is a 160-acre nature park featuring prairie, forest and marsh areas, with immersive trails and an educational center. WHNC sought to replace their small, aging facility with a new building aimed at connecting community to nature..

MISSION, PROGRAM, AND FUNCTION

The Westwood Hills Nature Center project reflects the city character in its vision and design - a resilient exemplar of a sustainable future. With the primary mission of the Nature Center being to connect people to the environment, the city challenged the team to create a zero-energy building to serve as a pilot for its new Green Building Program and Climate Action Plan. To reinforce sustainable building practices, the new facility serves as a teaching tool itself, demonstrating its passive and active strategies for energy efficiency and stormwater management, in addition to showcasing interpretive exhibits which highlight Minnesota landscape and wildlife habitat.

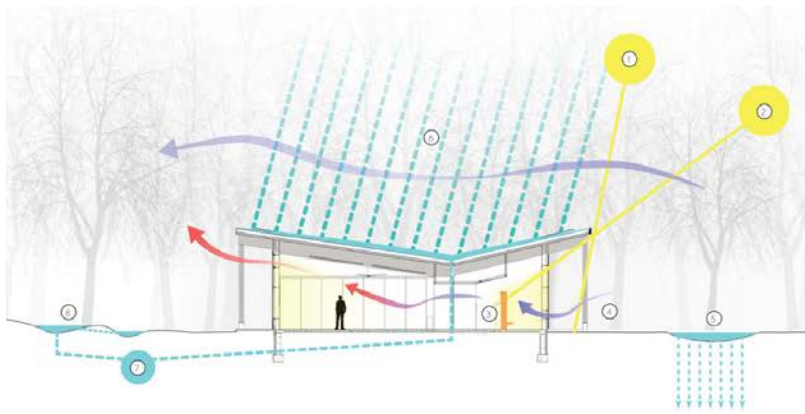
PERFORMANCE AND TECHNICAL INNOVATION

The use of future weather data models played a key role in verifying the performance of building systems well into the future. The team led a resilience workshop for project stakeholders to assess potential risks to

the building over its life span including everything from public safety scenarios through impacts of climate change.

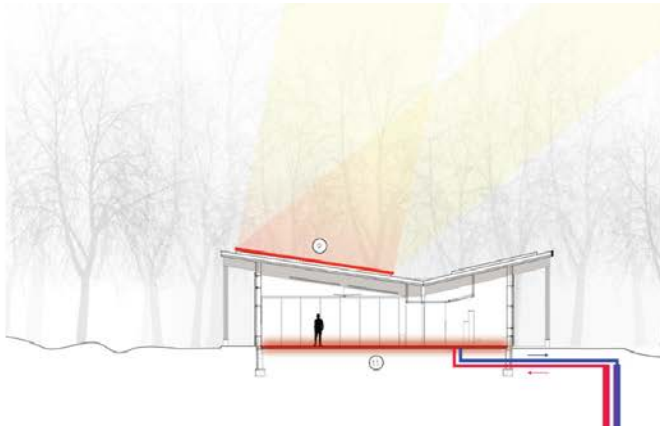
ECONOMICS AND SCHEDULE

The design team used several analytical design tools to establish strategies and test efficiency through the design process, including solar radiation analysis, wind direction, and daylighting/glare analysis. An energy model was regularly updated as the design evolved, and all disciplines collaborated to fine tune the thermal envelope and building loads along the way to ensure performance would be achieved as economically as possible. The project faced some substantial weather delays which affected the installation schedule of the roofing system. The HGA team was able to revise the roofing system in a timely manner to allow for cold weather installation and avoid further schedule delays.



PASSIVE STRATEGIES

- 1. Summer Sun Shading
- 2. Winter Sun Solar Collection
- 3. Thermal Mass Wall
- 4. Natural Ventilation
- 5. Stormwater Infiltration Basin
- 6. Rainwater Collection
- 7. Rainwater Storage
- 8. Stormwater Interpretive Feature
- 9. Solar Photovoltaic Panels



ACTIVE STRATEGIES

- 1. Solar Photovoltaic Panels
- 2. Geothermal Well Field
- 3. In-floor Radiant Heating

SUSTAINABLE OPERATIONS GOALS: ZERO ENERGY

Part of a City effort towards a sustainable future, WHNC serves as an exemplar for sustainability strategies and has achieved International Living Future Institute's (ILFI) Zero Energy Certification. Building envelope, orientation, and shading were optimized for efficiency and organized to take advantage of existing site resources—sun and wind—and maximize use of passive strategies. The design uses thermal mass for winter solar gain and in-floor radiant heating to achieve occupant comfort during cold weather, as well as "task oriented" passive and active ventilation strategies with operable windows and ceiling fans as low energy means of achieving occupant comfort in warmer months. On the active side electrical and mechanical systems' energy loads were reduced using daylighting throughout and a geothermal wellfield to supplement the all-electric boilers as a heat source for radiant heating of the floor slab. A rooftop solar photovoltaic system offsets annual energy use, and the building has achieved Zero Energy certification.

PROJECT DATA

Size: 160 acres / 13,300 SF

Scope: Full A/E services, Zero Energy certification services, cost estimating

Cost: \$12.6M

Completion Date: 2019





WHITETAIL WOODS REGIONAL PARK

DAKOTA COUNTY | FARMINGTON, MINNESOTA

Whitetail Woods Regional Park, the first new regional park developed in Dakota County in over 20 years, is a 456-acre property that integrates a wide variety of uses including over seven miles of trails, architecturally-designed camper cabins, integrated art and sculpture throughout the park and productive landscapes that enable perennial food cultivation by park visitors. The park has quickly become a flagship of the park system and a regional destination.

HGA worked with Dakota County, topic area experts, and stakeholder groups to envision innovative park programs that address the changing needs of Dakota County.

The social and activity center of the park, also called The Commons, is nestled in an opening overlooking Empire Lake. It acts as the trail head for over seven miles of hiking and skiing trails while integrating restorative landscape features into a variety of play and exploration elements designed to engage visitors of all ages. Located in The Commons, a nature-inspired

play landscape called Fawn Crossing, is an interactive and playful space that has quickly become a beloved park feature.

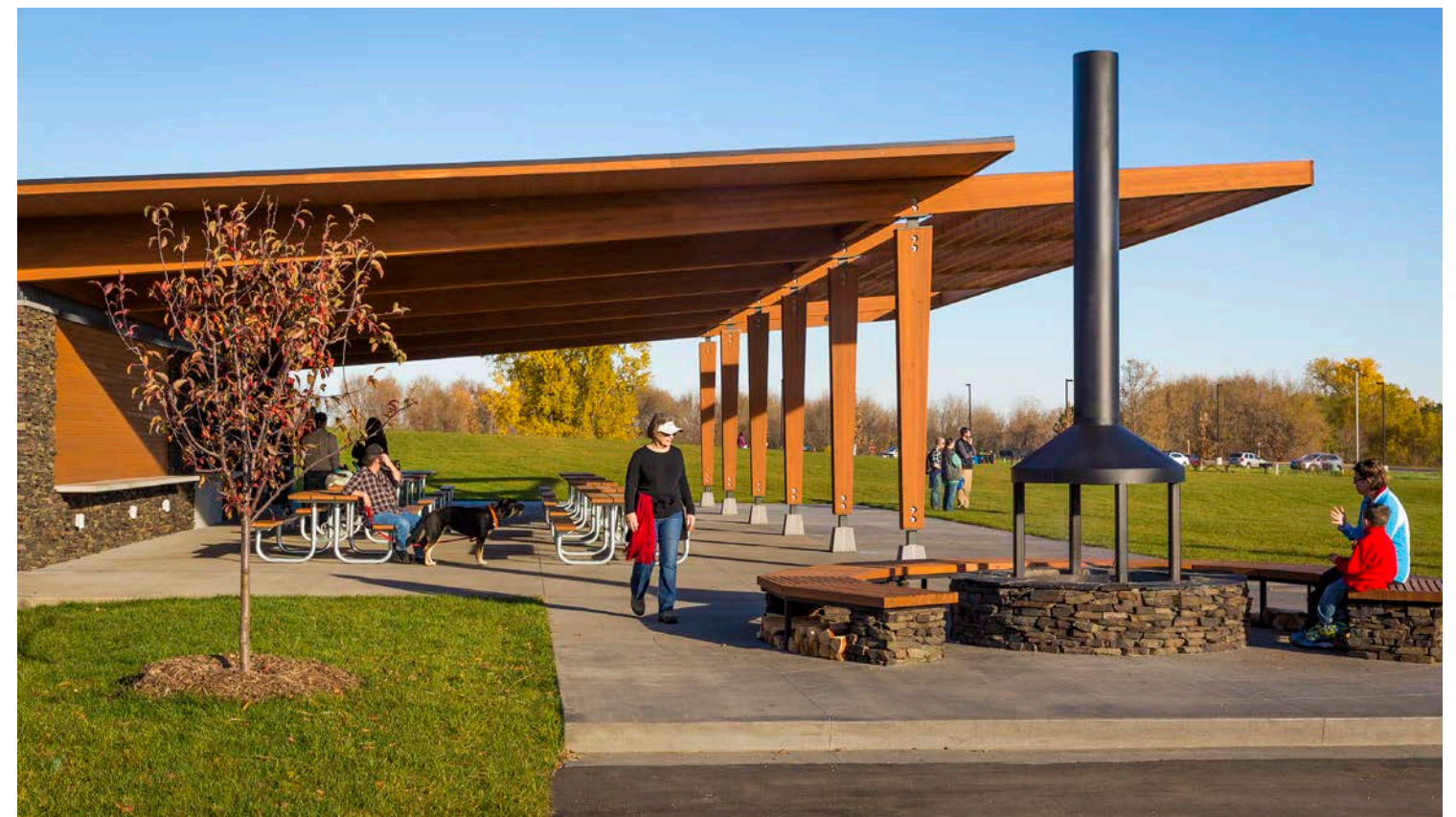
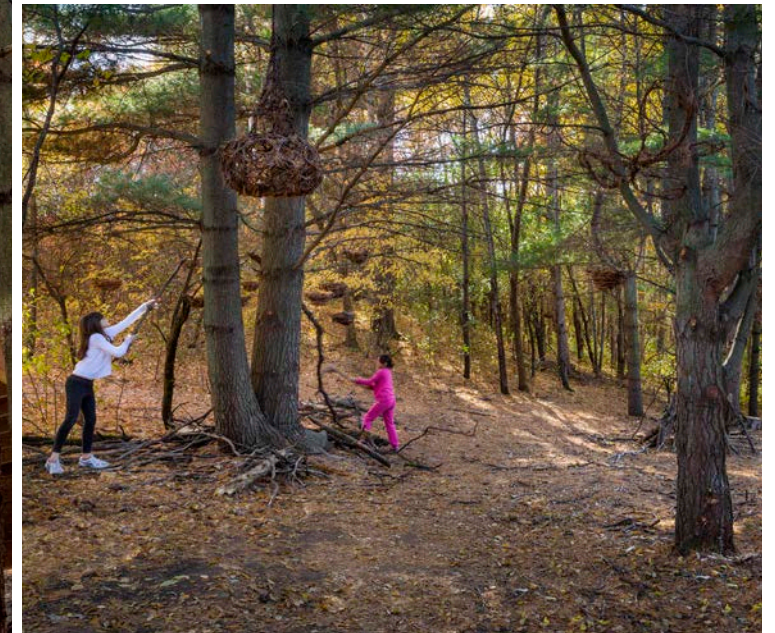
PROJECT DATA

Size: 456 Acres

Scope: Full A/E services, master planning, cost estimating

Cost: \$5.6M

Completion Date: 2014





THEODORE WIRTH TRAILHEAD WELCOME & ADVENTURE CENTER

LOPPET FOUNDATION / MINNEAPOLIS PARKS & RECREATION | MINNEAPOLIS, MINNESOTA

The Loppet Foundation partnered with the Minneapolis Park and Recreation Board (MPRB) to turn this exciting vision into reality. The new 14,000 SF, one-story building is designed to meet the needs of a wide range of activities available within Minneapolis' largest park. Some of those activities include cross-country skiing, golfing, disc golfing, hiking, snowboarding, snow tubing, cycling and mountain biking.

The Trailhead will enable Wirth Park to host national events for Olympic-caliber athletes, skiing and biking for families, and a place to learn.

The new Trailhead replaced a small building on site that supported the par 3 golf course. The new building includes a restaurant, indoor and outdoor gathering spaces, an exercise/training room, ski and bike shop offering rental equipment, men's and women's locker

rooms and restrooms, ticketing counter, outdoor patio and offices for The Loppet Foundation.

PROJECT DATA

Size: 14,000 SF

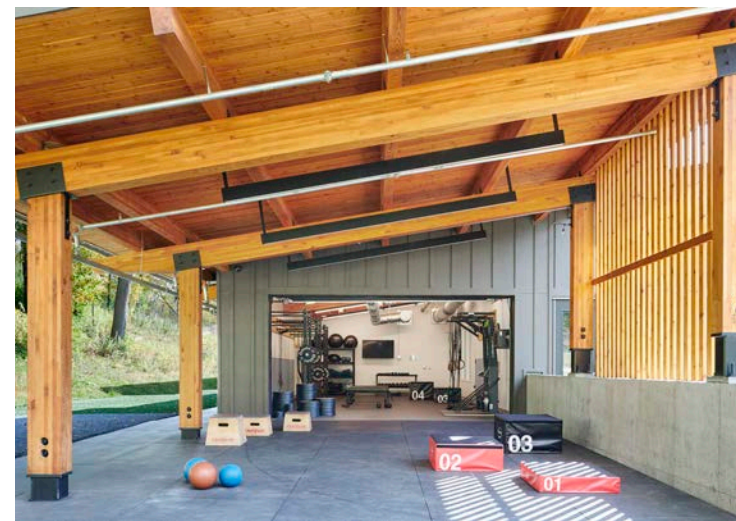
Scope: Full A/E services, cost estimating

Cost: \$4.2M

Completion Date: 2018

"Simply put, the Trailhead Welcome & Adventure Center is one of the most, if not *the* most, attractive physical amenities in the entire park system."

—Brad Bourn, Minneapolis Parks & Recreation Board President





LAKE WACONIA WATERFRONT PAVILION

CARVER COUNTY | LAKE WACONIA REGIONAL PARK IMPROVEMENTS | WACONIA, MINNESOTA

With the overall goal of establishing a vision and level of quality for future buildings on the lakefront park, HGA designed a new picnic shelter, park activity and concessions building, and central plaza. Taking cues from the historic resort structures found on Lake Waconia's Coney Island, the buildings provide a porch-like sheltered outdoor social space from which to enjoy the park and host events.

Phase 1 of the County's master plan is underway and includes the demolition of existing park structures, regrading of the entire site, and the addition of new parking, a new playground, a splash pad and beach expansion. Serving this initial phase is a new seasonal-use picnic shelter, comprised of sheltered rental space, seating for 80, restrooms, and accessory components including fire pit, grills, counter/staging space for events and mechanical/storage space. A new activity building is planned to accommodate year-round rental, restrooms, concessions, water craft and equipment rental and sheltered seating areas. To optimize the design of both structures, HGA

studied solar angles and wind exposure, analyzed fixture counts to serve both rental and adjacent site amenities, and developed building form and a durable material palette to visually tie the new buildings to the historic structures.

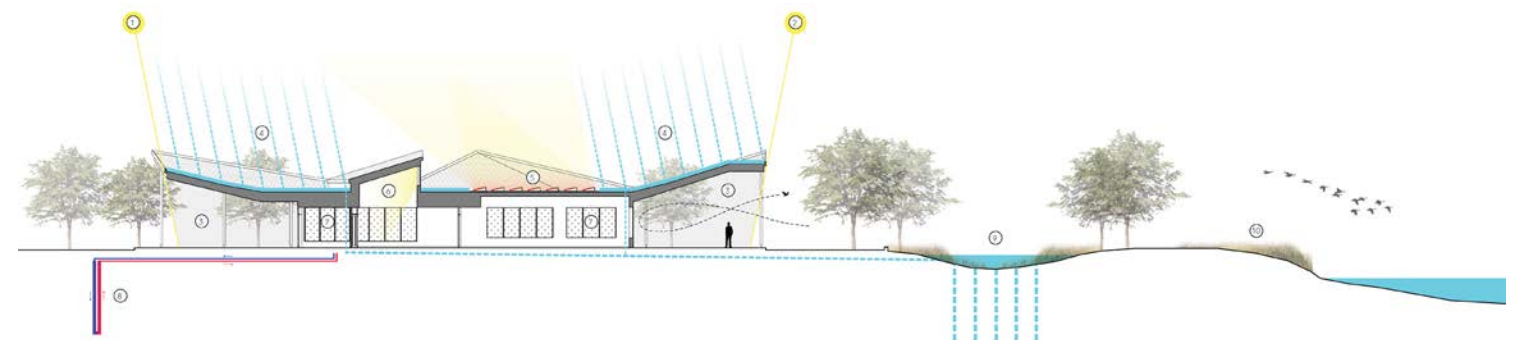
PROJECT DATA

Size: Activity Building 7,100 SF + 8,000 SF shelter

Scope: Planning/programming, architectural design, engineering, and cost estimating

Cost: \$6M

Completion Date: 2024



SITE SELECTION | SUSTAINABILITY STRATEGIES

1. Morning Sun Position
2. Afternoon Sun Position
3. Outdoor/Glazing Shading
4. Rainwater Collection
5. Solar Photovoltaic Panels
6. Indirect Daylighting
7. Bird Friendly Glazing
8. Geothermal Wells
9. Stormwater Infiltration Basin
10. Shoreline Vegetation Restoration



NANCY
BLANKFARD
FAIA, LEED AP

PRINCIPAL IN CHARGE | HGA

As Principal-in-Charge, Nancy leads an efficient, flexible, and highly creative process ensuring that budget, schedule, and project goals stay on track throughout the design and construction process. With more than 25 years of experience on a variety of cultural and community place-making projects, she has a passion for collaboration and a drive to uniquely meet the strategic needs of her clients. Nancy is the recipient of the Ralph Rapson Traveling Study Fellowship and the AIA Minnesota Young Architects Award. Her work experience includes two AIA Institute Honor Awards for Architecture and numerous AIA Minnesota Honor Awards.

SELECTED EXPERIENCE

City of St. Louis Park

Westwood Hills Nature Center | St. Louis Park, Minnesota

Washington County

Cottage Grove Ravine Regional Park Lower Landing Trailhead Building | Washington County, Minnesota

Loppet Foundation / Minneapolis Parks & Recreation

Theodore Wirth Welcome & Adventure Center | Minneapolis, Minnesota

Carver County

Lake Waconia Waterfront Services Building | Lake Waconia, Minnesota

City of Minnetonka

Community Facilities Study | Minnetonka, Minnesota

City of Golden Valley

Brookview Community Center | Golden Valley, Minnesota

City of Plymouth

Plymouth Creek Center Expansion & Renovation Feasibility Study | Plymouth, Minnesota

City of Edina

Aquatic Center Study | Edina, Minnesota

EDUCATION / AFFILIATIONS

Master of Architecture Tulane University

Licensed Architect Minnesota



MICHAEL
HARA
AIA

PROJECT DESIGNER AND PRIMARY CONTACT | HGA

Michael has 13 years of experience working on award-winning projects at multiple scales. As project designer specializing in arts, community, and higher education work, Michael engenders a thoughtful, analytical approach to design that is cross-disciplinary and integrative. He is adept at synthesizing a client's vision and resources into thoughtful and innovative design solutions. A natural collaborator, Michael works closely with team members from the early stages onward to establish the project's parameters and scope, ensuring their needs are translated into beautiful facilities

SELECTED EXPERIENCE

Minneapolis Park & Recreation Board

Waterworks Pavilion | Minneapolis, Minnesota

Walker Art Center

Vineland Entry & Landscape Expansion | Minneapolis, Minnesota

Confidential Client

Amphitheater Feasibility Study | Minneapolis, Minnesota

Macalester College

Janet Wallace Fine Arts Center | Saint Paul, Minnesota

Temple Israel

Lobby & Education Expansion | Minneapolis, Minnesota

St. Paul Academy & Summit School

Math & Science Center Addition; Humanities Renovation; Huss Center for the Performing Arts | Saint Paul, Minnesota

State of Iowa

Historical Building Renovation | Des Moines, Iowa

EDUCATION / AFFILIATIONS

Master of Architecture University of Minnesota

Bachelor of Arts University of St. Thomas

Licensed Architect Minnesota

University of Minnesota

Former Adjunct Professor



GLENN
WAGUESPACK
AIA, LFA

PROGRAM SPECIALIST | HGA

For over 25 years, Glenn has designed community projects that uncover surprising opportunities within their constraints, resulting in award winning, impactful architecture. As Program Specialist, Glenn will creatively synthesize stakeholder goals into program concepts which reflect a shared and meaningful vision for the Mississippi Dunes Park Reserve Building. With an open and inclusive design process backed by a strong technical aptitude, Glenn works to enable a successful, well-coordinated project from concept through implementation.

SELECTED EXPERIENCE

Washington County

Cottage Grove Ravine Regional Park Lower Landing Trailhead Building | Washington County, Minnesota

City of St. Louis Park

Westwood Hills Nature Center | St. Louis Park, Minnesota

Carver County

Lake Waconia Waterfront Services Building | Lake Waconia, Minnesota

City of Golden Valley

Brookview Community Center | Golden Valley, Minnesota

Minneapolis Parks and Recreation

Fort Snelling Outdoor Skills & Adventure Center Feasibility Study | Saint Paul, Minnesota

City of St. Louis Park

Community/Recreation Center Expansion & Feasibility Study | St. Louis Park, Minnesota

City of Plymouth

Plymouth Creek Center Expansion & Renovation Feasibility Study | Plymouth, Minnesota

City of Minnetonka

Community Facilities Study | Minnetonka, Minnesota

EDUCATION / AFFILIATIONS

Master of Architecture

Southern California Institute of Architecture (SCI-Arc)

Licensed Architect Minnesota

Living Futures Accredited Professional (LFA)



JOE
MOLLEN
AIA

PROJECT ARCHITECT | HGA

Joe is an experienced Design Architect skilled in Design, 3D Modeling, Analog Modeling, and Representation. Working closely with Michael Hara, he will realize the design concept with technical acumen. Joe will oversee the project's design details, and provide interdisciplinary coordination of all project phases. Joe will work with other team members, consultants, technicians and contractors to assure that the building is constructed as designed.

SELECTED EXPERIENCE

BOF Headquarters

Cleveland, Ohio

Sub Zero Manufacturing and Office

Cedar Rapids, Iowa

Bakken Museum | Addition and Renovation

Minneapolis, Minnesota*

Watermark Art Gallery

Bemidji, Minnesota*

Institute of Child Development

Minneapolis, Minnesota*

Dakota County Regional Bike Trail

St. Paul, Minnesota*

Vance Thompson Vision | Medical Office Building Addition

Fargo, North Dakota

CommonSpirit Health | Family Health Clinics Planning and Design

Grand Island, Nebraska

Aspirus, Inc. | Wausau Hospital Master Facilities Project | Bed Addition | ED Canopy

Wausau, Wisconsin

**Prior to joining HGA*

EDUCATION / AFFILIATIONS

Master of Architecture University of Minnesota

Bachelor of Architecture University of Minnesota



JOE
TARLIZZO
LEED AP BD+C

COST ESTIMATOR

Joe has 25 years of experience as a project estimator specializing in community projects. He will use his expertise in parks and recreation needs and the latest construction methods to accurately assess all related costs. Joe is particularly adept in design pre-construction services and conceptual estimating and uses many resources including HGA's arts building database and national and regional market information.

SELECTED EXPERIENCE

City of St. Louis Park

Westwood Hills Nature Center | St. Louis Park, Minnesota

Washington County

Cottage Grove Ravine Regional Park Lower Landing Trailhead Building | Washington County, Minnesota

Dakota County

Whitetail Woods Regional Park; Farmington, Minnesota

Loppet Foundation / Minneapolis Parks & Recreation

Theodore Wirth Welcome and Adventure Center Minneapolis, Minnesota

City of Golden Valley

Brookview Community Center | Golden Valley, Minnesota

City of Maple Grove

Town Green Band Shell and Pavilions Maple Grove, Minnesota

City of Saint Paul

Arlington Hills Community Center | Saint Paul, Minnesota

City of Woodbury

Central Park Improvements | Woodbury, MN

Como Park Zoo

Building Renovations; Exhibit Support; Education Resource Center | Saint Paul, Minnesota

Minnesota Zoo

Heart of the Zoo Entry | Apple Valley, Minnesota

EDUCATION | AFFILIATIONS

Bachelor of Science, Construction Engineering

North Dakota State University



LUKE
NICHOLS
ASLA, PLA

LANDSCAPE ARCHITECT | HGA

Luke is an award-winning landscape architect who has a decade of related experience in the field. He enjoys the co-creation process and how it kindles conversations about land, agency, and human experience. His goals are to create gardens that root users in the transformative power of place-based horticulture. He brings expertise in sustainable site design, plant materials, wayfinding, and recent work on the Wood Lake Nature Center to his design approach.

SELECTED EXPERIENCE

City of Woodbury

Central Park | Woodbury, Minnesota

City of Richfield

Wood Lake Nature Center | Richfield, Minnesota

Minnesota Zoo

Comprehensive Plan | Minneapolis, Minnesota

Macalester College

Comprehensive Campus Plan | Minneapolis, Minnesota

Winona State

Comprehensive Plan | Winona, Minnesota

McGough - College of Saint Scholastica

Student Center | Duluth Minnesota

TimeLine Theatre Company

Chicago, Illinois

St. Catherine University

Memorial Garden Predesign | Saint Paul, Minnesota

Bank of America

Sustainable Planting Visioning Plan | Plano, Texas

EDUCATION / AFFILIATIONS

Master of Landscaping Architecture

University of Minnesota College of Design

Licensed Landscape Architect Minnesota

American Society of Landscape Architects Member

3.

SECTION 3

COST PROPOSAL

We are pleased to provide an estimated fee for facility planning services for the City of Cottage Grove based on our current understanding of the Mississippi Dunes Park Reserve Building project.

HGA is competitive in the marketplace and we look forward to negotiating a fee that reflects the scope of services required for your project. We are flexible regarding our scope of services and corresponding compensation and are committed to working with you to tailor an approach that responds to your specific needs.

PROJECT SCOPE	Est. Hours	Fee
Programming / Site Analysis	150-180	\$25,000
Planning / Concept Design	240-280	\$40,000
Project Meetings	60-70	\$10,000
Cost Estimating	20-25	\$4,000
TOTAL NOT TO EXCEED		\$79,000

ESTIMATED REIMBURSABLES	
Expenses incurred in the interest of the project (includes printing, postage, mileage, etc.)	\$300



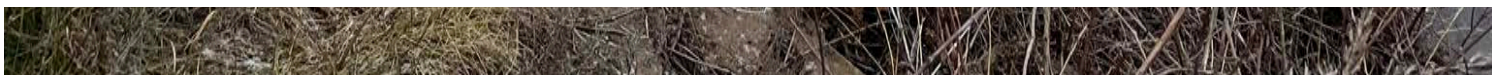
Theodore Wirth Trailhead Welcome & adventure Center | Minneapolis, Minnesota



HGA

420 North 5th Street, Suite 100
Minneapolis, MN 55401

612.758.4000
HGA.COM





City Council Action Request

7.0.

Meeting Date 2/7/2024

Department Community Development

Agenda Category Action Item

Title Holcim MWR, Inc. – Annual Mining Permit

Staff Recommendation Adopt Resolution 2024-016 approving the 2024 Mining Permit for Holcim – MWR, Inc. – Nelson Sand & Gravel Facility.

Budget Implication N/A

Attachments

1.	Holcim Mining Permit CC Memo
2.	Holcim Mining Permit Exhibit A
3.	Holcim Mining Permit Resolution

TO: Honorable Mayor and City Council
Jennifer Levitt, City Administrator

FROM: Mike Mrosia, Senior Planner

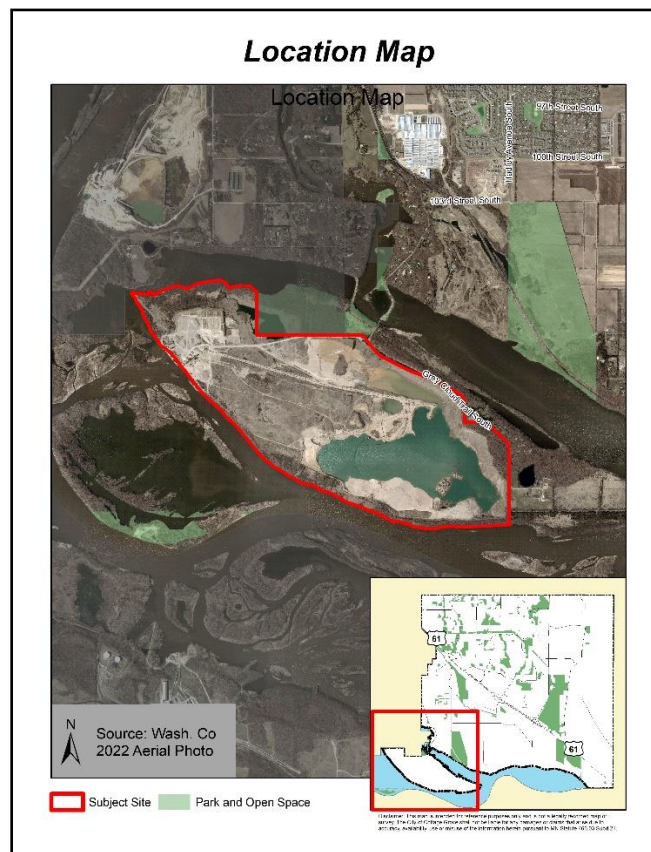
DATE: January 26, 2024

RE: Holcim MWR, Inc. – Annual Mining Permit

Proposal

Holcim MWR, Inc. (Applicant), formerly Aggregate Industries, has submitted their annual mining permit application to continue mining and processing aggregate materials in the Nelson Sand and Gravel Facility located at 11250 Grey Cloud Trail. The aggregate materials will be incorporated into various products in the Twin Cities metropolitan area and are used for ready mix concrete and/or asphalt in the construction of highways and buildings, etc. A copy of Nelson Sand & Gravel Plant 2024 Mining Plan is attached. The 2024 Mining Operations Plan proposes the following:

- Mining and processing approximately 700,000 to 750,000 tons of aggregate materials.
- Processing, washing, screening, and loading aggregate materials onto barges and trucks.
- Operating 24 hours per day seven days a week (Resolution 95-28).



Review Process

Application Received: December 15, 2023

Acceptance of Completed Application: December 15, 2023

City Council Date: February 7, 2024

60-Day Review Deadline: February 13, 2024

Planning Commission

The Planning Commission reviewed the application at their January 22, 2024 meeting. The Commission unanimously (6-to-0 vote) recommended approval of the request with no discussion.

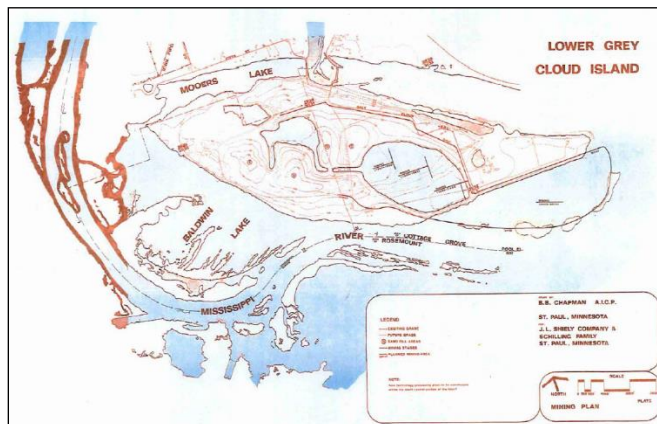
Ordinance Requirements

City Code Title 3-9 requires that an annual mining permit must be reviewed by the Planning Commission within 60 days after the completed application has been accepted by the City. The Planning Commission's recommendation is forwarded to the City Council for final action. The purpose of the annual mining permit is to:

- Ensure the restoration of the mined area is consistent with existing and planned land use patterns and to promote appropriate reuse of the mined areas.
- Ensure conformity of mining operations with the City's Critical Area and Comprehensive Plans.
- Control the effects of noise, dust, erosion, traffic, drainage, ground water pollution, and other factors related to mining in general.

Background

Mining at the existing Nelson Sand and Gravel Mine Facility has occurred since the early 1950s when the J.L. Shiely Company (now known as Holcim Industries) entered a lease agreement with the private landowner. A form of this lease agreement remains in place between the private landowner and Aggregate Industries today. On October 12, 1982, the Lower Grey Cloud Island Reclamation Concept Plan was approved by a City of Cottage Grove Reclamation Committee. A mining plan prepared by B.B. Chapman in 1982 is part of that document. A copy of this plan is shown below. With some exceptions, the proposed 2023 Operations Plan generally replicates landforms and topography as approved in 1982.



1982 Reclamation Plan

Mining Operations

Mining Operations consist of dredging to excavate raw aggregate materials. Dredging is used to reach sand reserves below the water surface. Its de-sanding capability and initial crusher that crushes rocks to smaller than six inches in size allows the operator to reclaim up to 400 tons of sand per hour without unnecessary re-handling. The dredge can mine 1,200 tons of aggregate material per hour at 60 feet below the water surface. After the material is excavated by the dredge, the mined aggregate is transported by a conveyor system that is about 2.2 miles long to the processing plant located at the northwest side of Lower Grey Cloud Island. The processing operations include crushing, washing, sorting, and stockpiling aggregate materials by size. These materials are then loaded onto barges or trucks. Most of the material is transported by barge up the Mississippi River to distribution yards in St. Paul.

In August 2023 the Applicant added a fully electric floating suction dredge that was used to move waste sand overburden from an area which was previously mined in the 1970s to 1980s. The suction dredge has the ability to reach depths of 60 feet below water and will work in conjunction with the existing dredge. While the existing dredge will continue to mine material for processing and sale, the new suction dredge was used to solely pump a slurry of overburden sand and water away from the active mining area. The overburden sand moved by the suction dredge will be placed in areas to support the final reclamation of the site.

Annual Mining Report

In 2023, approximately 675,000 tons of aggregate were transported up the river while approximately 61,000 tons were transported by truck to local job sites.

	2021	2022	2023
Estimated Tonnage Transported by Barge	721,500	607,000	675,000
Estimated Tonnage Truck Transportation	18,000	60,000	61,000

Planning Considerations

Proposed Mining Operations

The 2024 Operation Plan is shown below, and a copy is attached to this planning staff report.



2023-2024 Operations Plan



Proposed 2024 Operations Plan

As shown above, the proposed mining activity will be contained in the same area as the 2023 operation plan. The Applicant is proposing to export approximately 700,000 to 750,000 tons of material in 2024. Like previous operation plans, the applicant is required to take appropriate measures to ensure there is no erosion to stockpiles or earth-berms. At the base of each slope, a channel must be constructed to control runoff. The channeled water shall be diverted to a sedimentation basin before being allowed to enter any natural drainage system. Erosion control measures must be implemented within a reasonable amount of time for the stockpile and berm.

Environmental Impact Statement Process

The Applicant is in the process of working on an Environmental Impact Statement for proposed expansion of their mining operations in the Mississippi backwaters, located to the southeast of the existing facility.

Reclamation Plan

As of 2024, approximately 265 acres of the site have been reclaimed. The 2024 restoration plans include ongoing restoration efforts in creating a large lake and peninsula by providing shore stabilization/establishment and re-vegetation. Continued restoration in the areas of the oak grove/savanna and prairie will continue to take place as depicted in the 2024 operations plan. The Applicant has partnered with the non-profit Great River Greening on their reclamation efforts. This spring the two parties will be developing a new work plan for the reclamation efforts. The Applicant also continued treatment of invasive Siberian Elm, Black Locust, and brush species. This treatment work took place in the previously reclaimed areas along the eastern perimeter of the site.

Nuisance Noise Complaints

The Public Safety Department reported that there were no noise complaints related to the 24-hour mining that occurred in 2023.

Meeting Notices

The meeting notice was mailed to 18 property owners who are within a half-mile of the mine on January 10, 2024. Staff have not received any comments at the time of writing this report.

City Department Review

Holcim's 2024 mining permit application was distributed to other City departments. No comments were received.

Recommendation

That the Council adopt Resolution 2024-016 approving the 2024 Mining Permit for Holcim – MWR, Inc. – Nelson Sand & Gravel Facility.

Attachments:

2024 Mining Plan



December 15, 2023

Ms. Emily Schmitz
Senior Planner
City of Cottage Grove
12800 Ravine Parkway South
Cottage Grove, MN 55016

RE: Holcim – MWR, Inc. – Nelson Sand & Gravel Facility
2024 Mining Permit Application

Dear Emily:

Enclosed please find Holcim – MWR, Inc.'s 2024 Mining Permit Application, narrative and associated documentation for our Nelson Sand & Gravel facility located on Lower Grey Cloud Island. This permit application has been approved by a representative of Holcim – MWR, Inc., as well as Terry Gilberstadt of PAS Associates, Ltd.

It is our desire to have the Cottage Grove Planning Commission review this application at their meeting scheduled in January 2024, followed by the tentative City Council Meeting scheduled in February. Your confirmation of the dates of these meetings is appreciated.

Should you have any questions or require anything further, please contact me at (612) 214-8577 or via email at patty.bestler@holcim.com.

Sincerely,

A handwritten signature in blue ink that reads 'Patty Bestler'.

Patty Bestler
Regional Manager, Environmental & Land Services
Holcim – MWR, Inc.

Enclosure(s)

cc: Mike Murphy – Holcim – MWR, Inc.
Joseph Neumann – Holcim – MWR, Inc.
Riley Rooney – City of Cottage Grove



**Holcim – MWR, Inc.
Nelson Sand & Gravel
Cottage Grove, Minnesota**

2024 Mining Plan

December 15, 2023

Holcim – MWR, Inc.
Nelson Sand & Gravel
11250 Grey Cloud Trail South
Cottage Grove, Minnesota

Property Legal Description

The NE $\frac{1}{4}$, SE $\frac{1}{4}$, Section 31, Township 27, Range 21, South along Grey Cloud Trail; W $\frac{1}{2}$, SE $\frac{1}{4}$, Section 31, Township 27, Range 21; E $\frac{1}{2}$, NE $\frac{1}{4}$, NW $\frac{1}{4}$, Section 31, Township 27, Range 21, South along Grey Cloud Trail; W $\frac{1}{2}$, NE $\frac{1}{4}$, NW $\frac{1}{4}$, Section 31, Township 27, Range 21, South along Grey Cloud Trail; NW $\frac{1}{4}$, NW $\frac{1}{4}$, Section 31, Township 27, Range 21; S $\frac{1}{2}$, NW $\frac{1}{4}$, Section 31, Township 27, Range 21; E $\frac{1}{2}$, SW $\frac{1}{4}$, Section 31, Township 27, Range 21; Lot 1, Section 31, Township 27, Range 21; N $\frac{1}{2}$, NE $\frac{1}{4}$, Section 36, Township 27, Range 22; S $\frac{1}{2}$, NE $\frac{1}{4}$, Section 36, Township 27, Range 22; N $\frac{1}{2}$, SE $\frac{1}{4}$, Section 36, Township 27, Range 22; Lot 2, Section 36, Township 27, Range 22; Lot 3, Section 36, Township 27, Range 22; SE $\frac{1}{4}$, SW $\frac{1}{4}$, Section 25, Township 27, Range 22; NE $\frac{1}{4}$, NW $\frac{1}{4}$, Section 36, Township 27, Range 22; S $\frac{1}{2}$, NW $\frac{1}{4}$, Section 36, Township 27, Range 22; NW $\frac{1}{4}$, SW $\frac{1}{4}$, Section 36, Township 27, Range 22; N $\frac{1}{2}$, SW $\frac{1}{4}$, SW $\frac{1}{4}$, Section 25, Township 27, Range 22; S $\frac{1}{2}$, SW $\frac{1}{4}$, SW $\frac{1}{4}$, Section 25, Township 27, Range 22; NW $\frac{1}{4}$, NW $\frac{1}{4}$, Section 36, Township 27, Range 22; NW $\frac{1}{4}$, SW $\frac{1}{4}$, Section 36, Township 27, Range 22; N $\frac{1}{2}$, NE $\frac{1}{4}$, Section 35, Township 27, Range 22; S $\frac{1}{2}$, NE $\frac{1}{4}$, Section 35, Township 27, Range 22; SE $\frac{1}{4}$, SE $\frac{1}{4}$, Section 26, Township 27, Range 22; Lot 5, Section 35, Township 27, Range 22; Lot 3, Section 6, Township 26, Range 21; Lot 2, Section 6, Township 26, Range 21; Lot 1, Section 6, Township 26, Range 21; N $\frac{1}{2}$, NW $\frac{1}{4}$, Section 5, Township 26, Range 21; Lot 4, Section 5, Township 26, Range 21; Lot 3, Section 5, Township 26, Range 21; N $\frac{1}{2}$, NE $\frac{1}{4}$, Section 5, Township 26, Range 21; Lot 2, Section 5, Township 26, Range 21; Lot 1, Section 5, Township 26, Range 21; Lot 1, Section 4, Township 26, Range 21; NE $\frac{1}{4}$ SW $\frac{1}{4}$ Sections 36, Township 27, Range 22; Lot 5 Section 35, Township 27, Range 22

Landowner: PAS Associates, Ltd.
ATTN: Terry Gilberstadt
2565 Walnut Street
Roseville, MN 55113

Operator: Holcim – MWR, Inc.
ATTN: Patty Bestler
2815 Dodd Road, Suite 101
Eagan, MN 55121

Adjacent Landowners

PAS Associates Ltd. Partnership	12075 Grey Cloud Trail South	Cottage Grove
Terryl & Dave Gilberstadt	12085 Grey Cloud Trail South	Cottage Grove
Washington County	11395 Grey Cloud Trail South	Cottage Grove
North Central District Pentascotal	11975 Grey Cloud Trail South	Cottage Grove
Boggie, Jr., Richard	11971 Grey Cloud Trail South	Cottage Grove
Hale, Rod & Mary	11701 Grey Cloud Trail South	Cottage Grove
Washington County	11523 Grey Cloud Trail South	Cottage Grove
LaChapelle, Nanette	11973 Grey Cloud Trail South	Cottage Grove
Madsen, Fred & Karter, Katrina	10971 Grey Cloud Trail South	Cottage Grove
Maloney, Ryan & Kate	11881 Grey Cloud Trail South	Cottage Grove
Washington County	11500 Grey Cloud Trail South	Cottage Grove

Mining Operations

Holcim – MWR, Inc.’s (formerly Aggregate Industries) Nelson Sand & Gravel Facility excavates and processes aggregate materials which are utilized for ready mix concrete and/or asphalt products for the construction of various infrastructure projects within the Twin Cities metropolitan area.

The Company currently estimates that mining will continue for another three to five years. These estimate are based on current information and are subject to market trends, geologic variations and the expansion of reserves, as additional exploration occurs. At this time, the Company is in the process of working on an Environmental Impact Statement for their proposed mining in the Mississippi backwaters, located to the southeast of the existing facility.

The dredge at this facility will continue to carry out the mining into the foreseeable future. On the dredge the material is initially crushed into smaller than 6 inches in size and the excess sand is then screened off and pumped to the south shoreline or into the deepest part of the excavation for reclamation. The coarse aggregate blend is then conveyed to the processing plant where it is crushed, washed, sorted by size and loaded onto barges. The Plant is expected to produce approximately 700,000 to 750,000 tons of aggregate material in 2024.

A DRAGA 2030 fully electric floating suction dredge was put in place in August, 2023. This suction dredge will be utilized to move waste sand overburden from an area which was previously mined in the 1970’s – 1980’s. The suction dredge has the ability to reach depths of 60 feet below water and will work in conjunction with the existing clamshell dredge. While the existing clamshell dredge will continue to mine material for processing and sale, the new suction dredge will be used solely to pump a slurry of overburden sand and water away from the active mining area. The overburden sand moved by the suction dredge will be placed in areas to support the final reclamation of the site.

The majority of the material from the Nelson Sand & Gravel facility is transported by barge up the Mississippi River to the Company's distribution yard in St. Paul. At the time of this application submittal, roughly 675,000 tons of aggregate were transported by barge. In addition, roughly 61,000 tons were transported by truck to local jobsites.

The Company has mined around and past the area that was thought to have the greatest potential as the site of the historic town site Town Site 21WA48. As mining progresses to the west, the area that is identified as the Burial Mound Group 21WA9 will be left undisturbed.

Reclamation

The 2024 Operations Plan shows the area where the former St Croix Crossing Casting Plant and yard was located as "Operational Area." That area will not be reclaimed for several years. It will be utilized for additional product storage and will be filled with 3 to 5 feet of waste sand or dredge sand before it is ultimately reclaimed. The 2024 Operations Plan depicts roughly 265 acres which have been reclaimed to date.

The Landowner's current plans for reclamation of Lower Grey Cloud Island are depicted on the "Lower Grey Cloud Island Plan" prepared by Westwood Professional Services. This concept plan proposes a planned unit development of mixed residential, commercial and marina uses. The Company's reclamation efforts will follow this concept in general terms.

Waste sand will continue to be placed in the area north of the conveyor for the next several years until that area can be contoured to blend with the high ground to the north and east. That area will be sloped gradually from northeast to southwest at an elevation substantially above the 100-year flood plain.

Since 2010 the Company has been working towards the re-establishment of an Oak Savanna and a prairie area at the Nelson facility. The Company continues to work with Great River Greening with these reclamation efforts. Annual contributions have included and will continue to include: soil preparation, native grass seeding, oak plantings, herbicide treatment of non-native vegetation, brush and tree removal of non-native woody species and maintenance burns.

In 2020, a new oak grove was established in the area located northeast of the waste sand area as depicted on the 2024 Operations Plan. Additional oak trees were planted in this area and maintenance work continues for these plantings. This oak grove replaced the former Interlachen Prairie area which was located within the waste sand area.

Foliar treatment of invasive Siberian Elm, Black Locust and brush has also continued the last several years. This foliar treatment work took place in the previously reclaimed area along the eastern perimeter of the site.

A work plan will be developed in the spring of 2024, based upon the recommendations from Great River Greening.

Acknowledgement and Signature: **Holcim – MWR, Inc.**, as the Mining Operator, hereby represents upon all of the penalties of the law, for the purpose of inducing the City of Cottage Grove to grant an Annual Mining Permit, that all the statements are true and that all work will be done in accordance with the ordinance of the City of Cottage Grove and the laws of the State of Minnesota.

Holcim – MWR, Inc.

By: Patty Beath Dated: 12/15/23

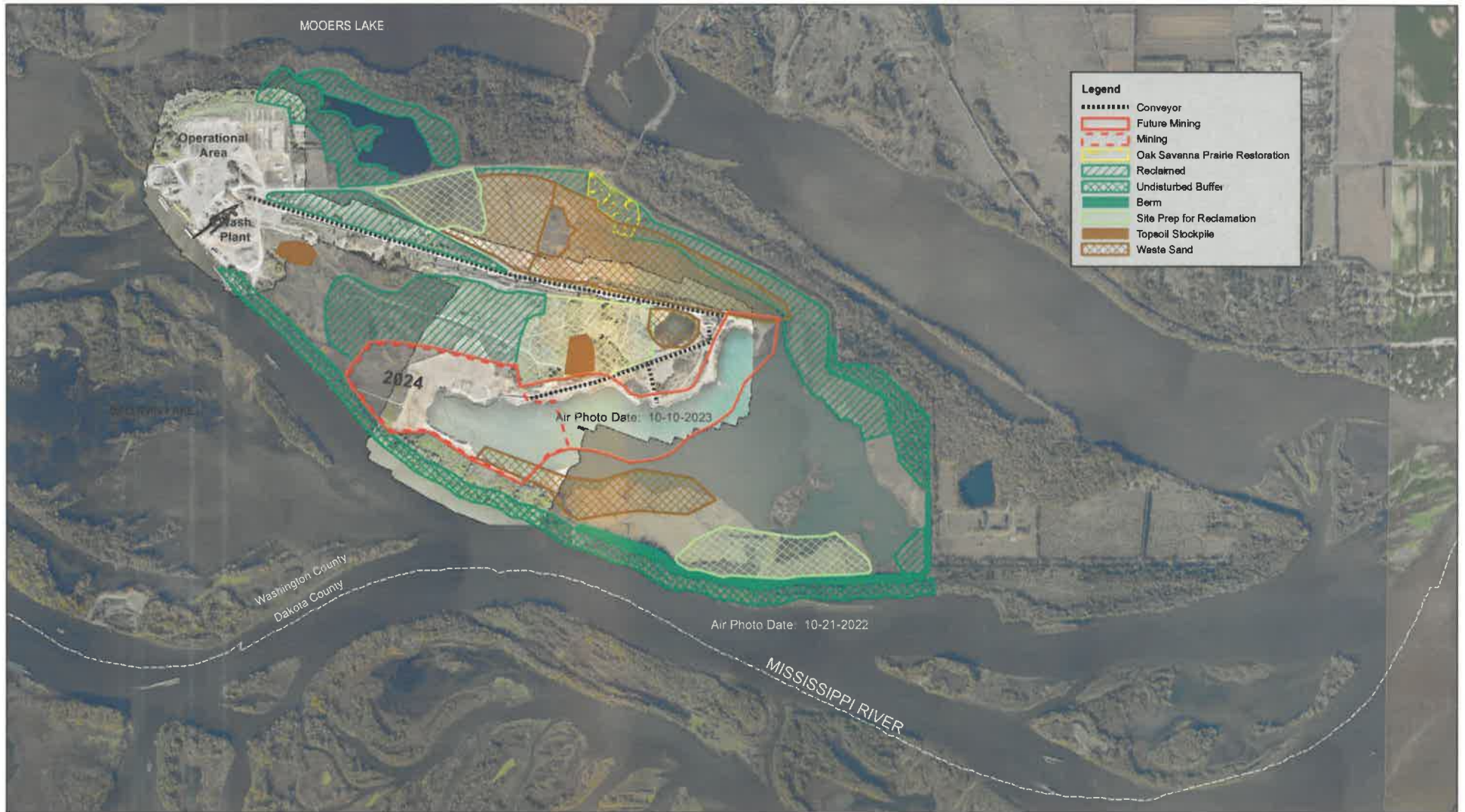
Its: Regional Manager
Environmental & Land Services

Acknowledgment and Signature: **PAS Associates, LTD**, as Landowner, hereby consents to the 2024 Operations Plan, as represented by Holcim – MWR, Inc.

PAS Associates, LTD

By: Terryl S. Gillerstedt Dated: Dec. 14, 2023

Its: Mgr. Gen. Partner



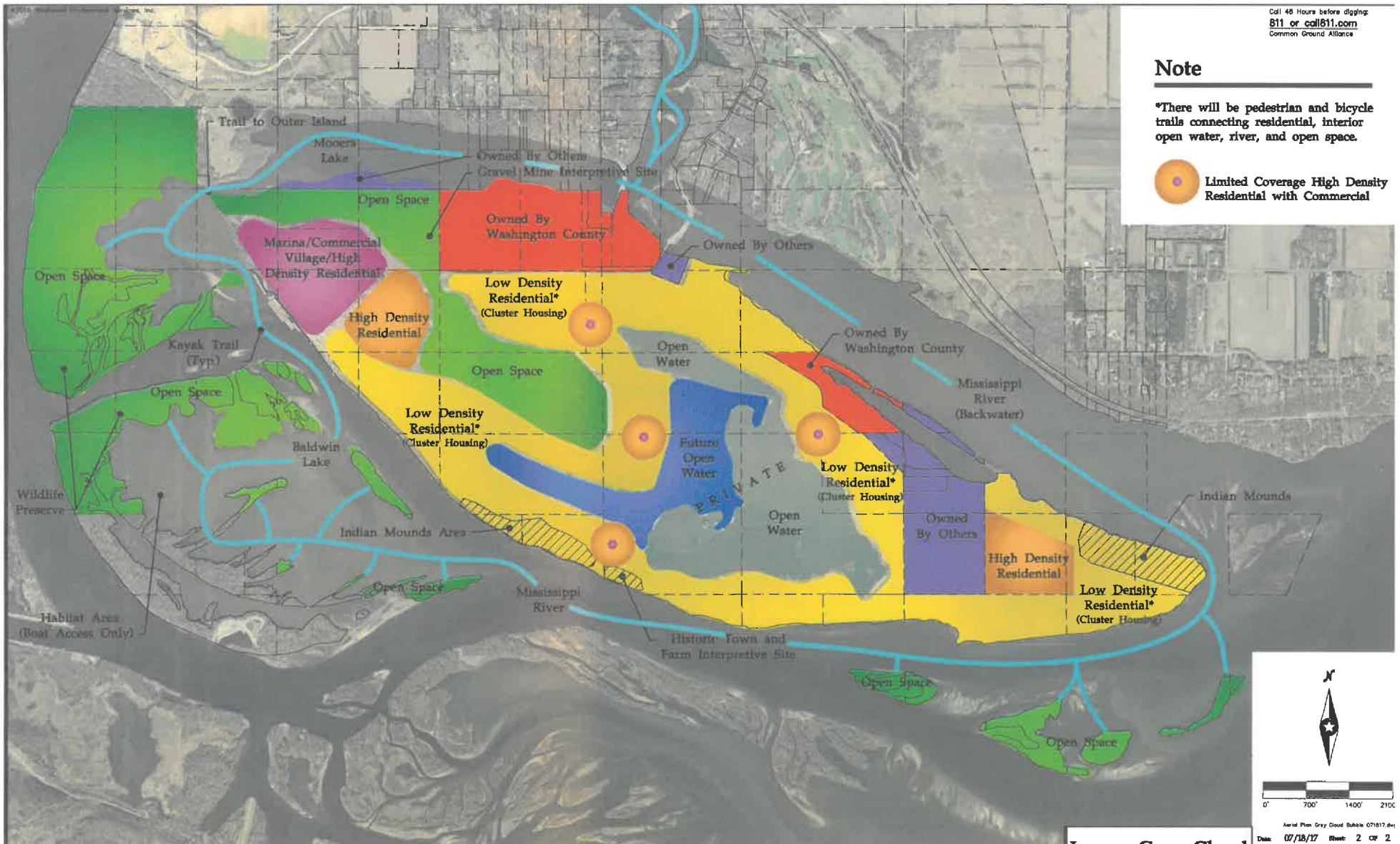
Legend

- Conveyor
- Future Mining
- Mining
- Oak Savanna Prairie Restoration
- Reclaimed
- Undisturbed Buffer
- Berm
- Site Prep for Reclamation
- Topsoil Stockpile
- Waste Sand

Note

*There will be pedestrian and bicycle trails connecting residential, interior open water, river, and open space.

 Limited Coverage High Density Residential with Commercial



Westwood

Phone: (662) 932-6160 7889 Augustine Drive
Fax: (662) 932-6222 Suite 100, Wadley, MS 38956
Toll Free: (800) 932-6160 westwoodps.com

Westwood Professional Services, Inc.

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Mississippi.

Type: 24234 Item _____
Date: _____ License No: _____

Revisions:

Revised:	_____
Checked:	_____
Drawn:	_____
Revised Drawing No:	_____

Prepared for:
PAS Associates Limited Partnership

Lower Grey Cloud Island
Cottage Grove, Mississippi

Bubble Diagram
Land Use Plan

CITY OF COTTAGE GROVE, MINNESOTA
CITY COUNCIL
RESOLUTION 2024-016

**RESOLUTION APPROVING THE 2024 MINING
PERMIT FOR HOLCIM – MWR, INC.**

WHEREAS, Holcim – MWR, Inc. has made application for their annual mining permit to excavate and process aggregate material on Lower Grey Cloud Island on the property legally described as:

NE ¼, SE ¼, Section 31, Township 27, Range 21, South along Grey Cloud Trail
W ½, SE ¼, Section 31, Township 27, Range 21
E ½, NE ¼, NW ¼, Section 31, Township 27, Range 21 South along Grey Cloud Trail
W ½, NE ¼, NW ¼, Section 31, Township 27, Range 21 South along Grey Cloud Trail
NW ¼, NW ¼, Section 31, Township 27, Range 21
S ½, NW ¼, Section 31, Township 27, Range 21
E ½, SW ¼, Section 31, Township 27, Range 21
Lot 1, Section 31, Township 27, Range 21
N ½, NE ¼, Section 36, Township 27, Range 22
S ½, NE ¼, Section 36, Township 27, Range 22
N ½, SE ¼, Section 36, Township 27, Range 22
Lot 2, Section 36, Township 27, Range 22
Lot 3, Section 36, Township 27, Range 22
SE ¼, SW ¼, Section 25, Township 27, Range 22
NE ¼, NW ¼, Section 36, Township 27, Range 22
S ½, NW ¼, Section 36, Township 27, Range 22
NW ¼, SW ¼, Section 36, Township 27, Range 22
N ½, SW ¼, SW ¼, Section 25, Township 27, Range 22
S ½, SW ¼, SW ¼, Section 25, Township 27, Range 22
NW ¼, NW ¼, Section 36, Township 27, Range 22
NW ¼, SW ¼, Section 36, Township 27, Range 22
N ½, NE ¼, Section 35, Township 27, Range 22
S ½, NE ¼, Section 35, Township 27, Range 22
SE ¼, SE ¼, Section 26, Township 27, Range 22
Lot 5, Section 35, Township 27, Range 22
Lot 3, Section 6, Township 26, Range 21
Lot 2, Section 6, Township 26, Range 21
Lot 1, Section 6, Township 26, Range 21
N ½, NW ¼, Section 5, Township 26, Range 21
Lot 4, Section 5, Township 26, Range 21
Lot 3, Section 5, Township 26, Range 21
N ½, NE ¼, Section 5, Township 26, Range 21
Lot 2, Section 5, Township 26, Range 21
Lot 1, Section 5, Township 26, Range 21
Lot 1, Section 4, Township 26, Range 21
NE ¼, SW ¼, Section 36, Township 27, Range 22
Lot 5, Section 35, Township 27, Range 22

WHEREAS, the applicant proposes to continue mining activities and operation at property located at 11250 Grey Cloud Trail South; and

WHEREAS, the applicant intends to mine and process approximately 700,000 to 750,000 tons of aggregate materials in 2024; and

WHEREAS, a notice of application was mailed to neighboring property owners informing them that the Planning Commission was scheduled to review the application at their meeting on January 23, 2023; and

WHEREAS, the application includes Holcim – MWR, Inc. continued request to extend the hours of mining, excavation, and processing operations to 24 hours, seven days a week; and

WHEREAS, crushing operations are proposed; and

WHEREAS, the applicant was present at the meeting; and

WHEREAS, the Planning Commission unanimously (6-to-0 vote) recommended approval of the mining permit at their January 22, 2024, meeting.

NOW, THEREFORE, BE IT RESOLVED, the City Council of the City of Cottage Grove, Washington County, Minnesota, grants an extension to the hours of operation as stipulated in Title 3, Chapter 9, Section 8(H) of the sand and gravel ordinance and Title 4, Chapter 7, Section 8; Construction, Excavation, Repair and Demolition Activities to allow mining operations 24 hours per day, seven days per week as long as such operations are not in conflict with the purpose and intent of the Comprehensive Plan and Reclamation Plan and shall not cause any adverse impact to public health, safety, or general welfare, based on the following findings of fact:

- A. The City has allowed the dredge to operate 24 hours per day seven days per week since 1995 when the dredge was first installed.
- B. Since the electric dredge has been in operation, only one noise complaint was received by the City. That complaint was received in 1996. The applicant was contacted and the problem was resolved in a timely manner.
- C. Residents were encouraged to immediately contact Aggregate Industries of any noise issues so that the problem can promptly be identified and mitigated in a timely manner.
- D. The variance relating to the hours of operation will be evaluated annually.

BE IT FURTHER RESOLVED, the City Council of the City of Cottage Grove, Washington County, Minnesota, approves the request by Holcim – MWR, Inc. for a mining permit ending January 31, 2025, subject to the following conditions:

- 1. The provisions as stipulated in Title 3, Chapter 9 of the City's Codes (Mining, Sand, and Gravel Operation) shall be complied with, except as modified below.

2. The applicant is responsible for removing any materials that their equipment and/or trucks may have spilled onto any public roadway. This material shall be cleaned up immediately.
3. The outer limits of their mining operations must be a minimum of 100 feet from abutting public right-of-way, private property, or any archeological sensitive area.
4. City approval of the 2024 Mining Permit does not approve their ability to mine within the required 200-foot setback from the Mississippi River, within the Mississippi River itself, or in the vicinity of archeological sensitive areas.
5. Bituminous/asphalt, concrete, and street sweepings originating within the geographical boundaries of Cottage Grove may be temporarily stockpiled on the site for processing (e.g., crushing, screening, etc.) and/or reuse. Bituminous/asphalt materials are prohibited from being buried on the premises.
6. The applicant may operate the mining operation 24 hours a day, 7 days a week. Upon notification by neighboring residents that the night-time operations (i.e., between the hours of 10:00 p.m. and 6:00 a.m.) are disturbing, the applicant agrees to voluntarily cease operation during night-time hours until such time the noise source is identified and appropriate corrections are made.
7. Holcim must install erosion control devices at the base of any slope where erosion is evident. A drainage swale must be constructed at the base of any eroding slope to control run-off and divert it to a sedimentation basin before entering any natural drainage system. Erosion control measures must be implemented within a reasonable amount of time.
8. Archeological and landmark sites as identified in the burial mound group known as 21WA9 and the recorded Grey Cloud Townsite 21WA48 on Lower Grey Cloud Island must be protected and undisturbed and protected from being damaged or adversely impacted from vehicles or equipment traveling in the vicinity of these historic sites.
9. The applicant is responsible for obtaining all state and federal permits relating to their mining operations on Lower Grey Cloud Island.
10. The applicant's current reclamation plan is titled "Future Land Use Plan." The City has not provided any formal review or approval of the "Future Land Use Plan." This concept plan is only an illustration of a development concept that the applicant and landowner have considered. The City's approval of the 2024 Operations Plan does not guarantee approval or imply future approval of the Harbor Island Concept Plan or the Future Land Use Plan as dated July 18, 2017 and prepared by Westwood Professional Services.
11. The Oak Savanna Reclamation Plan, revised 9-3-2010, is still valid. All oak plantings that have not survived within the designated oak savanna groves must be replaced with new oak trees and watered during dry conditions to promote their survival. As the Oak Savanna Reclamation Plan is implemented, the applicant must continue to up-

date the City on the effectiveness of the reclamation and restoration activities, particularly how many acorns are planted and how many oak seedlings are growing. If the survival number of trees is low, then another tree planting alternative will need to be discussed.

12. Depositing fill materials within the floodway and floodway fringe (below the 700-foot mean sea level elevation) is prohibited.

Passed the 7th day of February 2024.

Myron Bailey, Mayor

Attest:

Tamara Anderson, City Clerk



City Council Action Request

7.P.

Meeting Date	2/7/2024						
Department	Public Works						
Agenda Category	Action Item						
Title	Cottage Grove 2024 Standard Specifications for Street & Utility Construction and 2024 Standard Detail Plates						
Staff Recommendation	Approve the Cottage Grove 2024 Standard Specifications for Street & Utility Construction and 2024 Standard Detail Plates.						
Budget Implication	N/A						
Attachments	<table><tr><td>1.</td><td>Standard Specifications and Detail Plates Updates CC Memo</td></tr><tr><td>2.</td><td>Standard Specifications for 2024</td></tr><tr><td>3.</td><td>Standard Detail Plates for 2024</td></tr></table>	1.	Standard Specifications and Detail Plates Updates CC Memo	2.	Standard Specifications for 2024	3.	Standard Detail Plates for 2024
1.	Standard Specifications and Detail Plates Updates CC Memo						
2.	Standard Specifications for 2024						
3.	Standard Detail Plates for 2024						



To: Honorable Mayor and City Council
Jennifer Levitt, City Administrator

From: Joe Fox, PE, Project Engineer

Date: January 29, 2024

Re: Approve Cottage Grove 2024 Standard Specifications for Street & Utility
Construction and 2024 Standard Detail Plates

Background

The documentation for every city construction project and private residential development project includes standard specifications and detail plates. These documents lay out the city's construction and contracting requirements and help ensure uniformity in the design and construction of public and private projects. In December of 2018, the Engineering Department drafted complete standard specifications for construction and revised standard detail plates. The standard specifications and standard detail plates were approved by the City Council in March of 2018 and have been updated annually since 2020.

Discussion

Standard Specifications

Prior to the development of the standard specifications in 2018, separate specification documents were created by the city's design consultant for each public infrastructure project. For residential development, where infrastructure is designed and constructed privately, extensive city plan review was required. Due to the length and complexity of a project specification document, a large amount of coordination and review was required prior to 2018 to ensure private residential project specifications met city standards. This resulted in additional costs to developers and additional time to design a development. The standard specification document simplifies this process by giving a developer's engineer a preapproved specification to utilize. This simplifies the plan approval process for developers, city staff, and consultant engineers.

Recently city staff updated the standard specifications again to remain in conformance with applicable industry standards and MnDOT Standard Specifications as we embark on the 2024 construction season. A handful of minor changes were made based on items that have been identified through the past construction season.

Standard Detail Plates

Historically, the city has maintained a book of standard detail plates, which are used in construction plans to detail typical construction requirements. A few examples are the city standard bituminous street section; catch basin with sump; and construction requirements related to various city utilities. The city standard detail plates have been updated to be consistent with the revisions to the standard specification document and are enclosed for approval.

Honorable Mayor, City Council, and Jennifer Levitt

Approve 2024 Cottage Grove Standard Specifications for Street & Utility Construction and 2024 Standard Detail Plates

January 29, 2024

Page 2 of 2

Recommendation

It is recommended that the City Council approve the Cottage Grove 2024 Standard Specifications for Street & Utility Construction and 2024 Standard Detail Plates.

Standard Specifications for Utility and Street Construction

January 2024



SECTION 00 01 10
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Introductory Information

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01 50 00	Temporary Facilities and Controls
01 57 13	Temporary Erosion and Sediment Control
01 70 00	Execution Requirements

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34 41 05	Traffic Signs and Devices
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END OF SECTION

SECTION 00 71 00
CONTRACTING DEFINITIONS

PUBLIC PROJECTS:

Owner: As identified in the Agreement (Section 00 52 00).

Engineer: As identified in the Agreement (Section 00 52 00).

Whenever reference is made to the Minnesota Department of Transportation Specifications, such reference shall mean "Standard Specifications for Construction" 2020 Edition (MnDOT Spec.) and all subsequent revisions and supplements. The word "Engineer" is understood to refer to the Engineer for the Owner.

PRIVATE PROJECTS:

Owner: Whenever reference is made within the City of Cottage Grove's Standard Specifications for Utility and Street Construction, the word "Owner" is understood to refer to the City of Cottage Grove.

Engineer: Whenever reference is made within the City of Cottage Grove's Standard Specifications for Utility and Street Construction, the word "Engineer" is understood to refer to the City of Cottage Grove's designated engineering representative.

Whenever reference is made to the Minnesota Department of Transportation Specifications, such reference shall mean "Standard Specifications for Construction" 2020 Edition (MnDOT Spec.) and all subsequent revisions and supplements. The word "Engineer" is understood to refer to the City of Cottage Grove's designated engineering representative.

Whenever reference is made to the General Conditions, such reference shall mean "Standard General Conditions of the Construction Contract" as published by the Engineers Joint Contract Documents Committee (EJCDC) 2018 version.

END OF SECTION

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SECTION 01 31 00

PROJECT MANAGEMENT AND COORDINATION

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. General requirements for overall Project coordination.

1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. All Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.
- B. Related Sections:
 - 1. 01 33 00 Submittal Procedures

1.03 PROJECT COORDINATION

- A. Coordinate all Work with the Engineer and City engineering staff. City engineering staff are located at Cottage Grove City Hall, 12800 Ravine Parkway South. Regular office hours are 8 A.M. to 4:30 P.M.
- B. Coordinate the Work of the Contract and the Work of others relating to the Project. Work with others to cause the efficient and timely completion of the Work. These responsibilities include, among others, the following:
 - 1. Coordinate activities of all sub-contractors.
 - 2. Inform emergency services (Police, Fire), Post Office, and Schools of traffic situations as appropriate to Project circumstances.
 - 3. Inform City Public Works Department of Project schedule and upcoming activities that will affect their operation.
 - 4. Inform non-municipal utilities (gas, telephone, electric, etc.) of Project schedule to allow for planning of any activities they wish to coordinate with the Project.
 - 5. Maintain and coordinate access needs of adjacent properties.
 - 6. Conform to the requirements of Section 01 33 00.

1.04 UTILITIES

- A. Notify Gopher State One Call before starting construction in a given area requesting utility locates in the Site:
 - 1. Engineer has requested information at time of construction document preparation on existing private utilities via design locate request through the Gopher State One Call Program.
 - 2. The original version of the information supplied by the utilities is available for viewing at the office of the Engineer.

- B. Known Information On Private Utilities: Known information regarding the private utilities is depicted on the Drawings and information supplied by utility companies can be viewed at the office of the Engineer by request.
- C. Project Utility Sources: Coordinate Work with the following utility owners:
 - 1. City of Cottage Grove Public Works 651-458-2808
 - 2. Gopher State One Call 651-454-0002
- D. Locating Owner owned public utilities:
 - 1. Owner will complete initial locating of all existing Owner owned public utilities including communication lines, lighting, sanitary sewer, signal, storm sewer, and water utility. The request for initial locate of all utilities within the project limits must be submitted to Owner a minimum of 4 business days prior to the project start date.
 - 2. The responsibility of locating existing Owner owned utilities within the project limits shall be transferred to the Contractor after initial locating has been completed by the Owner until final completion.
 - 3. Contractor shall be responsible for locating all newly installed public utilities installed within the project limits until final completion.
 - 4. Locate requests within the project limits received by the Owner will be forwarded to the Contractor's representative responsible for coordinating locate requests within the project limits by email. Confirmation of receipt of the locate ticket must be sent by the Contractor's representative back to the Owner within 2 hours of Owner sending the locate request to the Contractor's representative.
 - 5. The Contractor shall be responsible for repairing any damage as the result of improperly located or unmarked public utilities within the project limits. The repair must be completed in accordance with the project requirements and to the satisfaction of the Engineer. This work shall be considered incidental.
 - 6. Owner requires a 48-hour notice for all utility interruptions.
- E. Coordinate the relocation or protection of all existing facilities. Any costs for such Work shall be the responsibility of the Contractor.

1.05 PERMITS

- A. Apply for, obtain, and comply with the provisions of the following permits, which the Owner will waive the permit application fee:
 - 1. City of Cottage Grove Right-of-Way Permit
- B. Comply with the stipulations of the following permits, which have been applied for and will be furnished by the Owner.
 - 1. The following will be furnished on public projects only:
 - a. Minnesota Pollution Control Agency (MPCA) Permit for Sanitary Sewer Extensions.
 - b. Minnesota Department of Health (MDH) Permit for Water Main Extensions.
 - c. MPCA Stormwater Discharges Associated With Construction Activities NPDES General Permit.
- C. Apply for, obtain, and comply with other permits, licenses, and approvals which may be required for the Project.

1.06 SURVEYING AND CONSTRUCTION OBSERVATION

- A. Provide Engineer a minimum of 48-hour notice in advance of the need for establishing lines, grades, measurements, grade checks, and observation of Work.
- B. Engineer will furnish a Resident Project Representative.
- C. The Contractor is responsible for:
 - 1. Grades and elevations for pedestrian ramps.

1.07 PROJECT MEETINGS

- A. Administrative Requirements:
 - 1. Project Superintendent or persons designated by the Contractor to attend and participate in the Project meetings shall have all required authority to commit the Contractor to solutions agreed upon in the Project meetings.
 - 2. Engineer will set the time, sites, and prepare the agenda for the meetings.
 - 3. Engineer will prepare meeting minutes and distribute 1 copy to Contractor. Notify Engineer of inaccuracies or discrepancies in the meeting minutes within 5 calendar days of receipt of the minutes.
 - 4. The attendance and cooperation of subcontractors and suppliers may be required.
- B. Preconstruction Conference:
 - 1. Provisions for the Preconstruction Conference are set forth in the General Conditions.
 - 2. Requirements for preconstruction submittals are set forth in the General Conditions. Submittal procedures shall be consistent with Section 01 33 00.
- C. Progress Meeting Procedures:
 - 1. Weekly Status Meetings will be held during weeks when construction activity is occurring on the Project. The meetings will take place at Cottage Grove City Hall. Day and time will be determined at the preconstruction meeting. If no Work is occurring, no meeting will be required:
 - a. Weekly Status Meetings are anticipated to be 30 to 60 minutes in length.
 - b. Furnish a detailed schedule of work for the following week as well as provide an update on construction activity from the previous week for the purpose of allowing the City to provide information on its website as well as communicate to residents within the project limits.
 - c. Provide copies of erosion control inspections completed during the previous week.
 - d. Developers, private utilities, and others may attend to communicate Project issues.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01 33 00
SUBMITTAL PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. General procedures and requirements for submittals during the course of construction.

1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. All Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 SEQUENCING AND SCHEDULING

- A. Schedule submittals consistent with the Contractor's schedule of shop drawings.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.01 CONSTRUCTION SCHEDULE

- A. Submit preliminary schedule and progress schedule consistent with the General Conditions.
- B. Prepare schedules on 11 inch by 17 inch sheets showing overall sequence of construction. Organize the schedule by work activity. Identify separate stages of each work activity:
 - 1. List work items in chronological sequence. Show beginning and completion dates of each activity. Include all activities with an estimated duration of 3 days or longer.
 - 2. Format schedule as a horizontal bar chart. Provide separate bars for each activity or trade.
 - 3. Provide space for revisions and notations.
 - 4. Identify interrelations between activities.
 - 5. Identify critical path of tasks to be performed.
 - 6. Include estimated times for preparation of submittals by Contractor, processing and review of submittals by Engineer, fabrication, delivery, installation, testing, start-up, instruction of Owner, and clean-up.
- C. As Work progresses, revise, update, and resubmit schedule as requested by Owner or Engineer. At a minimum, update schedule with each Application for Payment. Show all activities started or finished since previous schedule was submitted and show percentage of completion for each activity.

3.02 EMERGENCY CONTACT LIST

- A. Before any Work at the Site is started, submit a typed list on 8.5 inch by 11 inch paper outlining 24 hour on-call contacts for the Project. This list shall include the Contractor's safety representative, Contractor's locating representative, key representatives from the Contractor, subcontractors, and suppliers. Include the following information for each contact:
 - 1. Company name.
 - 2. Contact person(s).
 - 3. Local and mobile phone numbers.

3.03 SHOP DRAWINGS AND MANUFACTURERS' INFORMATION

- A. Conform to the requirements of the General Conditions, except as modified herein.
- B. The minimum sheet size shall be 8.5 inches by 11 inches. Non-legible copies will not be reviewed.
- C. Submit a minimum of 3 copies of shop drawings, plus the quantity of copies the Contractor wants returned, or submit electronically. Each copy shall contain the following information:
 - 1. Date of submission and date of any previous submittals.
 - 2. Project Title.
 - 3. Names Of: Contractor, subcontractor, supplier, and manufacturer.
 - 4. Identification of product and Specification Section number.
 - 5. Identification of revisions from previous submittals.
- D. Engineer's review will be in conformance with the requirements of the General Conditions, except as modified herein.
- E. Engineer will stamp shop drawings and indicate requirements for Contractor's review or re-submittal as follows:
 - 1. "Approved" – Appears that items covered by the submittal will, after installation or incorporation into the Work, conform to the Contract Documents and appears to be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
 - 2. "Approved as Noted" – Appears that items covered by the submittal will, after installation or incorporation into the Work, conform to the Contract Documents and appears to be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents, except as noted by Engineer.
 - 3. "Revise and Resubmit" – Appears that items covered by the submittal will not, after installation or incorporation into the Work, conform to the Contract Documents and will not be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Work cannot proceed until the submittal is revised and resubmitted conforming to the re-submittal procedures described in the General Conditions.
 - 4. "Rejected" – Work covered by the submittal is not complete or it appears that items covered by the submittal will not, after installation or incorporation into the Work, conform to the Contract Documents and will not be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Contractor shall conform to the re-submittal procedures described in the General Conditions.

3.04 TEST REPORTS

- A. Submit 3 copies of all inspections, tests and approvals required in the Specifications.

3.05 MATERIAL AND SAFETY DATA SHEETS

- A. Furnish Owner with current copies of Material Safety Data Sheets for all chemicals and products on Site.

END OF SECTION

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SECTION 01 40 00
QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Information required for conformance to regulatory requirements.
 - 2. Quality assurance.
 - 3. Procedures to measure and report the quality and performance of the Work.

1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. All Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCE STANDARDS

- A. Whenever reference is made to the Minnesota Department of Transportation Specifications, such reference shall mean "Standard Specifications for Construction" 2020 Edition (MnDOT Spec.) and all subsequent revisions and supplements. The word "Engineer" is understood to refer to the Engineer for the Owner.

1.04 SUBMITTALS

- A. Prior to start of Work, submit testing laboratory name for various specified tests for approval by Engineer.
- B. Laboratory test results or analysis.
- C. Manufacturer's certificates of quality control or performance.

1.05 WORKMANSHIP

- A. Comply with industry standards of the region, except where more restrictive tolerances or specified requirements indicate more rigid standards or more precise workmanship.

1.06 TESTS AND INSPECTIONS

- A. Conform to the requirements of the General Conditions, except as modified herein.
- B. Notify Engineer 48 hours prior to expected time for operations requiring tests and inspections.
- C. Provide incidental labor and facilities to obtain and handle samples at Site or source, transport samples to laboratory, and facilitate tests and inspections for storing and curing of test samples.

- D. On public projects, Owner shall pay for all required tests except as indicated in the Specifications:
 - 1. If, under test, any portion of the work fails to meet contract requirements and is altered, renewed, replaced, tests on that portion so altered, removed, replaced, together with portions of the work as are affected thereby, shall, if so required by Engineer, be repeated within reasonable time and in accordance with the specified conditions and the Contractor shall reimburse Owner for incurred costs of all subsequent tests to ensure compliance.
- E. Notify Engineer of pit and scale location and other correlated items prior to beginning Work.
- F. Following substantial completion of the project and in accordance with Standard General Conditions of the Construction Contract, the Engineer and Owner will perform a Final Inspection of the work performed under the contract. Based on that Inspection 1 initial Inspection Notice Report (INR) will be prepared. Contractor shall notify Engineer when items listed in INR have been completed. The Engineer will inspect Contractor's work a second time to verify the items in the initial INR have been completed. If there are items still unacceptable to the Owner/Engineer, a second INR will be prepared. All costs for Owner's/Engineer's time to prepare the second and, if needed, subsequent INRs and to verify that the work has been completed will be deducted from payments to the Contractor.

1.07 LABORATORY REPORTS

- A. After each inspection and test, submit 3 copies of Laboratory Report to Engineer.
- B. Include: Date issued, Project title and number, name of inspector, date and time of sampling or inspection, identification of product and Specifications Section, location in the Project, type of inspection or test, date of test, results of tests, and conformance with Contract Documents.

1.08 LABORATORY RESPONSIBILITIES

- A. Test samples and perform field tests.
- B. Provide qualified personnel. Cooperate with Engineer and Contractor in performance of services.
- C. Ascertain compliance with the requirements of the Contract Documents.
- D. When requested by Engineer, provide interpretation of test results.

1.09 LIMITS ON TESTING LABORATORY AUTHORITY

- A. Laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
- B. Laboratory may not approve or accept any portion of the Work.
- C. Laboratory may not assume any duties of Contractor.
- D. Laboratory has no authority to stop Work.

1.10 MANUFACTURER'S CERTIFICATES

- A. If requested by Engineer, submit manufacturer's certificate with shop drawings certifying that products meet or exceed specified requirements executed by responsible officer.

1.11 MANUFACTURER'S FIELD SERVICES

- A. Provide qualified representative to observe field conditions; conditions of surfaces and installation; quality of workmanship; start-up of equipment; and test, adjust, and balance of equipment.

1.12 RIGHT OF REJECTION

- A. The Engineer, acting for the Owner, shall have the right, at all time and places, to reject any articles or materials to be furnished hereunder which in any respect, fail to meet the requirements of these specifications, regardless of whether the defects in such articles or materials are detected at the point of manufacture or after completion of the work at the site. If the Engineer or RPR, through an oversight or otherwise, has accepted materials or work which is defective or which is contrary to the specifications, such material, no matter in what stage or condition of manufacture, deliver, or erection may be the Engineer for the Owner.

PART 2 PRODUCTS

NOT USED.

PART 3 EXECUTION

NOT USED.

END OF SECTION

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SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Temporary utilities and miscellaneous temporary facilities required during construction.
- B. Products furnished but not installed under this Section or products installed but not furnished under this Section.
- C. Related Sections:
 - 1. Section 01 33 00 – Submittal Procedures.
 - 2. Section 33 10 00 – Water Utilities.
 - 3. Section 33 14 18 – Water Utility Service Laterals.

1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Mobilization: Measurement is Lump Sum. This will be considered payment in full for all work and costs of this Bid Item for the entire Project. Partial payment of the Lump Sum Bid Item “Mobilization” will be made using a percentage based on the table below. If the contract unit price for mobilization exceeds 5 percent of the total contract amount, the owner may withhold (on any partial estimate) the portion in excess of 5 percent until the Contractor earns at least 95 percent of the original contract amount.

	Cumulative Percent of Mobilization Item Paid
First Partial Payment	50
Percent of original contract amount earned - 25	70
Percent of original contract amount earned - 50	90
Percent of original contract amount earned - 100	100

- 2. Traffic Control: Measurement is Lump Sum. This shall be considered payment in full for all labor, equipment, and materials associated with the required Traffic Control devices for vehicular and pedestrian traffic for the entire Project. This Bid Item shall include but not be limited to furnishing, installing, maintaining, relocating, and ultimate removal of the Traffic Control devices used over the duration of the Contract or as directed by the Engineer. Also included within this item is temporary pavement markings and detours as shown in the Drawings. Partial payment of the Lump Sum Item “Traffic Control” will be made using a percentage based on the table below. If the contract unit price for Traffic Control exceeds 5 percent of the total contract amount, the owner may withhold (on any partial estimate) the portion in excess of 5 percent until the Contractor earns at least 95 percent of the original contract amount.

	Cumulative Percent of Traffic Control Item Paid
First Partial Payment	50
Percent of original Contract amount earned – 25	70
Percent of original Contract amount earned – 50	90
Percent of original Contract amount earned – 100	100

3. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. Minnesota Department of Transportation “Standard Specifications for Construction”, 2020 Edition (MnDOT Spec.).
- B. The Minnesota Manual on Uniform Traffic Control Devices (MMUTCD), including the Field Manual on Temporary Traffic Control Zone Layouts – Latest edition.
- C. Minnesota Department of Transportation Traffic Engineering Manual.

1.04 SUBMITTALS

- A. Construction Staging Plan consistent with Section 01 33 00, including the following information:
 1. Sequence of construction and traffic control.
 2. Streets closed or restricted during any stage of construction.
 3. Provisions for routing any detoured traffic as permitted.
 4. Specific signs, striping, and other traffic control devices to be utilized.
- B. Traffic Management Plan consistent with Section 01 33 00, including the following information:
 1. Haul and access routes.
 2. Permits or applications required by local authorities.
 3. Temporary facilities required.
 4. Names, addresses, and phone numbers of at least 3 individuals responsible for placement and maintenance of traffic control devices. At least one of these individuals shall be “on call” 24 hours per day, 7 days per week during the time any traffic control devices furnished and installed by the Contractor are in place.

PART 2 PRODUCTS

2.01 TRAFFIC CONTROL CHANGE

- A. Sign:
 1. Conform to MMUTCD 6F30 - W3-X5, minimum dimensions of 36 inch X 36 inch.
 2. Sign material meeting the requirements of Section 34 41 05.
- B. High Level warning device:
 1. Conform to MMUTC 6F62 Orange flag, min 16 square inches surface area.

2. Minimum of two flags per sign.

PART 3 EXECUTION

3.01 MOBILIZATION

- A. Move personnel, equipment, materials, and all other items required to complete the Work at the Site.
- B. Establish Contractor offices, building, or other facilities necessary for Work on the Project.
- C. Temporarily hold or relocate utilities and any miscellaneous structures, such as signs, power poles, guy wires, and mailboxes disturbed.

3.02 TEMPORARY WATER FOR CONSTRUCTION AND USE OF OWNER'S WATER SYSTEM

- A. Regulations of the Minnesota Department of Health as adopted by the City of Cottage Grove prohibits the indiscriminate use of the City's water hydrants by persons other than City personnel.
- B. Contractors are not allowed to operate or connect to a City hydrant for water usage without a Hydrant Use Permit. A Hydrant Use Permit is available at Public Works Department 8635 West Point Douglas Road. Office hours 7 A.M. to 3:30 P.M. A deposit is required for the use of a hydrant meter.
- C. No direct connection will be allowed from a hydrant to a tank truck or watering vehicle or hose. Contractor must provide a backflow preventer or fill pipe air gap equal to 2 times the diameter of the fill pipe or hose.
- D. Clean and thoroughly disinfect all containers and testing equipment to eliminate the possibility of contamination of the system.
- E. Disinfect water mains and services consistent with Section 33 10 00 and Section 33 14 18.
- F. The following is a summary of the procedural requirements for installation and testing of City water mains and services.
- G. Phase 1: Utility projects consisting of sanitary sewer, water main, and storm sewer improvements:
 1. Step 1 - Open Connections to Existing Mains and/or Fittings:
 - a. Contractor schedules shutdown and contacts City Water Department a minimum of 48 hours prior to performing Work. At this time, the Contractor is responsible to notify the City Fire Department of the intended shutdown. Contractor must abide with specific requirements for the Project that limits or defines certain hours that the shutdown maybe be performed.
 - b. If water service is to be turned off, the Contractor is responsible to provide written notification to all affected property owners and customers at least 48 hours prior to the actual loss of service.

- c. The City Water Department must open and close the existing valves for this part of the operation. If required, the City will be responsible for flushing the existing mains after the connection is completed; however, the Contractor shall assist the City as necessary.
- 2. Step 2 - Filling Newly Installed Water Mains Prior to Service Installation:
 - a. Contractor contacts City Water Department a minimum of 48 hours prior to performing Work. Engineer reviews with the Contractor the sequence of lines to be filled and which hydrants to open to eliminate trapped air. Taps of 1 inch diameter may be required in dead end plugs to relieve air from the system as part of the Project.
 - b. After the Contractor notifies the City Water Department, the Contractor and Engineer Representative operate valve to slowly fill the mains.
 - c. When filling water mains 12 inches and larger, the City Water Department must be present.
 - d. Contractor is responsible to verify that all existing valves are off and that untested water is not able to enter the City system. The Contractor is further responsible to have all new valves in their system open to assure that all new mains are filled but that the water is contained within the new system.
- 3. Step 3 - Water Service Installation:
 - a. All corporation stops shall be tapped with the main under water pressure.
 - b. Contractor is responsible to open all corporation stops and curb stops to bleed air and flush any dirt from the copper water line. Afterwards, the Contractor shall close the curb stop and shall crimp the end of the short tail section.
 - c. During the service installation activity, the Contractor opens and closes existing main valve as necessary to maintain pressure for tapping and bleeding service lines only. The Engineer Representative must be present at the time the Contractor re-pressurizes the mains.
 - d. Engineer checks and verifies that existing valve is opened and closed promptly; however, the Contractor is responsible for this procedure.
- 4. Step 4 - Pressure and Conductivity Testing:
 - a. Pressure and conductivity testing shall be performed as per the Contract Specifications and shall be performed in that order to assure mains are full of water for conductivity testing.
 - b. All service lines shall be in place and on before the pressure test is administrated.
 - c. Document and provide the City with static pressure readings obtained during the pressure testing procedure.
- 5. Step 5 - Flushing of Water Mains for Bacteria Test:
 - a. Contractor contacts City Water Department a minimum of 48 hours prior to performing Work. Engineer reviews with Contractor the sequence of lines and valves to operate to thoroughly flush system.
 - b. After notifying the City, the Engineer Representative and Contractor operate existing valve/valves for flushing.
 - c. City Water Department must be present when flushing water mains 12 inches and larger.
 - d. Contractor shall notify the Engineer for the scheduling of water sample for bacteria test, which shall be pulled and tested by a certified independent testing firm. The Contractor will be required to assist the Engineer to operate valves for sampling if necessary.
- 6. Step 6 - Turning On New Mains into Existing Water System:
 - a. All testing complete - pressure, conductivity, and bacteria accepted by the Engineer.

- b. Engineer completes required documentation notifying Public Works Department, Engineering Department, and Building Inspection Department that the new system is turned on or can be scheduled to be turned on.
 - c. Engineer contacts the City Public Works Department which must be present to turn on the new system for mains 12 inches and larger. System shall be turned on within 14 calendar days of completion of passing tests.
 - d. Engineer and Contractor together turns on the new system for mains smaller than 12 inches. System shall be turned on within 14 calendar days of completion of passing tests.
- H. Phase 2 - Street Construction, Restoration, and Landscaping Work:
 - 1. Contractors, subcontractors, builders, or developers are not allowed to operate or connect to a City's hydrant for water usage without a hydrant use permit.
 - 2. The sources of City water for street construction, restoration, and landscaping work is as follows:
 - a. Public Works will designate a hydrant for the Contractors as part of Hydrant Use Permit process.
 - b. If hydrant meters are not available or if the City determines the Contractors request for water warrants it, the City will designate an existing hydrant for the Contractors use. The same hydrant use permit, deposit, and water use charge will be applied, as required for the hydrant meter.
 - c. Prices and deposit amounts may change without notice.
- I. Water Restrictions: Contractor may be required to use non-potable water during a drought period. Owner will assist Contractor in locating source.

3.03 CONSTRUCTION FACILITIES

- A. Sanitary Facilities:
 - 1. Comply with all governing regulations, including safety and health codes, for sanitary fixtures and facilities.
 - 2. Provide self-contained toilet units, or water and sewer connected temporary toilet facilities, consistent with governing regulations. Contractor may not use Owner's toilet facilities.
 - 3. Provide and maintain adequate supply of toilet tissue, paper towels, paper cups, and similar disposable materials appropriate for each facility. Provide appropriate covered waste containers for used material.

3.04 TEMPORARY CONSTRUCTION

- A. Bypass Pumping:
 - 1. All sanitary flows shall be pumped around areas with no spillage allowed.
 - 2. Any spill needs to be reported as required by law.
- B. Pumping and Dewatering:
 - 1. Provide draining, pumping, dewatering, and cleaning operations necessary to complete the Work.
 - 2. Provide all necessary pumping to remove all surface water and groundwater from structures as required for the Work. Provide erosion control measures for discharge of water.
 - 3. Protect Site and adjacent property to avoid damage.

3.05 TRAFFIC CONTROL

A. General

1. Provide and maintain all traffic control devices in accordance with the approved Construction Staging Plan. All traffic control devices and other protective measures shall conform to MMUTCD, including its supplements and part IV, "Field Manual on Temporary Traffic Control Zone Layouts", the "Guide to Establishing Speed Limits in Highway Work Zones", and, if any, traffic control layouts and typical traffic control layouts in the Plans.
2. Flaggers are required to protect construction vehicles during unloading of construction materials. Conform to the requirements of the MMUTCD, the Flagging Handbook included in the Field Manual for Temporary Traffic Control Zone Layouts, and the following:
 - a. While on duty flaggers shall wear hard hats and reflectorized florescent orange vests;
 - b. Flaggers shall be fully clothed when on duty with shirt or blouse, slacks or trouser, and sturdy shoes.
3. Do not park vehicles as to obstruct a traffic control device. The parking of workers' vehicles will not be allowed within the Project limits, unless so approved by the Engineer.
4. Do not store materials or equipment within 30 feet of through traffic, unless approved by the Engineer. If materials or equipment must be stored within 30 feet of through traffic, the Contractor shall provide barricades or barriers, as directed by the Engineer, to warn and protect traffic.
5. Conduct Work in a manner that will allow access to all properties within and adjacent to the Project by fire, police, and emergency vehicles.
6. Maintain all unpaved surfaces. The surface shall be watered and bladed as directed by the Engineer.
7. Remove traffic control devices at the conclusion of the Work
8. Protect work at all times, including during structure adjustment work.
9. Provide access for emergency vehicles and busses to all residences at all times.

B. Traffic Control Devices:

1. Daily inspect and insure that all traffic control devices required by the construction are in accordance with the MMUTCD. Any discrepancy between the actual devices in use and the required devices shall be immediately rectified. At least 1 nighttime inspection shall be made each week.
2. Respond with sufficient personnel, equipment, and/or materials to any request from the Engineer to improve or correct the usage of traffic control devices on or related to this Project within 1 hour of the time of notification or be subject to a \$100 per hour deduction from the time of notification for non-attention to protect security and safety.
3. Keep all traffic control signs and devices in a legible condition. This shall include but not be limited to removing grime and dust deposited on any device by traffic, natural causes, or when requested by Engineer.
4. Store at least 10 extra Type 1 barricades with flashers, 5 extra Type III barricades, and 10 extra drums, at a convenient location within the Project limits for use in an emergency, as approved by the Engineer. No direct compensation will be made to the Contractor for furnishing and erecting these traffic control devices.

C. Place traffic control with flashers around areas disturbed by removal and replacement of utility structures and concrete curb and gutter:

1. Place at least one Type 1 barricade with flasher or barrel with flasher per panel of curb removed.
- D. Establish and maintain advisory signs at all entrances to Site:
 1. Signs shall state "Construction Zone" and "Proceed at Own Risk" in black letters on orange background.
- E. Prior to disturbing any existing trail or sidewalk, place Type 3 barricade with "Sidewalk Closed" sign on each side of the disturbed area.
- F. Closure of a roadway using Type III barricades will require a sufficient number of barricades to span the entire roadway width, at the discretion of the Engineer.

3.06 TRAFFIC CONTROL CHANGE

- A. General
 1. Advanced warning signage must be in place prior to changes in traffic control, including removal of existing traffic control signs (e.g. stop, yield).
 2. Advanced warning signs must be located behind the curb.
 3. Advanced warning signage must remain in place for 60 days after change in traffic control and removed within 65 days of change in traffic control.
 4. After removal complete restoration in accordance with section 32 92 00.

3.07 TEMPORARY BARRIERS AND ENCLOSURES

- A. Temporary Barriers:
 1. Provide temporary covers, enclosures, markers, and barriers as necessary to protect Work.
 2. Promptly repair any damage to the Site caused by removal of temporary fencing, including potholes. During removal, at no time shall the Work remain unattended if a dangerous condition exists because of incomplete removal or Site requiring repair.
- B. Temporary Fence:
 1. Install as shown on the Drawings.
 2. Maintain and repair fence throughout the duration of the Project.
 3. Provide Owner and Engineer with keys or combinations to any locks that may be used to secure fencing gates.

3.08 RESTRICTIONS

- A. Temporary stockpiling of materials or debris on any City street overnight is not allowed. Proper traffic control is required for stockpiling during the day.
- B. Overnight parking of equipment will be allowed along city streets. Overnight parking of equipment must meet the following requirements or be subject to Penalty.
 1. Proper traffic control is required.
 2. Equipment left onsite must be utilized for construction purposes within the project limits a maximum of 48 hours from time of last use unless otherwise approved by Engineer.
 3. Equipment left onsite must be parked at locations that will not restrict access to driveways or access for emergency vehicles.

4. All overnight parking locations must be approved of by Engineer.

END OF SECTION

SECTION 01 57 13

TEMPORARY EROSION AND SEDIMENT CONTROL

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Managing storm water runoff and other Project related water discharges to minimize sediment pollution during construction.

1.02 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. Payment at the Bid Unit Price will be considered compensation in full for all Work necessary to complete the Bid Item in full, including installation, maintenance, sediment removal, repairs, and removals.
2. Measurement will be based upon the units as listed below for Bid Items removed, abandoned, or salvaged complete as specified. No measurement will be made of any removals that are not required. The actual quantity installed multiplied by the appropriate Bid Unit Price will be compensation in full for all Work and costs of the following Bid Items. 80-percent partial payment will be made upon installation and 20-percent payment will be made upon removal and restoration:
 - a. Silt Fence: Payment will be by type. Measurement will be by the linear foot along the base of the fence, from outside to outside of the end posts for each section of fence.
 - b. Floatation Silt Curtain: Payment will be by type. Measurement will be by linear foot installed.
 - c. Storm Drain Inlet Protection: Measurement will be per each, according to type furnished. Payment shall include installation and maintenance, removal, including cleaning and reinstallation.
 - d. Temporary Construction Entrance: Measurement will be by the cubic yard of material furnished and installed on the Project.
 - e. Rolled Erosion Prevention Products: Payment will be by type installed. Measurement will be by square yard.
 - f. Mulch: Measurement will be by the acre of material installed.
 - g. Temporary Hydraulic Matrix: Measurement will be by the acre of material installed.
 - h. Filter Berm: Payment will be by type. Measurement will be by the linear foot.
 - i. Sediment Control Logs: Payment will be by type. Measurement will be by the linear foot.
 - j. Sediment Trap: Shall be considered incidental to the Project.
 - k. Temporary Slope Pipe: Measurement will be by the linear foot. Payment shall include rip rap used to provide an outlet.
 - l. Bale Barrier: Measurement will be by the linear foot.
 - m. Flocculants and Polyacrylamides: Measurement will be by dry weight in pounds based on tickets submitted to the Engineer.
 - n. Flocculant Sock: Measurement will be by the each.

- o. Rapid Stabilization Methods:
 - 1) Method 1 and 2: Measurement will be by the acre.
 - 2) Method 3: Measurement will be by the 1,000 gals.
 - 3) Method 4: Measurement will be by the square yard.
 - 3. Bid Form for Street Sweeper With Operator and Skidsteer (Bobcat) With Operator: Measurement shall be by the hour of equipment use, based on the actual amount of time spent cleaning street surfaces. However, if the Contractor is careless in their construction operations, they will be required to clean and sweep streets at their own expense. Payment at the Unit Price shall be considered complete compensation for all work associated with the cleaning, including water as directed by Engineer, and disposal of collected materials:
 - a. Anticipate multiple mobilizations to perform this work.
 - 4. Erosion Control Supervisor throughout the duration of the project: No measurement will be made of the various duties performed or of the number of hours required, but all such work will be construed to be included in the lump sum payment, half to be paid after 50-percent of the project is complete and the remainder at closeout of the project. The bid item is for providing an Erosion Control Supervisor to perform all duties as described in Paragraph 1.05.A.
 - 5. Water for Dust Control: Measurement will be per 1,000 gallons (MGAL) applied. Payment will constitute compensation in full for all Work and costs to furnish and apply the water. This Bid Item is intended to pay for water used for dust control only and only at those times that it is requested by either the Engineer or Owner.
 - a. Water used for the construction of the streets will be considered incidental to the Project.
 - 6. When the contract Bid Item requires maintenance, partial payment for installation will be made no greater than 50-percent of the contract unit price. The remaining partial payment will be made after maintenance and final acceptance by the Engineer.
 - 7. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.
- B. Related Sections:
- 1. Section 01 33 00 - Submittal Procedures.
 - 2. Section 32 92 00 - Turf and Grasses.

1.03 REFERENCES

- A. Minnesota Department of Transportation "Standard Specifications for Construction" 2020 Edition (MnDOT Spec.):
 - 1. 1717 - Air, Land, and Water Pollution.
 - 2. 2573 - Storm Water Management.
 - 3. 2575 - Establishing Vegetation and Controlling Erosion.
 - 4. 3733 - Geosynthetic Materials.
 - 5. 3882 - Mulch Material.
 - 6. 3884 - Hydraulic Erosion Control Products.
 - 7. 3885 - Rolled Erosion Prevention Products.
 - 8. 3886 - Silt Fence.
 - 9. 3887 - Flotation Silt Curtain.
 - 10. 3890 - Compost.
 - 11. 3892 - Temporary Slope Pipe Drain.

12. 3897 - Sediment Control Log.
13. 3898 - Flocculants.
14. 3911 - Calcium Chloride.
15. 3912 - Magnesium Chloride Solution.
16. MPCA's NPDES General Stormwater Permit for Construction Activity.

1.04 SUBMITTALS

- A. MPCA's NPDES General Stormwater Permit for Construction Activity (MN R100001):
 1. NPDES permit inspection log resulting from weekly Site inspections will be prepared by the Contractor and submitted to the Engineer on a weekly basis.
 2. Amendments to the Stormwater Pollution Prevention Plan (SWPPP) for the Project.
 3. Completed form for MPCA's Notice of Termination, in conjunction with Owner.
 4. Provide documentation of certifications for Erosion Control Supervisor and Certified Installers that will be on this project.
- B. Contractor Prepared Schedules and Plans:
 1. Erosion and Sediment Control Schedule: Conforming to MnDOT Spec. 1717.2.B and submitted each week that construction is active.
 2. Site Management Plans in conformance with MnDOT Spec. 1717.2.C:
 - a. Submitted when requested by the Engineer.
 - b. Site plans prepared by Contractor will indicate Contractor operations, erosion and sediment control measures, and a schedule of starting and completion times.
- C. Certification and Sampling:
 1. Furnish a manufacturer's certification stating that the material supplied conforms to the requirements of this Section. The certification shall include or have attached typical results of tests for the specified properties, representative of the materials supplied.

1.05 QUALITY ASSURANCE

- A. Erosion Control Supervisor: Provide an Erosion Control Supervisor with a valid Minnesota Construction Site Management certification, or approved equal, authorized to represent the Contractor on matters pertaining to Erosion and Stormwater Management, work in public waters and be available to the work site within 24 hours of initial disturbance and daily when work is taking place until final stabilization. The following list describes the duties of the Erosion Control Supervisor:
 1. Implements the quality control program.
 2. Ensures proper installation, functionality, and maintenance, clean-up, and removal of all erosion and sediment control Best Management Practices (BMP's) and in accordance with manufacturer's recommendations.
 3. Implements the erosion and sediment control schedule.
 4. Coordinates the work of subcontractors and ensures the full execution of erosion and sediment control measures for each operation and stage of the work.
 5. Oversees the work of subcontractors and ensures the subcontractors undertake erosion and sediment preventative measures at each stage of the work.
 6. Prepares the required weekly erosion control schedule and inspections with the dates and times.

7. Attends construction meetings to discuss the erosion control schedule and inspections.
 8. Prepares the erosion and sediment control Site Management Plans as required by the contract or as directed by the Engineer.
 9. Provides for erosion and sediment control methods for temporary work not shown on the plans.
 10. Ensures effective preventative BMP's are in place, recommends changes to the SWPPP for the Engineer's approval, and amends the SWPPP to document changes.
 11. Ensures acquisition of and compliance with applicable permits for borrow pits, dewatering, and temporary work in rivers, lakes, and streams.
 12. Ensures the full installation of erosion and sediment control before suspension of the work.
 13. Coordinates with federal, state, and local regulatory agencies on resolution of erosion and sediment control issues resulting from the work.
 14. Ensures that proper clean-up occurs from vehicle tracking on paved surface locations where sediment leaves the project.
 15. Ensures daily compliance with environmental laws, permits, and SWPPP narrative requirements.
 16. Ensures the certification of installers for operations in accordance with Paragraph 1.05.B.
- B. Certified Installers: Provide at least one certified installer with a valid certification obtained through the University of Minnesota Erosion Control Inspector/Installer Certification program, or approved equal to install or direct installation of erosion or sediment control practices as listed below:
1. Seeding.
 2. Sodding.
 3. Mulching.
 4. Silt Fence or other perimeter sediment control device installations.
 5. Rolled Erosion Control Practices (RECP) installation.
 6. Hydraulic erosion control product installation.
 7. Silt curtain installation.
 8. Ditch check installation.
 9. Compost installation.

If the Contractor fails to provide the required certified installer, the Engineer may reject the work as unauthorized.

- C. If the Project disturbs 1 or more acres of total land area, Co-submittal with the Owner of a completed NPDES application form for the MPCA's General Stormwater Permit for Construction Activity and the appropriate fees to the MPCA is required. Engineer will complete the online application and fees will be paid as described in Section 01 31 00.

1.06 SEQUENCING AND SCHEDULING

- A. Install sediment control measures prior to grading activities.
- B. Schedule and coordinate the Work so that permanent erosion and sediment control BMPs, such as basin construction, rip rap placement, and permanent seeding, are directly incorporated into the supplement permanent erosion and sediment control BMPs with temporary BMPs. Place temporary BMPs when permanent erosion control cannot be achieved. Coordinate construction

operations so that erosion and sediment control measures (permanent or temporary) are installed and maintained concurrently with the rest of the Work of the Project.

- C. Coordinate and schedule the Work of subcontractors such that erosion and sediment control measures are fully executed for each operation and in a timely manner over the duration of the Project. Develop a chain of responsibility for all subcontractors and operators on the Project to ensure that permit provisions are adhered to.
- D. Infiltration areas and constructed infiltration systems should not be constructed until the contributing drainage area and/or adjacent construction has been completely stabilized. When this timing of construction is not possible, ensure sediment from exposed soil areas of the Project does not enter into the infiltration area or system.
- E. Stabilization timeframes shall conform to the NPDES General Stormwater Permit for Construction Activity.
- F. Perform weekly and post-rainfall event inspections in accordance with the NPDES permit.
 - 1. Complete and submit the required weekly inspection log.
- G. Prior to Project shutdown for the winter or other periods of a week or more, adequately protect Site from erosion and off site damage by covering exposed soils with mulch and establishing perimeter controls.
- H. If the Contractor fails to install erosion or sediment measures, the Engineer may withhold payment from related work until the control measures are undertaken by the Contractor:
 - 1. When the Contractor fails to conduct the quality control program, does not conduct the inspection required in the NPDES permit, or fails to take action ordered by the Engineer to remedy erosion or sediment control problems, the Engineer shall issue a Written Order to the Contractor.
 - 2. Respond within 24 hours with sufficient personnel, equipment, materials, and conduct the required Work or be subject to a \$1,000 per calendar day deduction for noncompliance.
- I. Establish permanent turf in accordance with Section 32 92 00 to prevent excessive soil erosion.
- J. Multiple mobilizations will be required for the various erosion and sediment control items.
- K. Silt fence shall be removed prior to project closeout and final acceptance.

PART 2 PRODUCTS

2.01 SILT FENCE: Conform to MnDOT Spec. 3886.2.

- A. Machine sliced in accordance with Standard Detail Plate ERO-1.
- B. Heavy Duty in accordance with Standard Detail Plate ERO-3:
- C. Delete MnDOT Spec. 3886.1. Pre-assembled (PA) silt fence.

2.02 TEMPORARY CONSTRUCTION ENTRANCE

- A. Construction Entrance: Conform to Standard Detail Plate ERO-12:
 - 1. Rock Entrance:
 - a. 2 inches minimum clear/washed rock.
 - b. Underlying Geotextile: Conform to MnDOT Spec. 3733, Type 5.
 - c. Minimum Thickness of Rock Placed: 6 inches.
 - 2. Wood Slash Mulch Construction Entrance:
 - a. Raw wood slash only. No chipped-up manufactured wood or chemically treated wood is allowed.
 - b. Splinter material to an average approximate length of 6 inches with a maximum length of 20 inches. Bark and wood splinters less than 2 inches long shall not exceed 20 percent by mass of the material.
 - c. Underlying Geotextile: Conform to MnDOT Spec. 3733, Type 5.
 - d. Minimum Thickness of Mulch Placed: 18 inches.

2.03 MULCH: Conform to MnDOT Spec. 3882.

- A. Type 1, clean grain straw only. Project specific, refer to MnDOT Spec. for options.
- B. Hydraulic erosion control products may be used in lieu of mulch with the approval of the Engineer.

2.04 HYDRAULIC EROSION CONTROL PRODUCTS (HECPs)

- A. Hydraulic Matrix:
 - 1. Mulch: Conform to MnDOT Spec. 3884.2.B.2.
 - 2. To be used as part of the Temporary Hydraulic Matrix Bid Item with no seed.

2.05 ROLLED EROSION PREVENTION PRODUCTS

- A. Conform to MnDOT Spec. 3885:

2.06 STORM DRAIN INLET PROTECTION

- A. Inlet protection for paved streets with concrete curb and gutter: The following methods are acceptable:
 - 1. Conform to the details on the Drawings.
 - 2. Catch Basin Inserts:
 - a. Road Drain by Wimco, LLC (www.roaddrain.com), in accordance with Standard Detail Plate ERO-9.
 - b. Lange Industries (www.langeindustries.com), or approved equal.
 - c. Filter bag insert subject to Site and approved by the Engineer.
- B. Inlet protection for non-paved surfaces without curb or areas where vegetation will be established. The following methods are acceptable:
 - 1. Conform to the details on the Drawings.
 - 2. Silt fence box: conform to Standard Detail Plate ERO-7 and ERO-10, or approved equal.
 - 3. Sediment control inlet hat:

4. InfraSafe Sediment Control Barrier by Royal Enterprises (<http://www.royalenterprises.net/>).
5. Rock filter: conform to Standard Detail Plate ERO-8.

2.07 SEDIMENT CONTROL LOGS:

- A. Conform to MnDOT Spec. 3897.

2.08 DITCH CHECKS AND VELOCITY CHECKS

- A. Conform to MnDOT Spec. 2573.3.F.4 and details in Drawings.

2.09 BALE BARRIERS

- A. Conform to MnDOT Spec. 2573.3.C.
- B. All bales shall be either bound with wire or tied with nylon string.
- C. Hardwood stakes shall be 1-1/2 inches by 1-1/2 inches by 36 inches.

2.10 FLOATATION SILT CURTAIN

- A. Conform to MnDOT Spec. 3887.
- B. Curtain depth shall extend to the bottom of the water body.

2.11 DUST CONTROL

- A. Water clear and free from suspended fine sediment.

2.12 TEMPORARY SLOPE PIPE DRAIN:

- A. Conform to MnDOT Spec. 3892 and detail in Drawings.

2.13 TEMPORARY SEED

- A. Conform to Section 32 92 00.

2.14 DEWATERING SEDIMENT CAPTURE

- A. General – Sizing, configuration, capacity, and selection of dewatering sediment capture techniques shall be based on Site and flow conditions. Submit the means and methods for review by the Engineer. Sizing of the sediment capture systems will have to be adjusted such that the ultimate discharge water is not visibly different from the receiving water.

2.15 FLOCCULANTS:

- A. Conform to MnDOT Spec. 3898.

2.16 EQUIPMENT

- A. Street sweeper with mechanism for picking up and containing sweepings. Power broom will not be allowed. The Street Sweeper shall have the minimum bristle length as recommended by the manufacture.
- B. Skidsteer (bobcat) to assist in street sweeping.

PART 3 EXECUTION

3.01 GENERAL

- A. Comply with all applicable laws, ordinances, regulations, permit requirements, orders and decrees pertaining to erosion/sediment control and stormwater discharge during the conduct of the Work.
- B. Take necessary precautions against damage to the Project by action of the elements.
- C. Implement the Project's NPDES Stormwater Pollution Prevention Plan (SWPPP) and take necessary actions to prevent off Site damage resulting from Work conducted on the Project or Project related stormwater runoff.
- D. Minimize the amount of disturbed land that is susceptible to erosion at any time. Delineate areas not to be disturbed:
 - 1. Exclude vehicles and construction equipment from area not to be disturbed to preserve natural vegetation.
 - 2. Maintain and preserve riparian and naturally vegetated buffer strips (10 feet minimum distance) along water courses.
- E. Restore all disturbed areas that have not had construction activity for more than 14 calendar days with temporary hydraulic matrix. All costs related to furnishing and installing the temporary hydraulic matrix will be considered incidental to the Project, unless a Bid Item has been provided for it and direction has been given by the Engineer.
- F. Street sweeping operations must include the application of water to effectively remove fine materials from pavement areas, as directed by the Engineer. The appropriate amount of water shall be applied to eliminate dust as part of the sweeping operations.

3.02 INSTALLATION

- A. General: Install temporary stormwater management and sediment control devices in conformance with the details, typical sections, and elevations shown on the Drawings.
- B. The location of temporary stormwater and sediment control devices may be adjusted from that shown on the Drawings to accommodate actual field conditions and increase the effectiveness of the installation.
- C. Silt Fence: Conform to MnDOT Spec. 2573.3.B:

1. Install in the locations shown on the Drawings using the machine sliced installation method, unless directed otherwise by the Engineer.
 2. Use additional measures, such as rock aggregate, placed along the base of the silt fence where the silt fence geotextile cannot be trenched in, i.e. tree roots, frost, bedrock.
 3. Use short sections of silt fence placed in J-hook patterns to:
 - a. Supplement the perimeter silt fence at corner locations and areas where sediment deposition will occur. No more than 100 feet of silt fence shall be installed per 1/4 acre of drainage.
 - b. Break up flow path along silt fence running across contours to be no more than 100 feet between hooks or as directed by the Engineer.
 4. Silt fence longer than 600 feet shall be constructed in separate independent units with each unit having a length less than 600 feet. Avoid splices whenever possible. If necessary, make splices at an opposing fence post and according to the manufacturer's specifications.
- D. Temporary Construction Entrance:
1. Install at locations shown on the Drawings.
 2. Construct construction entrance before grading begins on the Site.
 3. Inspect construction entrance daily for mud accumulation to minimize vehicle tracking of sediment onto public roadways. Remove fugitive rock or wood mulch from adjacent roadways daily.
- E. Mulch:
1. For seeded Sites, apply at a rate of 2 tons per acre (4,500 kg/ha).
 2. For unseeded Sites, apply at a rate of 2 to 3 tons per acre (4,500 to 6,700 kg/ha), covering the entire soil surface.
 3. Distribute mulch evenly by hand or machine and cover the exposed area to a uniform depth.
 4. Disk anchor in conformance to MnDOT Spec. 2575.3.D.
 5. Anchor mulch immediately to minimize loss by wind or water.
- F. Temporary Hydraulic Matrix:
1. Apply in conformance with Section 32 92 00 and MnDOT Spec. 2575.3.E, but without seed.
- G. Slope (Cat) Tracking:
1. Slope tracking consists of operating a dozer up and down slopes so that the cleats of the tracks create grooves perpendicular to the slope. By operating the dozer up and down, the soil surface is firmed and miniature interceptor checks are created.
 2. Required on all slopes equal to or steeper than 3:1 (H:V).
- H. Rolled Erosion Prevention Products:
1. Install immediately following seeding in accordance with MnDOT Spec. 2575.3.G, and as modified below.
 2. Install per Detail Plate ERO-5 and as shown on the Drawings.
 3. Raking or harrowing of soil/seed shall be done before installation of erosion control blanket.
 4. Install blanket parallel to the direction of flow.
 5. If permanent seeding is not available at the time of blanket installation, this material will have to be removed, re-seeded, and installed again as a permanent erosion control measure. If permanent seeding is available at the time of initial installation, a one-time proper installation is acceptable.

- I. Storm Drain Inlet Protection:
 - 1. Provide effective storm drain inlet protection over the life of the Project until all sources with potential for discharging to inlets have been paved or stabilized.
 - 2. Place devices so that driving hazards or obstructions are not created. The devices must be cleaned out regularly and all devices must have an emergency overflow to reduce flooding potential.
- J. Temporary Sediment Basins:
 - 1. Sediment basins shall be excavated as a first priority when grading begins on the Project. The location and outlet configuration are shown on the Drawings.
- K. Temporary Sediment Traps:
 - 1. Temporary sediment traps are excavated in conjunction with other grading activities. Temporary traps are approximately 2 feet or less in depth with a length to width ratio of 1:2.
 - 2. Effectiveness of sediment traps can be increased by placing a rock weeper at the outlet.
- L. Temporary Diversion Berm:
 - 1. Temporary diversion berm shall be installed at locations shown on the Drawings. The berm shall be located to minimize damage by construction operations and traffic.
 - 2. Temporary diversion berm shall be installed as a first step in the land-disturbing activity and must be functional prior or in conjunction with upslope land disturbance.
 - 3. The berm shall be adequately compacted to prevent failure.
 - 4. Temporary or permanent seeding and mulch shall be applied to the berm immediately following its construction.
- M. Temporary Slope Pipe Drains:
 - 1. When temporary down drains are placed on fill slopes, a temporary earth berm or sandbag barrier shall be constructed as necessary to guide water into the drain.
 - 2. The inlet of a drain and berm system must be properly constructed to channel water into the temporary drain.
 - 3. All temporary drains shall be adequately anchored to the slope to prevent disruption by the force of the water flowing into the drain:
 - a. If the drain consists of plastic pipe, it must be securely anchored to the ground.
- N. Filter Berm:
 - 1. Install in accordance with MnDOT Spec 2573.3.E and as detailed in Drawings.
- O. Floatation Silt Curtain:
 - 1. Floatation silt curtain shall be installed in locations shown on the Drawings and according to the manufacturer's specifications:
 - a. "Anchor" and secure to prevent any material from passing beneath, over, around, or through the barrier.
 - b. Provide sufficient slack to permit the curtain to rise to the maximum expected high water level, including wave action, without being overtopped and still be in continuous contact with the bottom.
 - 2. Place floatation silt curtain as close to the shoreline or work area as possible. Flotation silt curtain shall not be placed across flowing rivers, streams, drainage ditches, or across culvert inlets or outlets.

P. Rapid Stabilization:

1. Work to be performed under non-schedulable situations requiring rapid stabilization of small critical areas within 200 feet of surface waters to comply with permit requirements.
2. Methods per MnDOT Spec. 2575.3.M with Seed Mix 22-111.

3.03 MAINTENANCE

A. Conform to MnDOT Spec. 2573.3.A, NPDES permit, and as follows:

1. Inspect, maintain, and repair any washouts or accumulations of sediment that occur as a result of the grading or construction. Restoration consists of grade repair, turf re-establishment, and street sweeping of mud and debris tracked from the Site.
2. Inspection of all erosion and sediment control items will take place immediately after each runoff event and at least daily during prolonged rainfall. Make any required repairs immediately.
3. Maintain the temporary sediment control devices until they are no longer necessary and are removed:
 - a. Maintenance consists of keeping the devices functioning properly.
 - b. Repair or replace plugged, torn, displaced, damaged, or non-functioning devices.
4. Upon final acceptance of the Project and establishment of permanent erosion control measures, remove all temporary erosion control measures:
 - a. Catch basin protection becomes property of Contractor.
5. Temporary mulching and temporary seeding/mulching are very effective at controlling erosion. However, these are considered temporary measures. These measures may need to be re-established several times throughout the duration of the Work.
6. Floatation silt curtain shall remain in place until such time that water contained within is free from turbidity:
 - a. Remove curtain within 72 hours after this determination has been made.
 - b. At the completion of the Project, remove floatation silt curtain in such a manner so as to minimize release of sediment adhering to the turbidity curtain.

B. Sediment Removal: Conform to MnDOT Spec. 2573.3.P:

1. Remove sediment from erosion control devices when sediment reaches one-third of the height of the devices, restore such features to their original condition.
2. Established areas disturbed by the removal of sediment, will require finish grading and restoration with in-kind materials, such as area disturbed as part of silt fence removal. This work shall be considered incidental to the specific bid item.

C. Control dust blowing and movement on Site and roads as directed by Engineer to prevent exposure of soil surfaces, to reduce on and off site damage, to prevent health hazards, and to improve traffic safety.

END OF SECTION

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SECTION 01 70 00
EXECUTION REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Requirements for overall execution of the Work and closeout of the Contract for Final Payment.
- B. Measurement and Payment:
 - 1. All Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.02 SUBMITTALS

- A. Submit the following items consistent with the Conditions of the Contract and Division 01 Sections:
 - 1. Written Notification of Substantial Completion.
 - 2. Executed Certificate of Substantial Completion.
 - 3. Written Notification of Final Completion.
 - 4. Spare Parts, Operation and Maintenance Manuals, instructions, schedules, warranties, guarantees, Bonds, certificates, certificates of inspection, and other documents.
 - 5. Final Application for Payment, including accompanying documentation.
 - 6. IC-134 Forms.
 - 7. Lien Waivers.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Acceptance of Conditions: By commencing Work, Contractor construes acceptance of the adjacent work as satisfactory to receive subsequent work.
- B. Existing Conditions: Before commencing Work, inspect work completed by others that is adjacent to Work. If adjacent conditions prevent completion of Work, Contractor will not commence Work until the conditions are corrected.
- C. Inspect each product immediately prior to installation. Remove damaged products from Site.

3.02 GENERAL INSTALLATION REQUIREMENTS

- A. Comply with the manufacturer's instructions for installation of manufactured products to the extent that these instructions are applicable and more explicit or more stringent than requirements indicated in the Contract Documents.
- B. Secure Work true to line and level, within recognized industry tolerances, with anchorage devices designed and sized to withstand stresses, vibration, and rocking. Allow for expansion and movement of building.
- C. Install each element of work during weather conditions and Project status to ensure coordination of the Work. Isolate each element of work from incompatible work as necessary to prevent deterioration.
- D. Record installation details and prepare Record Documents consistent with the General Conditions.

3.03 SITE MAINTENANCE

- A. Maintain stockpiles, excavations, access roads, and all other work areas free from dust. Employ dust abatement techniques whenever a dust nuisance or hazard occurs, or as directed by Engineer. Comply with local ordinances.
- B. Protect hazardous work areas and hazardous material storage areas.
- C. Protect trees, unless specifically indicated on Drawings.
- D. Clean access roads and haul routes with mechanical street sweeper.
- E. Maintain and repair any damage to haul roads. Maintenance shall include, but not be limited to, the following: blading, patching, signing, graveling and dust control. This work will be at the Contractor's expense, without any direct compensation being made other than the payment received for Contract items.
- F. If Contractor fails to maintain Site, Engineer will provide Written Notice of Contractor's defective Work. Contractor will be given 12 hours from the Notice to clean Site. After the 12 hour period, Owner may correct the defective Work.

3.04 CLEANING AND PROTECTION

- A. Clean and protect Work in progress and adjoining Work during handling and installation. Apply protective covering on installed Work where it is required to ensure freedom from damage or deterioration.
- B. Clean and perform maintenance as frequently as necessary throughout construction period. Adjust and lubricate operable components to ensure operability without damage effects.

3.05 CUTTING AND PATCHING

- A. Complete all cutting, fitting, and patching as necessary to join the new Work to existing conditions.
- B. Remove or cut existing work only as necessary to join the new work to the existing construction or as required by the Contract Documents.
- C. Patch defective and incomplete surfaces caused or exposed by Work of the Project.
- D. Repair any damage to existing conditions and patch to match.
- E. Existing construction designated by the Contract Documents to remain that is loosened, cracked, or otherwise damaged or defaced beyond repair as a result of Work by the Contractor will be considered unsuitable for the use intended and shall be removed and replaced by the Contractor.

3.06 CERTIFICATE OF COMPLIANCE WITH MINNESOTA STATUTES 290.92 AND 290.97

- A. Upon completion of the Project and prior to Final Payment, the Contractor and all subcontractors shall complete Minnesota Department of Revenue Revised Form IC-134. This form, Affidavit for Obtaining Final Settlement of Contract with the State of Minnesota and any of its Political or Governmental Subdivisions, is to be signed by a Department of Revenue representative and forwarded to the Owner. Copies of this form can be obtained by writing to the Minnesota Department of Revenue, Forms Section, Mail Station 1173, St. Paul, MN 55146-1173 or by calling (651) 296-4444.

END OF SECTION

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SECTION 02 41 13

SELECTIVE SITE DEMOLITION

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Complete or partial removal and disposal or salvage of at grade, above grade, and below grade structures and miscellaneous items.

B. Related Sections:

1. Section 31 23 00 - Excavation and Fill.
2. Section 32 13 14 - Concrete Walks, Medians, and Driveways.
3. Section 32 16 13 - Concrete Curb and Gutters.
4. Section 32 17 23 - Pavement Markings.
5. Section 33 05 06 - Trenching and Backfilling.
6. Section 33 10 00 - Water Utilities.
7. Section 34 41 05 - Traffic Signs and Devices.

1.02 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. Payment at the Bid Unit Price will be considered compensation in full for all Work necessary to complete the Bid Item in full, including removal, salvage, storage, disposal, and reinstallation.
2. Measurement will be based upon the units as listed below for items removed, abandoned, or salvaged complete as specified. No measurement will be made of any removals that are not required. The actual quantity removed multiplied by the appropriate Bid Unit Price will be compensation in full for all Work and costs of the following Bid Items:
 - a. Sawing Concrete Pavement and Sawing Concrete Driveway Pavement: Per lineal foot along the saw cut line as staked, regardless of thickness.
 - b. Sawing Bituminous Pavement (Street or Trail) and Sawing Bituminous Driveway Pavement: Per lineal foot along the saw cut line as staked, regardless of thickness.
 - c. Remove Bituminous Street Pavement: Per square yard without regard to thickness, including integral bituminous curb if applicable.
 - d. Remove Bituminous Trail and Remove Bituminous Driveway Pavement: Per square yard without regard to thickness.
 - e. Remove Bituminous Wedge: Per square yard of bituminous wedge removed, regardless of thickness.
 - f. Mill Bituminous Pavement: Per square yard, according to depth, including off-site disposal.
 - g. Remove Concrete Pavement: Per square yard without regard to thickness.
 - h. Remove Concrete Sidewalk or Pedestrian Ramp: Per square foot without regard to thickness.
 - i. Remove Concrete Valley Gutter: Per square yard without regard to thickness.
 - j. Remove Concrete Curb and Gutter: Per linear foot, regardless of type.

- k. Remove Concrete Driveway Pavement: Per square yard without regard to thickness.
 - l. Remove Concrete Spillway: Per square yard without regard to thickness.
 - m. Remove Concrete Median: Per square yard, without regard to thickness.
 - n. Remove Valve and Box: Per each.
 - o. Remove Hydrant: Per each.
 - p. Remove Catch Basin or Manhole: Per each. Regardless of size of structure. Granular material is incidental to the removal.
 - q. Remove Retaining Wall: Per square yard, measured to existing ground level.
 - r. Remove Pipe or Culvert: Per linear foot of the size and type specified, measured from center of junction fittings, catch basins, or manholes, and will include the length of any aprons.
 - s. Remove Trash Guard from Flared End Section: Per each, according to size and type.
 - t. Remove Sign and Post, Signpost, or Barricade: Per each.
 - u. Remove Pavement Markings: Per linear foot, regardless of type or size.
 - v. Remove Pavement Messages: Per each, regardless of type or size.
 - w. Remove and Replace Concrete Curb and Gutter (High Early): A Bid Item has been provided in Section 32 16 13.
 - x. Remove and Replace Valve and Box: A Bid Item has been provided in 33 10 00.
 - y. Abandon Pipe: Per linear foot according to size of pipe, measured from center of junction fittings, catch basins, or manholes, and will include bulk heading and filling the pipe with lean mix backfill.
 - z. Abandon Structure: Per each, regardless of size of structure, and will include furnishing and installing granular material and removal of casting, adjusting rings and top section from Site.
 - aa. Salvage and Reinstall Fence: Per linear foot of the type specified.
 - bb. Salvage and Reinstall Pipe or Culvert: Per linear foot of the type and size specified.
 - cc. Salvage and Reinstall Flared End Section: Per each of the size specified.
 - dd. Salvage and Reinstall Sign: Per each. Payment will include all hardware required to reinstall sign.
 - ee. Salvage and Reinstall Sign and Post: Per each
 - ff. Salvage and Reinstall Mailbox: Per each. Payment will include all costs to salvage and re-install the mailbox, including similar footing.
 - gg. Salvage and Reinstall Community Mailbox: Per each. Payment will include all costs to salvage and reinstall the mailbox and removal of existing concrete pad. A separate bid item has been provided for 6 Inch Concrete Mailbox Pad.
 - hh. Temporary Mailbox: Per each. Payment will include all costs to furnish and install a temporary mailbox at a temporary location as determined by the Engineer in the field.
 - ii. Salvage and Reinstall Permanent Barricade: Per each, including sign panel.
 - jj. Salvage and Reinstall Hydrant: Per each.
 - kk. Salvage and Reinstall Valve and Box: Per each, according to size & type.
 - ll. Salvage and Reinstall DIP: Per linear foot, according to size. Sawcutting and removing any extra pipe that is not needed at the new hydrant location will be considered incidental.
3. Homeowners will be responsible for removing irrigation, landscaping, fences, etc. within the right-of-way that are in conflict with the proposed construction of the final street improvements.
 4. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. Minnesota Department of Transportation “Standard Specifications for Construction” 2020 Edition (MnDOT Spec.):
 - 1. 2104 – Removing Pavement and Miscellaneous Structures.
 - 2. 2520 – Lean Mix Backfill.

1.04 DEFINITIONS

- A. Remove: To take away or eliminate from the Site by any method selected by the Contractor, including disposal of material.
- B. Salvage: To dismantle, disassemble, or remove carefully without damage so the item can be re-assembled, replaced, or reused in a workable condition equal to that existing before removal.
- C. Abandon: To fill, bulkhead, or close off pipes and structures so that no settlement or flow can occur.

1.05 REGULATORY REQUIREMENTS

- A. Conform to MnDOT Spec. 2104.3.C, with the following modifications:
 - 1. Dispose of all materials designated for removal outside the Site at locations selected by Contractor.
 - 2. Stockpile or temporarily store materials designated for salvage at locations provided by Contractor.

1.06 SCHEDULING

- A. Prior to starting Work, submit for review by the Engineer and approval by the Owner, a schedule showing the commencement, order, and completion dates of the various parts of this Work.
- B. Install temporary erosion control, construction fence, barriers, and warning signs prior to removals.
- C. Fill holes or depressions resulting from removal or salvage immediately.
- D. Complete the remove and replace concrete curb or sidewalk to allow access to driveway within 7 calendar days, beginning on the day of the removals, or per applicable Milestones in Section 00 52 10, Paragraph 4.02.A.1.
- E. Provide temporary surface restoration for traffic continuity where removal or salvage operations are completed within streets, driveways, or parking lots.

PART 2 PRODUCTS

2.01 LEAN MIX BACKFILL:

- A. Conform to MnDOT Spec. 2520

PART 3 EXECUTION

3.01 GENERAL

- A. Dispose of all items removed, except for those items identified to be salvaged or recycled. Said disposal shall be in accordance with all laws, regulations, statutes, etc.
- B. Protect all sawcut edges. Where sawn edge is damaged, the Contractor shall recut sawn edge, remove damaged material, and replace damaged material at no expense to the Owner.
- C. Perform removal work without damage to adjacent retained work. Where such Work is damaged, patch, repair, or otherwise restore same to its original condition at no expense to the Owner.
- D. Remove debris from the work area as often as necessary, but not less than at least once at the end of each workday. Debris shall be placed in approved containers to prevent the spread of dust and dirt.
- E. Execute the Work in a careful and orderly manner with the least possible disturbance to the public and occupants of buildings.
- F. The Contractor shall notify Engineer immediately if existing street lighting wire is exposed during removal operations.
- G. Fill holes resulting from removals consistent with Section 31 23 00.
- H. Remove and replace damaged curb as directed by the Engineer.
- I. Remove 10 feet of concrete curb and gutter on each side of the catch basin that are adjusted, as directed by the Engineer.

3.02 EXAMINATION

- A. Meet with owners of signs to determine requirements for salvage, storage, and replacement.
- B. Develop plan acceptable to Engineer and postal service for maintaining mail service. Temporary relocations of mailboxes will be necessary.

3.03 PROTECTION

- A. Take all necessary precautions to adequately protect personnel and public and private property in the areas of Work. All Site fencing shall be in place prior to the start of any removal work.
- B. Remove, store safely, and replace all street signs, traffic control signs, guy wires, mailboxes, posts, wood fence, etc. that may interfere with construction.
- C. Provide approved barriers or warning signs as necessary.
- D. Provide and maintain temporary protection of existing structures designated to remain where removal work is being done, connections made, materials handled, or equipment moved.

- E. Do not close or obstruct walkways or roadways. Do not store or place materials in passageways or other means of egress. Conduct operations with minimum traffic interference.
- F. Take reasonable precautions to limit damage to existing turf.
- G. Holes or depressions created by removals shall not be left open for more than 1 day. Any hole within 10 feet of sidewalks shall be filled, suitably marked, or covered immediately.
- H. Avoid disturbance to any material beyond the limits required for new construction.

3.04 SAWING PAVEMENT

- A. Concrete Pavement: Saw along the removal line to full depth of the existing concrete prior to removal of the pavement.
- B. Bituminous Pavement: Saw along the removal line to the full depth of the pavement prior to removal of the pavement.
- C. Provide means and method (such as snapping a chalk line) to establish a straight and uniform sawed line.

3.05 REMOVE CONCRETE PAVEMENT

- A. Remove in accordance with MnDOT Spec. 2104.3.C, except as modified below:
 - 1. Saw cut concrete pavement and concrete base prior to mechanical pavement removal equipment. Remove concrete in such a manner that the remaining pavement is not damaged.
 - 2. Prior to restoring trench areas, the edges of the trench shall be trimmed back to a vertical face on a straight line which is parallel with the centerline of the trench.

3.06 REMOVE BITUMINOUS PAVEMENT

- A. Remove in accordance with MnDOT Spec. 2104.3.C, except as modified below:
 - 1. Saw cut bituminous pavement at the removal limits prior to that removal, unless otherwise approved by the Engineer.
 - 2. Remove bituminous in such a manner that the remaining surfacing is not damaged.
 - 3. Prior to restoring trench areas, the edges of the trench shall be trimmed back to a vertical face on a straight line which is parallel with the centerline of the trench.
 - 4. If a reclamation process is used to remove pavement, the resulting reclaimed material could contain diesel range organics (DRO) which must be disposed of in accordance with MPCA requirements.

3.07 REMOVE CURB AND GUTTER

- A. Excavation of the existing boulevard material to allow for the placement of the new concrete curb and gutter, and specified depth of topsoil/compost shall be considered incidental to the concrete curb removal Bid Item.
 - 1. This will include stripping and disposing of 6 inches of existing vegetation for 6 feet (full curb) or 2 feet (spot curb).

- a. In the full curb area, boulevard trees will need to be worked around and protected per the Engineer's direction.
- B. Saw cut at removal limits.
- C. Limits of removal may vary in length (5 feet minimum) and may be in multiple locations.

3.08 PAVEMENT MILLING

- A. Bituminous:
 - 1. Saw cut at removal limits prior to milling process.
 - 2. Mill bituminous surface to the depth specified as shown on the Drawings or as directed by the Engineer. The milled surface shall be uniform and consistent, with minimal depth of grooves.
 - 3. Dispose of millings at an approved off-site disposal location.
 - 4. Sweeping with pickup broom or vacuum clean the milled surface shall be incidental to the milling process. Perform sweeping until milled surface is accepted by the Engineer.
- B. Concrete:
 - 1. Mill surface to the depth specified as shown on the Drawings or as directed by the Engineer.
 - 2. Dispose of millings at an approved off-site disposal location.
 - 3. Sweeping with pickup broom and cleaning the milled surface shall be incidental to the milling process.

3.09 REMOVE CONCRETE SURFACING

- A. Work includes sidewalks, pedestrian ramps, medians, valley gutters, and driveways.
- B. Saw cut concrete surfacing prior to removal.
- C. Remove concrete in such a manner that the remaining surfacing is not damaged.
- D. When removing existing sidewalks, do not disturb any material beyond the limits required for new construction (assumed as 6 inches maximum beyond and 8 inches maximum below existing grade).
- E. When removing existing driveways, do not disturb any material beyond the limits required to form for new construction (assumed 12 inches maximum from the back of new Work and 6 inches beyond the edge of new driveways).
- F. Prior to restoring trench areas, the edges of the trench shall be trimmed back to a vertical face on a straight line which is parallel with the centerline of the trench.

3.10 REMOVE BITUMINOUS TRAILS AND DRIVEWAYS

- A. Saw cut bituminous surfacing to full depth at the limits of partial removal prior to that removal, unless otherwise approved by the Engineer.
- B. Remove bituminous in such a manner that the remaining surfacing is not damaged.

- C. Prior to restoring trench areas, the edges of the trench shall be trimmed back to a vertical face on a straight line which is parallel with the centerline of the trench.
- D. When removing existing trails and driveways, do not disturb any material beyond the limits required to form for new construction (assumed 12 inches maximum from the back of new work and 6 inches beyond the edge of new driveways).

3.11 REMOVE BITUMINOUS WEDGE

- A. Remove bituminous wedge as shown on the Drawings or as directed by the Engineer.
- B. Mill bituminous wedge in a manner that does not disturb the bituminous non wear course.

3.12 REMOVE/ABANDON MANHOLES AND CATCHBASINS

- A. Remove Structure:
 - 1. Remove entire structure, including casting and adjusting rings.
 - 2. Fill void left by structure with suitable material per Section 33 05 06.
 - 3. If requested by the Owner, deliver salvaged casting to Owner's Maintenance Facility.
- B. Abandon Structure:
 - 1. Remove casting, adjusting rings, and cone section or manhole section of structure, a minimum of 3 feet below final grade.
 - 2. Place and compact granular material within the remaining in place structure and the excavated area to finish grade.

3.13 REMOVE/ABANDON SECTIONS OF EXISTING PIPE

- A. Remove Pipe:
 - 1. Remove entire pipe to limits shown on the Drawings or as directed by the Engineer.
 - 2. Fill void left by pipe with suitable material per Section 33 05 06.
- B. Abandon Pipe:
 - 1. Bulkhead pipe with an 8 inch thick, non-shrink concrete grout plug at the upstream and downstream ends, and at locations as determined by the Engineer. On pipes 18 inches diameter and larger, brick or concrete block masonry may be used with non-shrink grout to construct the bulkhead.
 - 2. Fill with lean mix backfill.
- C. Remove pipe to be abandoned if the top of pipe is within 3 feet of final surface elevation.

3.14 REMOVE RETAINING WALL

- A. Avoid damage to sections of wall to remain.
- B. Dispose of materials off the Site at a predetermined location.
- C. Remove wall in its entirety, including footings and tiebacks.

3.15 REMOVE SIGNS AND BARRICADES

- A. Remove signs and barricades as shown on the Drawings or as directed by the Engineer.
- B. Owner to salvage sign panel from post prior to removal of post.
- C. Remove remaining post following salvaging of sign panel by Owner.
- D. Remove barricade, including "Future Road Extension" sign.
- E. Provide Engineer or Owner 48 hours notice prior to removing posts or barricades.

3.16 REMOVE PAVEMENT MARKINGS AND MESSAGES

- A. Remove to the limits shown on the Drawings or as directed by the Engineer.
- B. Removal of markings and messages shall be accomplished with suitable sand or water blasting equipment, unless other means are authorized by the Engineer. Grinding is not an acceptable method of removal. The bituminous street surface shall not be damaged by the removal operations.

3.17 SALVAGE AND REINSTALL

- A. Signs and Barricades:
 - 1. In no case shall a traffic sign or street sign be removed or disturbed by Contractor without prior notification being given to Engineer and then only after satisfactory arrangements have been made for a temporary installation or its disposition:
 - a. Maintain temporary post mounted street identification signage at all times due to its importance to the 911 Emergency Response System.
 - b. Maintain temporary post mounted traffic signage on all streets open to traffic.
 - c. Temporary post mounted installation shall be considered incidental to the Project.
 - 2. Owner to salvage sign panel from post and temporarily store until reinstallation.
 - 3. Remove remaining post following salvaging of sign panel by Owner.
 - 4. Install temporary post mounted signs as described above.
 - 5. Install new post and hardware per Section 34 41 05.
 - 6. Attach salvaged sign panel provided by Owner.
 - 7. Remove signs and barricades that are damaged during construction and replace with new signs as incidental to the Project.
 - 8. Contact the County directly related to all signs within the County right-of-way that may need to be temporarily or permanently removed.
- B. Mailboxes:
 - 1. Remove and salvage existing mailboxes that interfere with the Work or whose access is restricted by the construction activities.
 - 2. Place at temporary locations as directed by Engineer or as shown on Drawings.
 - 3. Removal, temporary re-installation, and replacement shall occur such that mail delivery is not interrupted.
 - 4. Reinstall in locations as shown on Drawings or as directed by Engineer.

5. Replace mailboxes, posts, and appurtenances damaged during construction at no charge to Owner.
- C. Community Mailboxes:
1. Remove and salvage existing mailboxes that interfere with the Work or whose access is restricted by the construction activities. Includes the removal and disposal of the existing concrete pad.
 2. Removal, temporary re-installation, and replacement shall occur such that mail delivery is not interrupted.
 3. Reinstall in locations as shown on Drawings or as directed by Engineer. A separate bid item has been provided for the 6 Inch Concrete Mailbox Pad.
 4. Replace mailboxes, posts, and appurtenances damaged during construction at no charge to Owner.
- D. Fences:
1. Salvage and store fence and post material where they are not in conflict with the Work.
 2. After completion of Work, reinstall fence to the condition existing prior to removal.
 3. Install temporary snow fence or similar barrier at the end of the working day while the permanent fence is removed.
- E. Culverts and Flared End Sections:
1. Where possible, salvage existing pipe in areas to be disturbed by the construction.
 2. Reinstall in original condition and location as shown on the Drawings.
 3. If requested by the Owner, deliver salvaged material to Owner's Maintenance Facility.
- F. Hydrants, Gate Valves, and Hydrant Leads:
1. Salvage existing hydrants, gate valves, and ductile iron pipe leads at locations shown on the Drawings or as determined by the Engineer.
 2. Reinstall in original condition at the location shown on the Drawings or as directed by the Engineer.
 3. Reinstall per Section 33 10 00 and the Standard Detail Plates in the Drawings.

3.18 FIELD QUALITY CONTROL

- A. Salvaged items to be reinstalled shall be of the same shape, dimension, location, and quality of the original item prior to construction.
- B. Items damaged during removal or salvaging operations shall be replaced with new material of equal type and quality of the damaged item when it was new.

3.19 DISPOSING OF MATERIAL

- A. Dispose of all materials outside of the Site at disposal location selected by Contractor in compliance with state and local regulations. Burying of material and debris is not allowed within the Site.

END OF SECTION

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SECTION 12 41 00

FURNISHINGS AND ACCESORIES

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Types of Project Site Furnishings Include: basketball post and backboard, and park shelter.
2. Work includes furnishing and installing Project Site Furnishings and supplying necessary inserts, anchors, templates, and setting diagrams for incorporation into the work of others.

B. Related Sections:

1. Section 01 33 00 – Submittals
2. Section 03 30 10 – Reinforced Concrete
3. Section 32 13 14 – Concrete Walks, Medians, Driveways
4. Section 32 11 23 – Aggregate Base Courses

1.02 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. Tree Protection Fence: Measurement shall be by linear foot and payment shall be full compensation for all work and costs in furnishing, installing, maintaining and removing the fence.
2. Picnic Table: Measurement shall be by each and payment shall be full compensation for all work and cost in furnishing and installing picnic table on concrete pad.
3. Park Bench: Measurement shall be by each and payment shall be full compensation for all work and cost in furnishing and installing park bench on concrete pad.
4. Trash Can: Measurement shall be by each and payment shall be full compensation for all work and cost in furnishing and installing trash can on concrete pad.
5. Concrete Bollard: Measurement shall be by each and payment shall be full compensation for all work and costs for furnishing and installing concrete bollard.
6. Pipe Rail: Measurement shall be by linear foot based on horizontal length of the railing as shown on the Drawings regardless of number of vertical and horizontal members. Payment shall be full compensation for fabrication, surface preparation, coating, galvanizing, metal posts, fittings, castings, anchor bolts, accessories required for erection, and installation.
7. Park Shelter: Measurement shall be by each according to size and payment shall be full compensation for all work and costs associated with furnishing and installing this item complete as specified, including excavation, aggregate, concrete foundation and slab, shelter lighting, and GFIC receptacle.
 - a. Lighting and receptacle include installation of light, conduit, wire, outlet box, mounting hardware, and miscellaneous items required for complete installation.
8. Basketball Pole and Backboard: Measurement shall be by each and payment shall be full compensation for all work and costs associated with furnishing and installing this work complete as specified.
9. Park Monument Sign Foundation: Measurement shall be by each and payment shall be full compensation for all work and costs associated with installation including excavation, aggregate, and concrete as specified.

10. Concrete Pad: Measurement shall be by square yard and payment shall include excavation, subgrade preparation, aggregate, concrete, and all other incidental items needed to place concrete as specified.
11. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. Minnesota Department of Transportation "Standard Specifications for Construction," 2020 Edition (MnDOT Spec.)
- B. American Society for Testing and Materials (ASTM)
- C. American Concrete Institute (ACI)
- D. Concrete Reinforcing Steel Institute (CRSI)

1.04 SEQUENCING AND SCHEDULING

- A. Prior to starting work, submit a schedule showing the order and completion of Work for review and approval by the Owner.
- B. Perform routine inspections to make sure the tree protection fence is still functioning as designed.
- C. Provide notice by 2:00 PM the day prior to any concrete placement to allow time for scheduling of the following activities. Notice must include mix designation, start time of placement, plant producing concrete, and foreman onsite during placement.
 1. Aggregate base DCP tests (per Section 32 11 23) prior to concrete placement.
 2. Inspection of placement operations. No concrete will be accepted without inspection.
 3. Concrete field and plant testing if required.
- D. Protection fence shall be removed upon project completion.
- E. Install park bench, picnic table, trash can, bollard, and pipe rail after topsoil placement has been completed.

1.05 SUBMITTALS

- A. Submit all required items before commencement of Work in accordance with Section 01 33 00.
- B. Shop Drawings
 1. For each item specified, provide information showing detail, location, material, finish, size and method of joining various assemblies.
 2. Provide templates and rough-in measurements as required.
 3. Mark items requiring field assembly for erection identification and furnish erection drawings and instruction.
 4. Reinforcing steel in accordance with CRSI Manual of Standard Practice and ACI SP 66.
 5. Submit MnDOT approved mix design for each concrete mix designation used.

C. Setting Diagrams

1. Provide setting diagrams, templates, instructions and directions for installation of anchorage devices and any cut-out requirements in other work.

1.06 QUALITY ASSURANCE

A. Qualifications

1. Installer: Engage experienced installer that has completed installation similar in material, design, and extent to that depicted on the Drawings.

1.07 DELIVERY, STORAGE AND HANDLING

A. Delivery and Acceptance

1. Package to prevent damage during shipment, handling, storage and installation. Maintain protective covering in place and in good repair until removal is necessary.
2. Products shall be delivered to the Site in the manufacturer's original, unopened containers and packaging. Notify Owner's Representative a minimum of 5 days prior to delivery for inspection.
3. Contractor shall remove all shipping materials as necessary to inspect products for damage immediately upon delivery and coordinate inspection by Owner's Representative.

B. Storage and Handling

1. Contractor shall repack and store products in a secure area and protect from damage and adverse environmental conditions until installation is performed. Products shall be protected from damage during handling and installation.

C. Waste Management and Disposal

1. Dispose of all waste generated from packaging and installation as in accordance with applicable regulations.
2. Any excess material is the property of the Contractor and shall be disposed of off-Site.

1.08 WARRANTY

A. Manufacturer's Warranty: Submit manufacturer's standard limited warranty on all Site furnishing Bid Items.

B. Installer Warranty: Installer shall warrant all site furnishing installations for a period of no less than one year, including anchorage and fastener failure.

PART 2 PRODUCTS

2.01 MATERIALS

A. Tree Protection Fence:

1. Orange safety fence.
2. At least 4' in height.
3. Steel T posts placed a maximum of 10' on center.

- B. Picnic Table:
 - 1. Provide a picnic table as manufactured by Pilot Rock, or approved equal.
 - 2. Model: Pilot Rock WPTS/CB-8RB Series with powder coated frame and thermoplastic coated perforated steel black in color, 8' with ADA access.
 - 3. Supplier: St Croix Recreation Co, Inc.
<http://www.stcroixrec.com>, 1-800-525-5914
Contact: Mike Basich, 651-430-1247
- C. Park Bench:
 - 1. Urbanscabe Butler Series, or approved equal.
 - a. 6' bench with back, black, BU1114C.
- D. Tash Can:
 - 1. Urbanscape, or approved equal.
 - a. 32 gallon flat top lid, black, TE3F34S.
- E. Concrete Bollard:
 - 1. Conform to the detail shown on the Drawings.
- F. Pipe Rail:
 - 1. Conform to MnDOT Spec. 2475.3.B and 2475.3.C.
- G. Basketball Pole and Backboard
 - 1. Model: First Team – Legacy Supreme, or approved equal.
 - a. 6' Black Square Post.
 - b. Adjustable Extension Arm.
 - c. 42" x 72" Acrylic Backboard.
 - d. Heavy Duty Flex Goal.
- H. Park Shelter:
 - 1. All-Steel Shelter w/All-Steel Square Cupola, Manufactured by Superior Shelters, RCP Shelters, or CoverWorx (Steelworx).
 - a. Dimensions as shown on Drawings.
 - 1) Minimum 7'6" Eave Height.
 - 2) 4:12 Roof Pitch, w/24 Ga. MultiRib PreCut Metal Roofing with steel edging.
 - 2. Powder coated forest green roof with chocolate brown framing
 - 3. Provide signed Drawings by a licensed Engineer in the state of Minnesota for the shelter structure, typically obtained from the supplier. The signed Drawings will need to be submitted with the building permit discussed in paragraph 3.04.
 - 4. Include security light located in center of shelter
 - a. Light shall be LED 20W RAB WPLED20, or approved equal.
 - 5. Include GFCI outlet located at corner of shelter as shown on Drawings.
- I. Concrete:
 - 1. Conform to section 32 13 14 2.01.A except as modified herein:
 - a. Slab, Park Monument Sign Foundation, and Concrete Pad Mix No. 3F52A.
 - 2. Foundation: conform to MnDOT 2461.2 mix design 1G52.
 - 3. Curing Compound: conform to section 32 13 14 2.01.D.
 - 4. Reinforcing Steel:

- a. Deformed bars: ASTM A615, grade 60.
 - b. Welded wire fabric: ASTM A497, flat sheets only.
- J. Aggregate Base:
 - 1. Conform to section 32 11 23 2.01.B.
- K. Miscellaneous Material:
 - 1. Nonshrink Grout:
 - a. Color to match concrete.
 - b. Nonmetallic and nongas-liberating flowable fluid.
 - c. BASF: Masterflow 928, Euclid Chemical Co
 - 2. Steel Anchors and Fasteners:
 - a. Dowels and Pins: Stainless steel, ASTM A276, Type 304. Substitutions may be submitted to Owners Representative.
 - b. Anchor rod structural adhesive: Hilti, Inc HIT-RE 500 V3 Epoxy Adhesive or approved equal.
 - 3. Joint Sealant: One-component elastomeric self-leveling polyurethane sealant by BASF: Sonolastic SL1, Sika: Sikaflex -1C SL, or approved equal.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Field Measurements: The Contractor shall verify site conditions and dimensions shown on the Drawings. Notify the Owner's Representative of any differences, obstructions, or utilities that in any way affect the installation of furnishings.
- B. The Contractor shall be responsible for verifying the presence and location of underground utilities prior to excavation. Damage to utility lines, services, and other structures shall be repaired at the Contractor's expense.
- C. Examine the surfaces intended to receive the furnishings for compliance with all requirements, including tolerances, level grade, mounting requirements, and any other conditions affecting performance.
- D. The Contractor shall inspect the correct and level finish grade, mounting surfaces, and other conditions affecting performance. Discrepancies, irregularities, etc. shall be brought to the attention of the Owner's Representative.

3.02 PREPARATION

- A. Where existing work and improvements are in place, cover, fence, and protect all such work from damage and soiling from construction operations.
- B. Contractor shall maintain and protect all erosion control measures during construction. Contractor shall also protect all existing trees on Site not noted for removal. Any damage to existing structures, vegetation to remain, or erosion control shall be immediately reported to the Owner's Representative and replaced at the Contractor's expense.

- C. If the Site conditions do not allow for the installation as shown on the Drawings, contact the Owner's Representative and provide a proposed modification to the method or location for approval prior to proceeding with the installation.
- D. Unpack and assemble (as needed) and install the items in accordance with the manufacturer's printed instructions, unless otherwise specified or shown.

3.03 INSTALLATION

- A. General
 - 1. Install all items per the manufacturer's printed recommendation, details, and product literature. Do not remove any protective coverings until installation is complete.
 - 2. Install items rigid, plumb, level, and true to lines and orientation shown in the Drawings or shop drawings.
 - 3. Contractor shall take necessary steps to protect furnishings and existing work, surfaces, and vegetation from damage during transport, handling, or installation.
 - 4. Contractor shall permanently affix all site furnishings to the ground as specified.
 - 5. Erection tolerances: Maximum variation from True position = 0.5 inch.

3.04 PARK SHELTER

- A. Contractor will be responsible to pull a building permit with the City of Cottage Grove Building Official, submit all required documentation – including signed drawings, and schedule all necessary inspections.
- B. Submit proposed method of passing electrical conduit through foundation slab and inside of structure column to the shelter light unit and receptacle in accordance with Section 01 33 00 – Submittals.
- C. Furnish and install security light inside of structure, including all electrical connections and wiring necessary within the structure.
- D. Provide power from power source as indicated on drawings to light and receptacle.

3.05 CONCRETE

- A. Formwork:
 - 1. Construction:
 - a. In accordance with ACI 347.
 - b. Make joints tight to prevent escape of mortar and to avoid formation of fins.
 - c. Brace as required to prevent distortion during concrete placement.
 - d. On exposed surfaces locate form ties in uniform pattern or as shown.
 - e. Construct so ties remain embedded in the wall with no metal within 1 inch of concrete surface when forms, inserts, and tie ends are removed.
 - 2. Form Removal:
 - a. Remove after concrete has attained at least 70% of 28 day strength, or approval is obtained in writing from Engineer.
 - b. Remove forms with care to prevent scarring and damaging the surface.

3. Reinforcing steel:
 - a. Unless otherwise specified, place reinforcing steel in accordance with CRSI Recommended Practice for Placing Reinforcing Bars.
 - b. Place and support slab reinforcement on reinforcement chairs. Place reinforcement 2" from the top surface of the slab.
 - c. Splices and Laps: As specified on the Drawings and as listed below:
 - 1) Tie splices with 18 gauge annealed wire as specified in CRSI Standard.
 - 2) Splice length for WWF: One full mesh plus 2 inches, 6 inches minimum.
4. Placement and Finishing
 - a. Place concrete in accordance with section 32 13 14 3.01 and 3.06.A except as modified herein:
 - 1) Prior to placing concrete, remove water from excavation and debris and foreign material from forms. Check reinforcing steel for proper placement and correct discrepancies.
 - 2) Before depositing new concrete on old concrete, clean surface using sandblast or bushhammer or other mechanical means to obtain a 1/4 inch rough profile, and pour a cement-sand grout to minimum depth of 1/2 inch over the surface. Proportion 1 part cement to 2.5 parts sand by weight.
 - 3) Place concrete as soon as possible after leaving mixer, without segregation or loss of ingredients, without splashing forms or steel above, and in layers not over 2 feet deep. Place within 90 minutes after adding cement to mix.
 - 4) Four feet maximum vertical drop to final placement, when not guided with chutes or other devices to prevent segregation due to impact with reinforcing.

3.06 CLEANING, REPAIR, & RESTORATION

- A. All damage to Site resulting from the installation of the furnishings shall be repaired by the Contractor at no cost to the Owner.
- B. Soil, dust, or other materials brought onto paved areas shall be removed promptly.
- C. Restore areas damaged during installation to their original condition unless otherwise specified or depicted on the Drawings.
- D. Touch-Ups: Touch up scratches and other blemishes in the powder coat, paints and other finishes in accordance with the manufacturer's recommendations.

3.07 FIELD QUALITY CONTROL

- A. Any concrete damaged prior to acceptance shall be removed and replaced by the Contractor, and will be incidental to the Project.
- B. The Owner shall have an independent testing laboratory perform the following tests as a minimum. The test locations will be determined by the Engineer.
 1. One Air Entrainment test per day, per concrete mix.
 2. One slump test per day per concrete mix.
 3. One set of cylinders for compression tests per day, per concrete mix.

END OF SECTION

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SECTION 26 05 59

IRRIGATION SYSTEM ELECTRICAL SUPPLY

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Provide and install materials and equipment for supply of power to irrigation control cabinet and pumps in accordance with the National Electrical Code (NEC), MnDOT Specifications, and as specified in the Contract.
2. Coordination with utility to obtain electrical service and connection to electrical service source.
3. Other miscellaneous work shown on the plans or specified herein.

B. Related Sections:

1. Section 32 80 00 – Irrigation System

1.02 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. Payment included under bid item for Irrigation System in section 32 80 00 1.02 includes full compensation for the cost of conduit, conduit sleeves, handholes, couplings, elbows, bushings, sealing around the conduit where it enters a pull box, conductors, pulling, splicing, making required connections, testing, grounding and bonding, and other miscellaneous items required for a complete installation as specified.
2. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

A. National Electrical Code (NEC).

B. Minnesota Department of Transportation “Standard Specifications for Construction”, 2020 Edition (MnDOT Spec.):

1. 3801 – Rigid Steel Conduit.
2. 3815 – Cables and Conductors.

1.04 SUBMITTALS

A. Submit all required Items before commencement of Work in accordance with section 01 33 00.

B. Submit an electrical design including the following items:

1. Size and type of conduit.
2. Size and type of conductors.
3. Location of connection to source of power.

C. Submit manufacturers product information for the following items as specified:

1. Conduit.
2. Conductors and splices for above and below ground.
3. Handhole.
4. Receptacles and switches.

D. Provide operations manual for booster pump if pump required.

1.05 QUALITY ASSURANCE

A. Qualifications

1. Contractor: Must be a Minnesota Licensed Electrical Contractor in “good standing” with the Minnesota State Board of Electricity at the time of bid submission.
2. Contractor must provide at least one person at all times during execution of this portion of work who is thoroughly familiar with the type of materials being installed and is directly responsible for all work performed under this Section.

1.06 SEQUENCING AND SCHEDULING

- A. Begin coordination with utility company for power supply prior to preconstruction meeting.
- B. Provide 48 hour notice to Engineer prior to installations to allow for staking locations of any conduit, handholes.
- C. Install all conduit for crossings under, streets, parking lots, trails, and sidewalks as identified in drawings prior to grading work.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Non-Metallic Conduit: Except where required by the NEC and noted herein all conduct shall be type PVC schedule 40.
 1. Provide conduit in accordance with NEC Article 352 except as modified herein:
 - a. Conduit shall be a minimum of .75 inch diameter unless otherwise noted.
 - 1) The conduit that contains only control wiring may be reduced in size to 0.5 inch.
 2. All Exposed Conduit installed on an exterior surface or emerges from the ground outside of an enclosure shall be type rigid steel in accordance with MnDOT Spec. 3801.
 - a. Includes conduit containing only control wiring.
 3. Liquid Tight Flexible Metal Conduit may be used only when the entire length of conduit, including fittings, is not greater than 6 feet and the entire run is located within the irrigation cabinet.
- B. Conductors:
 1. Provide conductors in accordance with MnDOT 3815 except as modified herein:
 - a. Unless otherwise noted, all conductors shall be stranded copper, Type XHHW.
 - b. Conductors shall be sized according to National Electric Code and verified through voltage drop calculations except as noted:
 - 1) Minimum size conductor shall be #10 AWG except as noted:

- a) The Minimum size conductor that supplies power to the irrigation controller only may be reduced to #12 AWG.
- 2) Conductors for irrigation pumps shall not have a voltage drop exceeding 3% when calculated from the overcurrent protective device at the service to the irrigation pump disconnect.
- C. Splices in below grade wiring within handhole:
 - 1. Raychem GTAP 1 or GTAP 2, or approved equal
- D. Hand Holes:
 - 1. Type A: 12 x 12 x 12 stackable Quazite Box PC1212BA12 (all applications).
 - a. Cover PC1212HA0017 stamped "Electric".
- E. Booster Pump and Booster Pump Disconnect:
 - 1. Booster pump if required shall be sized as needed to provide sufficient flow for proper operation of irrigation system.
 - 2. The disconnecting means shall be lockable and meet the requirements of NEC Article 110-25.
- F. Devices
 - 1. Receptacles and switches shall be Spec grade.

PART 3 EXECUTION

3.01 GENERAL

- A. All installations shall meet or exceed NEC requirements.
- B. All circuits exceeding 50VAC to ground shall be installed in conduit.

3.02 CONNECTION TO SOURCE OF POWER

- A. The source of power shall be indicated in the Drawings.
- B. Connection of conduit to the service cabinet shall be made by one of the following methods:
 - 1. Core Drilling the concrete base and installing a new conduit.
 - 2. Utilization of an existing empty conduit.
 - 3. Installation of a handhole in an existing conduit with wiring. Existing wire shall be replaced with new wire as required to return the circuit to operation. The new wire shall be of the same size and type as the existing wire.
 - 4. Knock out holes are not allowed in the service cabinet to allow for the connection of a conduit.

3.03 CONNECTION TO IRRIGATION CONTROLLER:

- A. Final connection shall be made by cord and plug to a GFCI receptacle installed inside the irrigation cabinet.

3.04 BOOSTER PUMP AND BOOSTER PUMP DISCONNECT:

- A. A disconnecting means for the booster pump shall be installed on the exterior of the booster pump cabinet . Installation of the disconnecting means shall meet the requirements of NEC Article 430 Part IX. Disconnecting means located at locations other than on the exterior of the booster pump cabinet shall not be considered as meeting the requirements of NEC Article 430.102.
 - 1. NEC Articles 430.109(A)(2), 430.109(A)(3), 430.109(A)(4), 430.109(C)(1), and 430.109(C)(2) shall not apply to this section
 - 2. For the purpose of this section the disconnecting means shall be considered to require serve or maintenance when energized and the installation shall meet the requirements of the NEC Table 110.26(a)(1).
- B. Only the booster pump circuit shall enter or leave the disconnect.
- C. Demonstrate operation of booster pump at irrigation system startup.

END OF SECTION

SECTION 26 56 00

EXTERIOR LIGHTING

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Provide and install materials and equipment for construction of lighting systems in accordance with the National Electrical Code (NEC), MnDOT Specifications, and as specified in the Contract.

B. Related Sections

1. Section 00 31 00 – Project Management and Coordination.

1.02 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. Non-Metallic Conduit: Measurement will be per lineal foot for each size and type from center of handhole, base, service cabinet, or connection to existing conduit to center of handhole, base, service cabinet, or connection to existing conduit along the centerline of the conduit as installed. Payment at the Bid Unit Price shall be full compensation for the cost of conduit, conduit sleeves, couplings, elbows, bushings, sealing around the conduit where it enters a pull box, grounding and bonding, and other miscellaneous items required for a complete installation of the conduit.
2. Underground Wire: Measurement will be per lineal foot for each size and type from center of handhole, base, or service cabinet to center of handhole, base, or service cabinet along the centerline of the wire installed. Payment at the Bid Unit Price shall be full compensation for the cost of wire, pulling, splicing, terminals, making required connections, slack required at connections, testing, and other miscellaneous items required for complete installation of underground wire.
3. Lighting Service Cabinet: Measurement will be per each. Payment at the Bid Unit Price shall be full compensation for the cost of panel board enclosure, circuit breakers, switches, relays, photoelectric control, internal wiring, service entrance circuit, mounting hardware, grounding, painting, sealing around cabinet base, numbering of the service cabinet, permits, and miscellaneous items required for a complete installation of the lighting service cabinet.
4. Handhole: Measurement will be per each by type. Payment at the Bid Unit Price shall be full compensation for handhole, frame and cover, excavation, aggregate drain bed, backfilling, sealing conduit entrances, surface restoration, and miscellaneous items required for the complete installation of handholes.
5. Lighting Unit (City supplied Light Pole and Luminaire): Measurement will be per each by type. Payment at the Bid Unit Price shall be full compensation for lamps, assembly and installation of the luminaire and pole base, pickup and delivery of pole and luminaire to place of installation, pole bracket, inline fuse, wiring between pole base and luminaire, luminaire wire holder, splice to power circuit, numbering of the light pole, luminaire labeling, and other miscellaneous items required for a complete installation of the lighting unit.

6. Light Foundation: Measurement will be per each by type. Payment at the Bid Unit Price shall be full compensation for excavation, concrete, reinforcement, anchor rods, ground rod, ground lead, grounding connections, conduit elbows and bushings, and other miscellaneous items required for the complete installation of light foundation.
7. Equipment Pad: Measurement will be per each. Payment at the Bid Unit Price shall be full compensation for excavation, aggregate, concrete, reinforcement, anchoring hardware within the pad, conduits within the pad, ground rods, grounding connections, mounting brackets, mounting hardware, and miscellaneous items required for the complete equipment pad installation.
8. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. National Electrical Code (NEC).
- B. Minnesota Department of Transportation "Standard Specifications for Construction", 2020 Edition (MnDOT Spec.):
 1. 2471 – Structural Metals.
 2. 2545 – Lighting Systems.
 3. 3101 – Portland Cement.
 4. 3113 – Admixtures for Concrete.
 5. 3803 – Non-Metallic Rigid PVC and HDPE Conduit.
 6. 3815 – Cables and Conductors.
- C. American Society of Testing Materials (ASTM):
 1. C260 - Air-Entraining Admixtures for Concrete.

1.04 SUBMITTALS

- A. Conduit.
- B. Conductors and splices for above and below ground.
- C. Handhole.
- D. Service Cabinet.
- E. MnDOT approved design mix for each concrete mix designation used.

1.05 SEQUENCING AND SCHEDULING

- A. Concrete curb and gutter construction precedes street light system installations.
- B. Provide 48 hour notice to Engineer prior to installations to allow for staking the locations of poles, handholes and cabinets.
- C. Concrete shall be placed in the form the same day the form is placed for all pour in place light foundations.

- D. Install conduit crossings prior to curb placement when replacing existing curb or installing new curb at the point of the crossing as part of the project.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Non-Metallic Conduit: Provide conduit in accordance with MnDOT Spec. 3803 except as modified herein:
 - 1. Except where required by the NEC conduct shall be type PVC schedule 40.
 - 2. Conduit shall be 1.5 inch unless otherwise noted.
 - a. The portion of conduit that feeds receptacle stations or landscape/accent lighting may be reduced in size, but not less than .75 inch.
- B. Conductors:
 - 1. Provide conductors in accordance with MnDOT 3815 except as modified herein:
 - a. Unless otherwise noted, all conductors shall be Copper, Type XHHW-2
 - b. Conductors shall be sized according to National Electric Code and verified through voltage drop calculations except as noted:
 - 1) Minimum size phase conductor for lighting system shall be #6 wire gauge.
 - 2) Minimum size equipment ground wire conductors shall be #8 wire gauge.
 - 3) Minimum size conductor feeding receptacle stanchions or landscape/accent lighting shall be #10 wire gauge.
 - 4) Conductors within lighting unit extending from the fuseholder to the luminaire, including the equipment grounding conductor, shall be #12 gauge stranded XHHW
 - a) The grounding electrode conductor shall be green or bare, stranded or solid, and no smaller than #6 gauge wire.
 - b) If installed wholly within the lighting unit the grounding electrode conductor may be reduced to #8 gauge wire.
 - c. Phase conductors shall be color coded
 - 1) Phase conductors for 240 volt circuits shall be red and black.
 - 2) Phase conductors for 240/120 volt circuits shall be red, black, and white.
 - 3) Phase conductors supplying receptacles, pole, or ground mounted shall be blue and white.
 - 2. Phase conductors shall be color coded
- C. Above grade wiring within lighting unit:
 - 1. Fuses shall be dual element time delay, FNM5 or equal.
 - 2. Pole fuse holders for 240 volt circuits shall be Bussmann Hex-AA, for 120 volt circuits shall be Bussmann Heb AA.
 - a. tape used around fuse holder shall be 3M 33Plus or equal.
 - 3. Splicing shall be Burndy 1PL4-X, or approved equal.
 - a. The number of terminals shall not be less than the number of Conductors.
 - b. In the event a conductor larger than #4 is used, the corresponding insulated splice block of the manufacturer's series shall be provided.
- D. Below grade wiring within handhole:
 - 1. Splicing shall be Raychem GTAP 1 or GTAP 2, or approved equal.

- a. Splices that contain no conductor larger than #10 AWG may utilize Ideal Gel Filled Wire Connectors.
- E. Service Cabinet (120/240 VAC) – Feed Point, Povolny Specialties or approved equal:
 - 1. Nema 3 R, neoprene gasket on doors, 1/8" aluminum 5052-H32, anodized 30MIN, clear, non-corroding hardware, ETL listed in accordance with UL508A.
 - 2. Dimensions of box 17" x 17" x 55" height.
 - 3. 4" divider, rear lower section of cabinet, full width utility wire way.
 - 4. Photocell.
 - 5. 7" x 7" 178MM Lexan Window.
- F. Handholes:
 - 1. Type A: 13 x 24 x 12 stackable Quazite Box PG1324BA12 (all applications).
 - a. Cover PG1324CA0041 stamped "STREET LIGHTING".
 - 2. Type B: 12 x 12 x 12 stackable Quazite Box PC1212ZA12 (only allowed when located behind pole Type F or reconstruct when specifically identified in Drawings).
 - a. Cover PC1212CA0041 stamped "STREET LIGHTING".
- G. Light Foundation:
 - 1. All foundations shall be poured in place except design F foundations.
 - 2. Concrete to Conform to MnDOT Spec. 2461, except as modified herein:
 - a. Portland Cement: Conform to MnDOT Spec. 3101:
 - 1) Type 3 air-entraining concrete produced by using Type I Portland Cement.
 - b. Air-Entraining Admixtures: Conform to MnDOT Spec. 3113:
 - 1) Conforming to ASTM C260.
 - 2) Not to be added to the concrete mixtures in the field without approval from Engineer.
 - c. Mix Designation and Classification for Concrete foundations.
 - 1) Equipment Pad and Light Pole Foundation: Mix No. 3G52.
 - 3. Reinforcing to Conform to MnDOT Spec. 3301.
 - 4. Design P and E anchor bolt circle dimension and projection shall be modified to meet lighting unit manufacturers specifications.
- H. Equipment Pad:
 - 1. Concrete to conform to 2.01.G.2.
- I. Lighting Unit Provided by the City.
 - 1. Light Pole Type A Residential (LGT-7)
 - a. Holophane Standard Pole
 - 1) RTA 1650C PLN NDR BZ 35HH FBC RFD2043
 - 2) 3" x 5"- Handhole Base Cover
 - 3) Dark Anodized Duranodic Bronze Finish
 - 4) Full spun aluminum cover
 - b. Holophane Taft LED Luminaire
 - 1) PTE2 P20 40K MVOLT GL3 BZ BL
 - 2) 55W LED
 - 3) Auto-sensing (120-277) 50/60 HZ voltage
 - 4) Type III glass reflector
 - 5) Painted Standard Holophane Bronze Finish

- 6) Ball final
- 7) Standard solid rib
- 2. Light Pole Type P1 Ravine Single LED Fixture 14 Foot (LGT-8)
 - a. Holophane Columbia
 - 1) Aluminum Sitelink Pole
 - 2) CLA 14 SL5 17D C04 BZ
 - b. Holophane Granville Luminaire
 - 1) Classic Utility LED3 Version
 - 2) GVD3 P20 40K MVOLT MS GL3 BZ RB ST TBZ
- 3. Light Pole Type P2 Ravine Single LED Fixture 18 Foot (LGT-9)
 - a. Holophane Columbia
 - 1) Aluminum Sitelink Pole
 - 2) CLA 18 SL5 17D C04 BZ
 - b. Holophane Granville Luminaire
 - 1) Classic Utility LED3 Version
 - 2) GVD3 P20 40K MVOLT MS GL3 BZ RB ST TBZ
- 4. Light Pole Type E2 Ravine Double LED Fixture 14 Foot (LGT-10)
 - a. Holophane Columbia
 - 1) Aluminum Sitelink Pole
 - 2) CLA 14 SL5 17D C04 BZ
 - b. 2-Holophane Granville Luminaire
 - 1) Classic Utility LED3 Version
 - 2) GVD3 P20 40K MVOLT MS GL3 BZ RB ST TBZ
 - 3) Cincinnati Cross Arms (two at 180°) CSC 15 2A TN SL5 BZ
- 5. Light Pole Type E3 Ravine Double LED Fixture 18 Foot (LGT-11)
 - a. Holophane Columbia
 - 1) Aluminum Sitelink Pole
 - 2) CLA 18 SL5 17D C04 BZ
 - b. 2-Holophane Granville Luminaire
 - 1) Classic Utility LED3 Version
 - 2) GVD3 P20 40K MVOLT MS GL3 BZ RB ST TBZ
 - 3) Cincinnati Cross Arms (two at 180°) CSC 15 2A TN SL5 BZ
- 6. Light Pole Type A2 Cobra Head LED Fixture 20 Foot (LGT-12)
 - a. Holophane Standard Pole
 - 1) Autobahn Series
 - 2) RTA 2050E PLN NDR BZ – FBC RFD2043
 - 3) Full spun aluminum cover
 - b. Holophane Standard Mast Arm
 - 1) 1MA-BZ
 - 2) Dark Anodized Duranodic Bronze Finish
 - c. Luminaire-American Electric
 - 1) Autobahn Series, LED Version, 45 inch slip over arm
 - 2) ATB2 40X MVOLT R2 BZ NL AO RFD330774
 - 3) 88w 11.7k lm
- 7. Light Pole Type E4 Cobra Head LED Fixture 30 Foot (LGT-13)
 - a. Holophane Standard Pole
 - 1) RTA3070E PLN NDR BZ FBC RFD2043
 - 2) Dark Anodized Duranodic Bronze Finish

- 3) Full spun aluminum cover
- b. Holophane Standard Mast Arm
 - 1) 1MA-BZ
 - 2) Dark Anodized Duranodic Bronze Finish
- c. Luminaire-American Electric
 - 1) Autobahn Series, LED Version
 - 2) ATB2 40X MVOLT R2 BZ NL AO FRD330774
 - 3) 88w 11.7k lm
- 8. Light Pole Type F1 LED Lighting Unit 31 Foot 11 Inches (LGT-14)
 - a. Holophane Wadsworth
 - 1) Aluminum Sitelink Pole
 - 2) WDA 30 SL6 17D C05 BZ
 - b. Holophane Memphis Luminaire
 - 1) Utility Tear Drop LED 2
 - 2) MPL2 P50S 40K MVOLT BG3 QSM BZ SS BHDF QSM BZ
 - 3) 30" Dia. Shallow Skirt, Bronze, Bowl Glass
 - 4) Boston Harbor Style Arm, Model: BHC 72IN 1A TN SL6 BZ
 - 5) Boston Harbour Style Decorative Arm Fitter Model: BHDF13 200 BZ

PART 3 EXECUTION

3.01 CONSTRUCTION REQUIREMENTS

- A. General
 - 1. Locating of public utilities within the project limits in accordance with section 01 31 00 Project Management and Coordination shall be incidental to the project and included in the Total Base Bid.
- B. Service Cabinet:
 - 1. Contractor shall furnish and install a Service Cabinet, for supplying power to an electric lighting system.
 - 2. Supplying power to an electric lighting system, on an equipment pad concrete foundation at the location indicated in the Plans.
 - 3. The Service Cabinet shall be modified as needed to include the appropriate number and size of circuits to make the lighting systems operational.
 - a. 240 volt 30 AMP branch circuits required.
 - 1) If the street light pole is equipped with a pole mounted receptacle, 240/120 volt 30 AMP circuits may be utilized.
- C. Conductors:
 - 1. All below grade conductors must be located in conduit.
 - 2. Conductor color code shall be maintained for the entire length of the circuit.
 - 3. Sufficient slack shall be provided in all conductors to allow removal from the pole of all fuseholders and splices.
 - 4. Insulation damage shall be replaced with a new conductor running the full length between two pull points (light pole, handhole, or cabinet). No taping of damaged areas is permitted.

D. Conduit:

1. Install with a minimum of 24" cover measured from top of conduit to finished grade.
2. When installed parallel to curb install between 12 inches and 24 inches from the back of curb unless specifically identified otherwise on drawings or approved by Engineer.
3. Street crossings:
 - a. Shall occur at intersections only unless otherwise approved by Engineer.
 - b. Shall be installed perpendicular to the centerline of the street being crossed.
 - c. Shall not be installed within 6' of private utility crossings.
4. Shall not be installed within another conduit of larger diameter.
5. Install such that each run shall contain no more than a combined total of 270 degrees of bends regardless of radius size of bends.

E. Handholes:

1. Handholes to be installed in green space only.
2. When installed along roadside, the roadside edge of the handhole shall be located between 12 inches and 18 inches from the back of curb.
3. Type F1 Light Pole requires installation of a handhole adjacent to light pole foundation which will include ground rod.

F. Below Grade Cable Splices:

1. Below Grade cable splices shall be used in all handholes (only) to provide for the lighting as specified in the Plan.
2. Below Grade cable splices must be located within a handhole. Direct bury splices are not allowed.
 - a. Provide adequate slack in the conductor assembly to allow for each individual conductor to extend at least 2 feet above the top of the handhole.
 - b. Maintain proper circuit color identification within each splice.

G. Light Foundation:

1. Foundations installed adjacent to curb shall be installed with the center of the foundation 3' from the back of curb.
2. Foundations shall be located no closer than 5' from any hydrant, valve, or manhole unless otherwise approved by Engineer.
3. Conduits within light foundation
 - a. At the last foundation in a line one conduit shall be stubbed out to allow for future expansion. The stub conduit shall be the same size as the conduit being utilized.
 - b. No more than 3 conduits shall be located within one light foundation.
 - c. Conduit projection shall be no less than 2 inches and no more than 3 inches above the top of the light foundation.
4. The threaded portion of anchor bolts protruding above the lighting foundation shall have an anti-seize compound applied prior to the installation of the light pole.
5. All light foundations, except type F, shall contain a 0.625 inch diameter grounding rod as identified in the standard detail plates that projects no less than 2 inches and no more than 4 inches above the top of the light foundation.
6. Forming material shall extend the entire depth of the foundation.
 - a. Forming material shall be removed after concrete has cured from the top of the foundation to a depth of 3" below finished grade.

7. Excavation of foundations shall be completed with Auger unless otherwise noted:
 - a. The auger size shall correspond with the diameter of the specific light foundation being utilized except as noted.
 - 1) For precast Type F foundations the auger diameter shall be 36 inches.
 - b. Other means of excavation may be needed when utilities are located within 2 feet of light foundation or if large rocks are encountered.
 8. Finishing
 - a. All concrete foundations shall have a broom finish.
 - b. Foundations for pole types A1, A2, and E4 shall be finished with a 0.75 inch crown.
 - c. Foundations for pole types P1, P2, E2, E3, and F1 shall be finished with a flat and level top.
- H. Equipment Pad:
1. Equipment pad shall be located no further than 15 feet from source of power.
 2. Use the equipment pad mentioned for mounting the lighting service cabinet and meter socket.
 3. Construct the mounting bracket assembly for the service equipment using 5/8 inch (9.5 mm) bolts anchored in the equipment pad.
 4. Install one spare conduit of each type and size utilized for possible future expansion.
 - a. If equipment pad is located within an outlot or park property install two additional 0.75 inch diameter conduit stubs for future expansion.
- I. Lighting Unit:
1. Light poles and luminaires are available at the City of Cottage Grove Public Work Facility.
 2. Contractor shall load and deliver to the project site.
 3. Contractor shall install the light poles and luminaires as required by the project.
 4. Lighting units shall be installed plumb.
 - a. Install lighting units on leveling nuts for pole types A1, A2, and E4.
 - b. Install pole types P1, P2, E2, E3, and F1 directly on light foundations without leveling nuts.
 - 1) MnDOT approved shims may be used for leveling, but total height of shims shall not exceed 0.25 inches.
 5. Each lighting unit shall have a fuseholder and fuses installed at the base of the pole
 6. Each pole shall be grounded at the pole handhole location to the grounding rod with a minimum #8 conductor.
 7. A grounding conductor shall be installed from the base of the pole to the luminaire.
 8. No splicing is allowed on any of the conductors located within the pole between the luminaire and the fuseholder or splice located in base of the pole.
 9. Splicing materials within the pole shall be arranged in a way that will not allow water to pool in the devices.
 10. All fasteners of the pole, luminaire, mast arms or twin arms shall have anti-seize compound applied prior to installation.
 11. Luminaires shall be installed such that both the access cover/door and the street side optics face the street.
 12. Poles shall be installed such that the handhole at the bottom of the pole is on the side of the pole opposite the street.
- J. Above Ground Wiring:
1. MnDOT Spec. 2545.3.F.2, except as modified here in:
 - a. Fuses, fuse holders, and splicing materials in accordance with 2.01.C

K. Arc-Flash Hazard Warning Labeling:

1. Calculate available fault current in accordance with MnDOT Spec. 2545.3.U and 2565.3.Z.
2. Establish available fault current and apply the appropriate label as follows.
3. Use the current edition of NFPA 70E “Standard for Electrical Safety in the Workplace” to determine the required PPE category and personal protective equipment.
4. If the available fault current is $\leq 25,000$ amps, then provide a label with the following information shown in Example 1.

Example 1

Warning

Arc Flash Hazard

Appropriate PPE Required

Arc Flash Boundary 19 Inches

Arc Flash PPE Category 1

Working Distance 18 Inches

Arc Flash Personal Protection Equipment (PPE)

List required clothing, **Min Arc Rating of 4 cal/cm²**, and protective equipment in accordance with the PPE Table from the current edition of NFPA 70E Standard for Electrical Safety in the Workplace

Equipment ID

5. If the available fault current is $> 25,000$ amps:
 - a. Determine PPE requirements in accordance with the current edition of NFPA 70E Standard for Electrical Safety in the Workplace, and
 - b. Provide a label with the following information shown in Example 2.
 - 1) Fill in the ____ (**blank**) with the required arc-flash PPE category and arc-flash boundary distance.

Example 2

Warning

Arc Flash Hazard

Appropriate PPE Required

Arc Flash Boundary Feet

Arc Flash PPE Category _____

Working Distance 18 Inches

Arc Flash Personal Protection Equipment (PPE)

List required clothing, **Min Arc Rating of ____ cal/cm²**, and protective equipment in accordance with the PPE Table from the current edition of NFPA 70E Standard for Electrical Safety in the Workplace

Equipment ID

6. Install labels on the front of the dead front door of the electric service cabinet at eye level.

L. Electric Service:

1. Proposed source of power addresses are identified in the Plan.
2. Coordinate the installation of Electrical Service, provide power to the service cabinets.

3. Fees for the “Application for Electrical Service” and payment to the Electric Utility for providing the electrical service connections is the responsibility of the Contractor.
4. Secure approval from the Engineer for any changes to the Electrical Service as reflected in the Plan.
5. No measurement will be made of the various items that constitute Electrical Service. Electrical Service shall be incidental to the service cabinets and shall include all compensation in full for all costs incidental thereto, including, but not limited to providing power to service cabinets, power company fees, Power Utility Company.

M. Compliance with NEC Article 110.24:

1. Provide fault current calculations in accordance with 2545.3.U.

END OF SECTION

SECTION 31 10 00

SITE CLEARING

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Removal and trimming of vegetation and trees and stripping and stockpiling of sod and topsoil.

1.02 PRICE AND PAYMENT PROCEDURES

A. Measure and Payment:

1. Payment at the Unit Price will be considered compensation in full for all work necessary to complete the Bid Item in full.
2. Clearing and Grubbing:
 - a. Measurement will be by physical count of each tree cleared and grubbed having a diameter of more than 3 inches at a point 24 inches above the ground surface. Payment will constitute compensation in full for all removal, disposal work, and costs.
 - b. Measurement will be by lump sum for all Project Clearing and Grubbing. Payment will constitute compensation in full for all removal, disposal work, and costs.
 - c. Measurement will be by acre of trees cleared and grubbed. Measurements shall be made horizontally to points 10 feet outside the trunks of trees or stumps on the perimeter of the area being measured. Any separate area smaller than 1/20 acre will be considered to be 1/20 acre:
 - 1) Whenever isolated trees or stumps are removed outside the areas designated to be cleared and grubbed, the acre payment will be made by:
 - a) Each tree measuring more than 3 inches, but less than 36 inches in diameter, at a point 2 feet above the ground surface, and each stump measuring more than 3 inches, but less than 36 inches, at the point of cutoff will be considered as being 1/20 acre.
 - b) Each tree or stump measuring 36 inches or more in diameter will be considered as being 1/10 acre.
 - 2) Payment will constitute compensation in full for all removal, disposal, and costs.
3. Clearing:
 - a. Measurement will be by physical count of each tree cleared having a diameter of more than 3 inches at a point 24 inches above the ground surface. Payment will constitute compensation in full for all removal, disposal, and costs.
 - b. Measurement will be by acre of trees cleared. Measurements shall be made horizontally to points 10 feet outside the trunks of trees or stumps on the perimeter of the area being measured. Any separate area smaller than 1/20 acre will be considered to be 1/20 acre.
4. Grubbing:
 - a. Measurement will be by physical count of each tree or stump grubbed. Payment will constitute compensation in full for all removal, disposal, and costs.
 - b. Measurement will be by acre of trees or stumps grubbed. Measurements shall be made horizontally to points 10 feet outside the trunks of trees or stumps on the perimeter of

the area being measured. Any separate area smaller than 1/20 acre will be considered to be 1/20 acre.

5. Salvage and Respread Topsoil: Measurement will be per square yard of surface area by depth of topsoil to be respread. Payment will include vegetation removal, striping existing topsoil, stockpiling, and resspreading material, Excavation of topsoil in excess of the volume to be respread shall be included under the Excavation – Common Bid Item.
6. Sod Removal: This Work is considered incidental to the other Work of the Contract.
7. Windfall/Deadfall Removal: This Work shall be incidental to the Project with no direct compensation.
8. Brush Removal: This Work shall be incidental to the Project.
9. Stripping and Stockpiling of Soil: This Work shall be considered incidental to other Work in the Contract.
10. Stripping and Stockpiling of Soil: This Work shall be considered incidental to other Work in the Contract.
11. Any tree trimming necessary to perform other work in the Contract shall be considered incidental.
12. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. Minnesota Department of Transportation “Standard Specifications for Construction”, 2020 Edition (MnDOT Spec.):
 1. 2101 – Clearing and Grubbing.

1.04 DEFINITIONS

- A. Brush: All bushes, shrubs, and other vegetation that can be cut with a brush scythe or mowing machine, including small isolated trees having a diameter of 4 inches or less at a point 2 feet above the ground surface.
- B. Clearing: Cutting, removing, and disposing of trees, shrubs, bushes, windfalls, and other vegetation in the designated areas.
- C. Grubbing: Removing and disposing of stumps, roots, and other remains in the designated areas.
- D. Tree Trimming/Pruning: Cutting broken, damaged, or obstructing branches and installing wound dressing. Includes the uplift of branches along the roadway to allow for street construction.

1.05 SITE CONDITIONS

- A. Work consists of removing trees generally along the easement lot lines designated for utilities.
- B. The Drawings do not specifically show all trees to be removed or transplanted.
- C. Protect specimen trees close to Work that are designated to remain but may be damaged by Work.

1.06 SEQUENCING AND SCHEDULING

- A. Install temporary erosion control measures prior to Work of this Section.
- B. Complete before or sufficiently ahead of on-going rough grading, excavation, backfill, and compacting for utilities.

PART 2 PRODUCTS

2.01 WOUND DRESSING

- A. Asphalt base tree paint.
- B. Other acceptable materials per Engineer's approval.

PART 3 EXECUTION

3.01 GENERAL

- A. Review removals in the field with the Engineer prior to doing Work. Clearing limits will be clearly marked by the Engineer.
- B. Assume multiple mobilizations for the Work of this Section.
- C. Stockpile soil to eliminate contamination with other on site materials.

3.02 CLEARING AND GRUBBING

- A. Clearing Trees: Cut off, remove, and dispose of trees and brush in the areas designated as a clearing operation. When grubbing is not required, the point of cut off shall be 6 inches above the ground.
- B. Clearing Brush: Cut even with the ground surface.
- C. Grubbing: Remove brush, stumps, roots, and other remains to a minimum depth of 6 inches below subgrade for all proposed sections.
- D. Backfill all depressions resulting from the grubbing operations in accordance with Section 31 23 00.

3.03 TRIMMING AND PRUNING

- A. As directed by the Engineer, trim trees that are to be saved but interfere with the proposed construction. Paint all cuts with wound dressing.

3.04 STRIPPING

- A. After clearing and grubbing have been completed, strip sod and topsoil to a line 2 feet outside of areas to be occupied by structures, walks, roadways, areas to be excavated or filled, and other areas shown.

1. Do not strip within the drip line (branch spread) of trees identified to remain.
- B. As directed by Engineer, stockpile sufficient topsoil to re-spread at a uniform depth of 6 inches to all disturbed areas identified for seeding or sodding.

3.05 SALVAGE AND RESPREAD TOPSOIL

- A. Strip in accordance with 3.04.A.
 1. Strip existing topsoil to a depth to stockpile a sufficient volume of material to be respread at depth as specified.
- B. Stockpile stripped topsoil at locations within the project grading limits.
- C. Re-spread at a uniform depth as specified at locations within the project grading limits after grades have been verified by Engineer.

3.06 DISPOSAL LIMITATIONS

- A. Conform to MnDOT Spec. 2101.3.D, or as modified herein:
- B. Dispose of all cleared and grubbed material and debris outside the right-of-way at a location selected by the Contractor, except for trees and logs identified to be salvaged.
- C. Disposal site should be a properly designated landfill area as determined by appropriate governmental agencies or lands under direct control of the Contractor.
- D. Stripped materials not used for embankments shall be disposed off the site.
- E. On Site burial of any debris is not permitted.
- F. On Site burning of debris is not permitted.

3.07 PROTECTION

- A. Conduct operations so as not to damage surrounding private property.
- B. Protect trees intended to be saved from injury or defacement during operations:
 1. Restrict widths of utility trenches.
 2. Provide protective bracing, sheeting, or box to insure safe Work conditions as incidental to Contract.
- C. Exercise care to keep salvaged material as clean as possible during operations.
- D. Install temporary fencing at the construction limits and drip lines of trees to be protected prior to any construction activities in order to protect vegetation.

END OF SECTION

SECTION 31 23 00
EXCAVATION AND FILL

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Excavation and fill for roadways, foundations, channels, ponds, and other areas.
- B. Related Sections:
 - 1. Section 01 57 13 - Temporary Erosion and Sediment Control.
 - 2. Section 02 41 13 - Selective Site Demolition.
 - 3. Section 31 10 00 - Site Clearing.
 - 4. Section 31 23 13 - Subgrade Preparation.
 - 5. Section 33 05 06 - Trenching and Backfilling.
 - 6. Section 32 92 00 - Turf and Grasses.

1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Measurement and payment shall be at the Bid Unit Price consistent with MnDOT Spec. 2106.4 and 2106.5, except as modified in the following.
 - 2. Excavation - Common (EV) (P): Measurement will be by volume of material in its original position, based on pre-construction digital surface model and design digital surface model. Quantity shall be calculated and computed by the surface comparison completed by Engineer. Payment will include excavation, testing, and disposal of material. Placement of suitable excavated material on site shall be included under the Common Embankment Bid Item.
 - a. Excavation and disposal if existing topsoil will be included within the Excavation – Common quantity when a Salvage and Respread Topsoil Bid Item is not provided in the Bid Form.
 - b. When a Salvage and Respread Topsoil Bid Item is provided and the existing onsite topsoil is in excess of the volume needed to be respread, excavation and disposal of the excess existing topsoil will be included in the Excavation – Common Bid Item.
 - c. Excavation – Common will include material within trail and sidewalk sections when no separate bid item is provided for Excavation – Common Trail or Sidewalk.
 - 3. Excavation - Common (EV) – Trail or Sidewalk: Measurement will be by volume of material in its original position, based measurements performed by the Engineer at the time of construction. Payment will include excavation, testing, and disposal of material.
 - 4. Excavation - Subgrade (EV): Measurement will be by volume of material in its original position, based on pre-construction and post-construction cross sections taken by the Engineer. Quantity shall be calculated by the average end area method. Payment will include excavation, testing, and disposal of material.
 - 5. Excavation - Subgrade (EV) – Trail or Sidewalk: Measurement will be by volume of material in its original position, based on pre-construction and post-construction cross sections taken by the Engineer. Quantity shall be calculated by the average end area method. Payment will include excavation, testing, and disposal of material.

6. Common Embankment (CV) (P): Measurement will be volume of material compacted in place based on pre-construction digital surface model and the design digital surface model. Quantity shall be calculated and computed by surface comparison completed by Engineer. Payment will include all costs related to testing, delivery, placement, compaction, and final finishing.
7. Aggregate Backfill (Modified): Measurement will be by the ton of material compacted in place as determined from weight tickets delivered to the Engineer. Payment will include all costs to performing the Work in accordance with these Specifications, including shaping, grading, compacting and tolerancing, and include all costs related to furnishing and installing the material complete in place as specified:
 - a. If the aggregate backfill material is being wasted or placed excessively thick, the Owner reserves the right to deduct quantities that are in excess of plan thickness. Said quantities shall be based on material weighing 110 pounds per square yard of area per inch of thickness.
8. Aggregate Backfill (Modified) – Trail or Sidewalk: Measurement will be by the ton of material compacted in place as determined from weight tickets delivered to the Engineer. Payment will include all costs to performing the Work in accordance with these Specifications, including shaping, grading, compacting and tolerancing, and include all costs related to furnishing and installing the material complete in place as specified:
 - a. If the aggregate backfill material is being wasted or placed excessively thick, the Owner reserves the right to deduct quantities that are in excess of plan thickness. Said quantities shall be based on material weighing 110 pounds per square yard of area per inch of thickness.
9. Pond Liner (CV): Measurement will be volume of material compacted in place based on pre-construction cross sections and design grades. Payment will include all costs related to testing, delivery, placement, compaction, and final finishing.
10. Boulevard Grading: Payment for this final Boulevard Grading, including placing, grading, and compacting topsoil, shall be made under the Bid Item included in the Bid Form based upon the number of hours actually spent grading:
 - a. Initial backfilling of the curb is considered incidental to the installation of the curb.
 - b. Payment for furnishing of topsoil will be made under the Topsoil Borrow Bid Item, per Section 32 92 00.
11. Boulevard Stripping: Measurement will be per hour of time actually spent stripping, hauling, and disposing of boulevard sod. Payment will include all costs related for performing the work as specified.
12. Haul Excess Reclaimed Material Offsite (LV): Measurement will be by the loose volume of material hauled offsite by means of a truck count. Payment will include all costs related to removing and disposing of material off the Site.
13. Payment for Placing Topsoil Borrow will be made in Section 32 92 00 – Turf and Grasses.
14. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. Minnesota Department of Transportation “Standard Specifications for Construction”, 2020 Edition (MnDOT Spec.):
 1. 2106 - Excavation and Embankment – Compacted Volume Method.
 2. 3149 - Granular Material.

3. 3877 - Topsoil Material.

1.04 SUBMITTALS

- A. Submit the following items consistent with Section 01 33 00:
 1. Gradation tests for borrow materials.
 2. Pond liner permeability testing.

1.05 DEFINITIONS

- A. The definitions of the different classifications of excavation and borrow material shall conform to MnDOT Spec. 2106.1 and 2106.2, or as modified herein:
 1. Excavation - Common: In locations where the design cross section is in a cut section, excavation – common shall be classified as all excavation above the grading grade that has not been classified as another form of excavation in this section. In areas where the design cross section is in a fill section, common excavation shall consist of excavation of topsoil. Excavation - common shall not include payment for pavement removal when a separate bid item is present.
 2. Excavation - Subgrade: Excavation below the grading grade that has not been classified as another form of excavation in this Section.
 3. Topsoil borrow material shall conform to Section 32 92 00 – Turf and Grasses.

1.06 QUALITY ASSURANCE

- A. Assist testing laboratory by excavating for density tests. Assist testing laboratory with obtaining material samples.

1.07 SEQUENCING AND SCHEDULING

- A. Perform excavation as soon as possible after sewer and water construction.
- B. Submit pond liner permeability test results for either on site material or imported material prior to placement.
- C. Complete subgrade for streets, driveways, walks, and parking lots immediately after trench backfill and compaction.
- D. Provide notice by 3:00 P.M. of any aggregate backfill placement for the following day, to allow time for scheduling subgrade inspection and compaction tests prior to any aggregate backfill being placed.
- E. Aggregate backfill placement shall not occur until the Boulevard has been graded to within 6 inches of finished grade per typical section.
- F. Complete finish grading of turf areas within 5 calendar days after backfill.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Embankment Materials: Conform to MnDOT Spec 2106.2.B except as modified:
 - 1. Common Embankment: Conform to MnDOT Spec 2106.2.B.1 except as modified:
 - a. Soil which is capable of attaining specified compaction levels, excluding soils which contain organics, contain debris or are potentially expansive (CH or MH per the Unified Soil Classification System).
 - b. Materials Containing recycled asphalt or recycled concrete are not allowed without prior approval from Engineer.
- B. Aggregate Backfill (Modified):
 - 1. Only naturally occurring sand meeting the following requirements:
 - a. Uniformly blended.
 - b. Non-manufactured.
 - c. Uncrushed.
 - d. Mineral materials.
 - 2. Conform to the following gradation requirements or a deduct will be required per price adjustment tables found on the Grading and Base website.

Sieve Size	Percent Passing
3 Inch	100
2 Inch	80 to 100
#40	0 to 50
#200	0 to 12

- C. Pond Liner:
 - 1. Maximum permeability of 1×10^{-6} cm/s.
 - 2. Minimum of 15% passing the #200 Sieve.

PART 3 EXECUTION

3.01 GENERAL

- A. Conform to MnDOT Spec. 2106.3.A, or modified herein:
 - 1. Establish traffic control prior to excavations.
 - 2. Establish the specified erosion control devices according to Section 01 57 13 prior to all excavations.
 - 3. Notify utility companies of progress schedule so they can accomplish relocations, removals, and holding of lines.
 - 4. Perform removals consistent with Section 02 41 13.
 - 5. Strip topsoil consistent with Section 31 10 00.
 - 6. No borrow areas are allowed within City right-of-way.

3.02 PREPARATION OF EMBANKMENT

- A. Conform to MnDOT Spec. 2106.3.D, or as modified herein:
 - 1. Engineer's approval is required of all areas where preparation work has been performed prior to the placement of the embankment or fill material.

2. Where embankment is to be constructed over swamp, marsh, or other locations where the foundation material is unstable, the foundation shall be excavated to remove all or part of the unstable material.

3.03 EXCAVATION OPERATIONS

- A. Conform to MnDOT Spec. 2106.3.E, or as modified herein:
 1. Perform excavations to the alignment, cross section, and grade as shown on the Drawings and staked by the Engineer.
 2. Excavation of unstable material below grade shall be done under the direction of the Engineer as the subsurface conditions are disclosed.
 3. Remove muck excavation material so as to minimize disruption to the bottom of the excavation.
 4. Notify Engineer immediately of any large boulders or ledge rocks encountered so proper measurement or profile can be made for pay quantities.
 5. No solid rock will be allowed within 12 inches of the subgrade.
 6. Provide and maintain temporary drainage facilities until permanent facilities are completed.
 7. After the roadway excavation is complete and prior to backfilling operations, notify the Engineer 24 hours in advance so all excavation areas can be cross-sectioned to determine quantities.
 8. Cut, fill, and grade Site to elevations and contours shown on the Drawings with allowances for pavements, topsoil, and structures.
 9. Mining of material in boulevards for use in street construction will not be allowed.
 10. Excess reclaimed material above and beyond that is needed for the aggregate base shall be properly disposed of at a location off of the Site:
 - a. The resulting reclaimed material could contain diesel range organics (DRO) which must be disposed of in accordance with MPCA requirements.
- B. On street rehabilitation projects, excavation and disposal of the existing boulevard material to allow for the placement of the new concrete curb and gutter, and specified depth of topsoil/compost shall be considered incidental to the concrete curb removal Bid Item.

3.04 DISPOSITION OF EXCAVATED MATERIAL

- A. Conform to MnDOT Spec. 2106.3.J, or as modified herein:
 1. No disposition of bituminous millings will be permitted, unless thoroughly mixed with other on Site materials.
 2. If a reclamation process is used to remove pavement, the resulting reclaimed material could contain diesel range organics (DRO) which must be disposed of in accordance with MPCA requirements.

3.05 PLACING EMBANKMENTS

- A. Conform to MnDOT Spec. 2106.3.F:
 1. Topsoil placement shall conform to Section 32 92 00.

3.06 COMPACTING EMBANKMENTS

- A. Conform to MnDOT Spec. 2106.3.G, or as modified herein:

1. Compaction required for embankment materials shall conform to the Specified Density Method (nuclear) with the testing location and rates being determined by the Engineer.
2. Backfilling of embankments shall be performed using on Site materials: If the Contractor is unable to meet the specified density requirements using that material due to excess moisture content, they shall immediately notify the Engineer of this condition.
3. Recognize that inclement weather (sometimes heavy) occurs during the construction season and be responsible for protecting the moisture condition of soils during the construction phase. Such protection measures include sloping of exposed surfaces to promote runoff (avoid ponding) and compacting exposed surfaces prior to rain events to minimize infiltration.
4. Compaction required for aggregate backfill materials shall conform to the Specified Density Method (nuclear) with the testing location and rates being determined by the Engineer.

3.07 FINISH OPERATIONS

- A. Conform to MnDOT Spec. 2106.3.I, or as modified herein:
 1. Finish grading of granular material, select granular material, and aggregate backfill prior for placement of an aggregate base shall conform to MnDOT Spec. 2112.3.E.
 2. Grading of the soils beneath the proposed topsoil shall be reviewed and approved by the Engineer prior to the start of the topsoil placement.

3.08 POND LINER

- A. Grading of soils beneath pond liner shall be reviewed and approved by the Engineer prior to the start of liner placement.
- B. Place liner along pond bottom a minimum thickness of 1 foot or as indicated on the Drawings.
 1. Where riprap is present place liner a minimum of 1 foot thickness below riprap.
- C. Pond liner shall extend from pond bottom up pond slopes to an elevation 1 foot above the normal water level.

3.09 BOULEVARD GRADING

- A. Backfill Curb After It Has Hardened:
 1. Leave the boulevards within a tolerance of 0.3 feet plus or minus of finish grade prior to installation of private underground utilities.
 2. Compact the backfill material directly behind the concrete curb to meet the requirements of "Quality Control Compaction."
- B. Following installation of private underground utilities by others, re-grade entire boulevard area to the right-of-way, including the re-spreading of topsoil stockpiles located adjacent to the boulevard areas:
 1. It is intended that this work be done with 1 small dozer.
 2. The extent of the final work and the hours of work shall be reviewed with the Engineer prior to any grading being done.
 3. Compaction is required as part of the backfill procedure.
- C. Reconstruction and Final Street Improvement Projects:

1. Grade, shape, and prepare boulevards disturbed by construction for topsoil and sod placement.
2. Place, grade, and compact topsoil, minimum 6 inches thick.

3.10 BOULEVARD STRIPPING

- A. Final Street Improvement Projects:
 1. Strip sod adjacent to bituminous curb prior to reclamation process.
 2. Haul and dispose of stripped material off of the Site.

3.11 FIELD QUALITY CONTROL

- A. The Owner shall have an independent testing laboratory perform the following tests. The location of the tests shall be determined by the Engineer:
 1. Aggregate Backfill – Modified:
 - a. 1 gradation test per 1,000 tons of material placed.
 - b. 1 density test, monitored by Specified Density Method (nuclear), per 2,000 square yards of street constructed.
 2. Pond Liner Material:
 - a. 1 permeability test per pond of in place pond liner material.

END OF SECTION

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SECTION 31 23 13

SUBGRADE PREPARATION

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Grading, shaping, and compacting subgrade prior to placing an aggregate base or aggregate backfill materials.

1.02 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. Subgrade Preparation: Measurement by the square yards and shall be based on a width of 1 foot behind the back of curb, except as modified below. Payment at the Unit Price shall include all costs related to performing the Work in accordance with these Specifications, including shaping, grading, compacting, and tolerancing.
2. Subgrade Preparation - Trail or Sidewalk: Measurement by the square yards and shall be based on a width of 1 foot behind the edge of trail or sidewalk, except as modified below. Payment at the Unit Price shall include all costs related to performing the Work in accordance with these Specifications, including shaping, grading, compacting, and tolerancing.
3. Geotextile Fabric: Measurement by the square yard of area covered with no allowance for overlaps, according to type installed. Payment will include all costs related to furnishing and placing fabric.
4. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

A. Minnesota Department of Transportation "Standard Specifications for Construction", 2020 Edition (MnDOT Spec.):

1. 1103 – Definitions.
2. 2106 – Excavation and Embankment – Compacted Volume Method.
3. 2108 – Geosynthetic Construction Materials.
4. 2111 – Test Rolling.
5. 2112 – Subgrade Preparation.
6. 3733 – Geosynthetic Materials.

1.04 SEQUENCING AND SCHEDULING

- A. Perform subgrade preparation prior to placement of the aggregate base or aggregate backfill material.
- B. Complete subgrade preparation for streets, driveways, walks, and parking lots immediately after installation of pipe as part of trench backfill and compaction when project includes pipe installation.

1.05 DEFINITIONS

- A. Subgrade Preparation – grading, shaping, and compacting existing soil below the top of subgrade as defined in MnDOT Spec. 1103.

1.06 SUBMITTALS

- A. Submit Manufacturer's Certificate of Compliance for the following items:
 - 1. Geotextile Fabric.

PART 2 PRODUCTS

2.01 GEOTEXTILE FABRIC

- A. Provide geotextile meeting the requirements of MnDOT 3733.2.
- B. MnDOT Type 7 – Needle-punched nonwoven meeting the requirements of Table 3733.2-1.

PART 3 EXECUTION

3.01 GENERAL

- A. Subgrade preparations shall be performed to produce the required density, grade, and cross-section.
- B. At the end of each day and prior to placement of aggregate base, the contractor shall eliminate surface indentations, including those caused by sheeps foot rollers and tractor cleats, and roll the surface with a steel wheel or rubber tire roller.

3.02 PREPARATION

- A. If the subgrade is unstable and the instability is due to excessive moisture, the subgrade shall be scarified and dried over a reasonable time period. When the material has reached acceptable moisture limits, the material shall be returned to the roadbed and compacted into place to the proper elevation. If the material continues to be unstable, the Engineer may authorize the removal of the undesirable material as subgrade excavation.
- B. Test roll subgrade conforming to MnDOT Spec. 2111, or as modified herein:
 - 1. The equipment used for test rolling shall be a Tandem Truck with a gross weight of 45,000 pounds.
 - 2. If rutting is greater than 1/2 inch, subgrade excavation and aggregate backfill will be required.
- C. Once the subgrade has been test rolled and accepted by Engineer, no traffic or construction equipment shall be permitted to operate directly on the subgrade without the prior approval of Engineer.
- D. In the event that inclement weather occurs after a test roll, and prior to placement of the aggregate base or backfill material, the test roll shall be voided and a new test roll shall be performed.

3.03 COMPACTION

- A. Conform to MnDOT Spec. 2106.3.G.1, or as modified herein:
 - 1. For the Specified Density Method, the Engineer will sample and test the soils to determine the Maximum Density and Optimum Moisture.
 - 2. The Owner will have an independent testing laboratory perform the following test, as minimum. The tests will be taken on the compacted subgrade at the location and testing rates designated by the Engineer. Nuclear density testing shall be considered an approved method:
 - a) 1 density test for every 2000 square yards of street in the upper 3 feet of subgrade (100 percent density zone) at varying distances either side of centerline. Note: This is done if subgrade excavation is not required.
 - b) 1 density test for every 500 lineal feet of trail or sidewalk in the upper 3 feet of subgrade (100 percent density zone) at varying distances either side of centerline. Note: this is done if subgrade excavation is not required.

3.04 FINISH OPERATIONS

- A. Subgrade tolerance shall conform to MnDOT Spec. 2112.3.E.

3.05 GEOTEXTILE FABRIC

- A. Install in accordance with MnDOT 2108.3A and as described herein:
 - 1. If multiple pieces of geotextile are required, overlap joints between separate pieces of fabric a minimum of 2'.

END OF SECTION

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SECTION 32 11 23

AGGREGATE BASE COURSES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Requirements for aggregate base course on a prepared subgrade and gravel driveway patching.
- B. Related Sections:
 - 1. Section 31 23 00 - Excavation and Fill.
 - 2. Section 32 23 13 - Subgrade Preparation.

1.02 PRICE AND PAYMENT PROCEDURES

- A. Conform to MnDOT Spec. 2211.4 and 2211.5 For Measurement and Payment except as modified herein:
 - 1. Aggregate Base, Virgin Class 5: This Bid Item is for aggregate base placed in the streets and aggregate base placed below new concrete driveways, concrete medians, concrete approach noses, and valley gutters as described in section 32 13 14. Measurement will be by the ton of material compacted in place as determined from weight tickets delivered to the Engineer.
 - 2. Aggregate Base, Virgin Class 5 - Trail or Sidewalk: Measurement will be by the ton of material compacted in place as determined from weight tickets delivered to the Engineer.
 - 3. Finish Grading – Street: Measurement will be by the square yard of surface area to be paved.
 - 4. Finish Grading – Trail or Sidewalk: Measurement will be by the square yard of surface area to be paved or covered with concrete sidewalk.
 - 5. Shoulder Base Aggregate, Virgin Class 2: Measurement will be by the ton of material compacted in place as determined from weight tickets delivered to the Engineer.
 - 6. Patch Gravel Driveway: Measurement will be by the ton of material compacted in place as determined from weight tickets delivered to the Engineer. Payment will include all costs related to patching the driveway, including excavation and aggregate base.
 - 7. If the aggregate base course material is being wasted or placed excessively thick, the Owner reserves the right to deduct quantities that are in excess of Drawing thickness. Said quantities shall be based on material weighing 110 pounds per square yard of area per inch of thickness.
 - 8. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. Minnesota Department of Transportation “Standard Specifications for Construction”, 2020 Edition (MnDOT Spec.):
 - 1. 2211 - Aggregate Base.
 - 2. 2221 - Shoulder Base Aggregate.
 - 3. 3138 - Aggregate for Surface and Base Courses.

1.04 SUBMITTAL

- A. Submit gradation report on sample of aggregate base to be used.
- B. Submit aggregate quality testing per MnDOT 3138.3.B virgin aggregates.

1.05 DEFINITIONS

- A. Finish Grading: Grading, shaping, compacting, and tolerancing of new gravel base, existing gravel base, reclaimed material, existing gravel base that has been supplemented with Aggregate Base, or reclaimed material that has been supplemented with Aggregate Base.

1.06 SEQUENCING AND SCHEDULING

- A. Construct aggregate base only after all of the following have been completed:
 - 1. Top of subgrade or surface of aggregate backfill has been approved by Engineer.
 - 2. If aggregate backfill is required, a minimum 400 lineal feet of roadway has been placed, compacted, shaped, graded, and checked for conformance to line and grade tolerances.
 - 3. The Boulevard has been graded to within 6 inches of finished grade per typical section.
- B. Provide notice by 3:00 P.M. of any aggregate base placement for the following day, to allow time for scheduling aggregate backfill compaction testing prior to any aggregate base being placed.
- C. Finish grading of gravel base prior to placing bituminous surface shall not be performed until initial curb backfilling is complete.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Aggregate Base within Street:
 - 1. Conform to MnDOT Spec. 3138.2.B Virgin class 5 aggregate, except as modified herein:
 - a. The City reserves the right to reject the material in lieu of a deduct.
 - 2. Conform to MnDOT Spec. 3138.2.E, Table 3138.2-3 for gradation requirements.
- B. Aggregate Base within Trail, Sidewalk, or paved driveway:
 - 1. Conform to MnDOT Spec. 3138.2.B Virgin class 5 aggregate, except as modified herein:
 - a. The City reserves the right to reject the material in lieu of a deduct.
 - 2. Conform to MnDOT Spec. 3138.2.E, Table 3138.2-3 for gradation requirements.
- C. Aggregate surface driveway and shoulder base aggregate:
 - 1. Conform to MnDOT Spec. 3138.2.B Virgin class 2 aggregate.
 - 2. Conform to MnDOT Spec. 3138.2.E, Table 3138.2-3 for gradation requirements.

PART 3 EXECUTION

3.01 GENERAL

- A. Finish Grading:

1. Supplement existing gravel base with Aggregate Base, Class 5, as required to meet specified tolerances.
2. Grading and Shaping Aggregate Base shall be considered grading, shaping, compacting, and tolerancing material from 0 to 2 inch depth.

3.02 PREPARATION

A. Street:

1. Prepare the subgrade in accordance with Section 31 23 13.
2. Prepare the surface of the aggregate backfill in accordance with Section 31 23 00.

3.03 CONSTRUCTION REQUIREMENTS

A. Conform to MnDOT Spec. 2211.3, except as modified herein:

1. Compaction shall conform to 2211.3.D.2.c, Table 2211.3-3 Penetration Index Method or Specified Density (100% Standard Proctor Density) as directed by the Engineer.
2. Pneumatic Roller is required for compaction on all aggregate base courses with recycled bituminous (e.g. reclamation projects, etc.).
3. Install aggregate base in accordance with details on Drawings.
4. Deliver weight tickets to Engineer daily.
5. Patch gravel driveways to the thickness shown on the Drawings.

3.04 FIELD QUALITY CONTROL

A. The Owner shall perform Agency Verification Testing (VT) by use of an independent testing laboratory to sample the aggregate base materials, determine the moisture/density relationships, gradations, and perform field moisture tests and field density (DCP) tests at locations determined by Engineer. The following are minimum testing rates:

1. 1 gradation test per 500 ton of material placed.
 - a. Contractor shall provide split sample of aggregate base material for gradation test.
2. 1 density test per 2,000 square yards of street gravel surface, minimum 3 DCP tests per Project.
3. 1 density test per every 500 feet of trail or sidewalk, minimum 3 DCP tests per Project.
4. 1 moisture test per Project during compaction.
5. Density testing (DCP) at the curb lines prior to concrete curb and gutter placement is at the discretion of the Engineer.

B. The Owner shall perform Agency Verification Testing (VT) by use of an independent testing laboratory to sample reclaimed gravel base materials, determine the moisture/density relationships, gradations, and perform field moisture tests and field density tests (DCP) at locations determined by Engineer. The following are minimum testing rates:

1. 1 gradation test per 500 ton of material placed.
 - a. Contractor shall provide split sample of reclaimed gravel base material for gradation test.
2. 1 density test per 2,000 square yards of gravel surface, minimum 3 DCP tests per Project. Full depth reclamation (Shear Strength Method) DCP testing if depth of reclaimed gravel is greater than 8 inches.

C. The Owner will not allow a "Roll Test" as a method of measuring acceptance of the final aggregate base surface.

- D. Line and Grade Tolerance for Aggregate Base or Reclaimed Aggregate Base: The final aggregate base or reclaimed aggregate base surface will be checked for conformance to specified tolerances by the “stringline” method. Grade shall be ± 0.03 feet of grade. Notify Engineer a minimum of 4 hours (one half day) prior to paving to allow for the “Field Quality Control” tolerance check.
- E. Line and Grade Tolerance for Trail and Sidewalk: The final aggregate base surface needs to be graded and toleranced. Grade tolerance shall be $\pm 3/8$ inch as measured with a 10 foot straight edge. Notify Engineer a minimum of 4 hours (one half day) prior to paving to allow for the “Field Quality Control” tolerance check.

3.05 PROTECTION

- A. Protect aggregate base until it is covered by surface pavement.
- B. Keep aggregate base free of ruts and irregularities until covered by surface paving.
- C. Place water on aggregate base for dust control as required, to eliminate nuisance conditions for adjacent properties.

END OF SECTION

SECTION 32 11 25

FULL DEPTH RECLAMATION

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Reclamation of the existing bituminous surfacing and a portion of the underlying existing base material.
- B. Related Sections:
 - 1. Section 31 23 00 - Excavation and Fill.
 - 2. Section 31 23 13 - Subgrade Preparation.

1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment
 - 1. Full Depth Reclamation: Measurement will be by the square yard, based on the width of the existing pavement, regardless of depth of reclamation required:
 - a. Payment for leveling and compaction of the material immediately after it is reclaimed is to be included in the Bid Unit Price per square yard.
 - b. The Bid Unit Price is to include the motor grader and any water necessary to maintain the reclaimed material until paved.
 - 2. Finish grading and tolerancing of reclaimed material prior to paving shall be per Section 32 11 23.
 - 3. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. Minnesota Department of Transportation "Standard Specifications for Construction", 2020 Edition (MnDOT Spec.):
 - 1. 2215 - Reclamation.

1.04 SEQUENCING AND SCHEDULING

- A. Reclamation will be performed at locations shown on the drawings.
- B. Provide a 48 hours' notice prior to beginning the reclamation process.
- C. Initial grading/leveling and interim compaction of the reclaimed material by a motor grader and rubber-tired roller is required immediately following the reclamation process.
- D. Reclamation and base stabilization process can not be performed while rain is occurring.
- E. Maintain access to all residents during the reclamation and tolerancing process.

PART 2 PRODUCTS

2.01 MATERIALS

A. Reclaimed material – Pulverized Aggregate:

1. Pulverize the full depth of the existing bituminous material and underlying base materials until 100-percent passes the 3 inch sieve size and 97-percent or more pass the 1.5 inch sieve size.

B. Contractor's Gradation Quality Control (QC):

1. The Contractor shall be responsible for gradation control by testing the reclaimed material at a rate of 1 test per 5,000 square yards, with a minimum 1 test per day.
2. Provide the Engineer a verification sample for Quality Assurance testing at the discretion of the Engineer. This shall be a split sample taken by the Contractor.

PART 3 EXECUTION

3.01 GENERAL

- A. Create an aggregate base course composed of the existing bituminous pavement and a portion of the existing underlying base material.
- B. The reclamation process cannot be performed during rain events. Compact reclaimed material prior to rain events.
- C. Disposal of the oversize bituminous pieces, within the Right-of-Way, will not be permitted. Any oversize bituminous pieces found in the Right-of-Way shall be removed by the Contractor and at the Contractor's expense.
- D. Access to all residents shall be maintained during the reclamation and tolerancing process.
- E. The resulting reclaimed material could contain diesel range organics (DRO) which must be disposed of in accordance with MPCA requirements.

3.02 EQUIPMENT

A. Conform to MnDOT Spec. 2215.D.1 except as modified herein:

1. Reclaiming Machine:
 - a. Equipment to be hydrostatically driven.
 - b. Computerized operation controls.
 - c. Rotating cutter drum to operate parallel to the existing road surface, providing a uniform section across the entire roadway.
 - d. Capable of cutting up to a 12 inch depth in 1 pass.
 - e. Equipment exhaust must be on the top and not the side.

3.03 PREPARATION

- A. Remove grass and other vegetation from the edge of the existing pavement to prevent contamination of the pulverized material during the reclamation process. Remove this material per Section 31 23 00.

3.04 PLACING AND COMPACTING

- A. Finish grading, compaction, and tolerancing of the reclaimed material shall conform to Section 32 11 23.
- B. Control moisture content of reclaimed material 3 to 7-percent by dry weight during the initial leveling/compaction and final shaping and tolerancing process as incidental to reclamation.
- C. The maximum reclaimed layer thickness for compaction shall be 8 inches.
- D. Removal of excess reclaimed material shall be per Section 31 23 00.

3.05 THICKNESS REQUIREMENTS

- A. Typical reclaimed section varies. Refer to typical sections on Drawings.

END OF SECTION

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SECTION 32 12 01

FLEXIBLE PAVING

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Hot plant mixed asphalt-aggregate mixtures for wearing and non-wearing courses.
 - 2. Bituminous tack coat.
- B. Related Sections:
 - 1. Section 01 57 13 - Temporary Erosion and Sediment Control.
 - 2. Section 02 41 13 - Selective Site Demolition.
 - 3. Section 31 23 00 - Excavation and Fill.
 - 4. Section 32 11 23 - Aggregate Base Courses.
 - 5. Section 33 05 18 - Adjust Miscellaneous Structures.

1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Method of measurement and payment shall conform to MnDOT Spec. 2360.4 and 2360.5, except as modified herein.
 - 2. Bituminous Material for Tack Coat:
 - a. Measured by volume in gallons at 60 degrees F.
 - b. Payment for bituminous material used for Tack Coat includes compensation in full for all costs incidental to the furnishing and application at the Bid Unit Price per gallon.
 - c. Cleaning of all debris and dirt from the previous bituminous surfaces prior to placement of Tack Coat is included in the Bid Unit Price for Tack Coat.
 - d. Payment for the accepted quantity of asphalt emulsion shall be at the Contract price per unit of measure for undiluted asphalt emulsion.
 - e. Payment for tacking exposed edges of existing bituminous surfaces and concrete curb and gutter in conjunction with initial lift placement is considered incidental to the placement of the initial lift.
 - 3. Bituminous Mixtures:
 - a. Measured by the weight in tons of material placed and accepted for each specified Bid Item as stated in the Bid Form. Payment shall be made in accordance with the acceptance and payment schedules provided in MnDOT Spec. 2360.
 - b. The Bid Unit Price includes both the bituminous course mixture and asphalt binder material.
 - c. Partial payment will not exceed 70-percent of the total calculated payment until the required testing and product documentation is received and found to be acceptable to the Engineer.
 - d. Payment for the bituminous final lift will not be made until the corresponding signing and pavement markings have been installed.
 - 4. Preparation of Bituminous Initial Lift consists of final clean up of the bituminous initial lift prior to paving final lift:
 - a. Street Sweeper with power pickup broom, including operator: per hour

- b. Skidsteer (Bobcat), including operator: per hour
- 5. Patch Bituminous Driveway and Patch Bituminous Trail: Measurement will be by the square yard. Payment will include all costs related to patching the driveway or trail to the thicknesses shown on the Drawings, including excavation, subgrade preparation, aggregate base, and the bituminous wearing course:
 - a. Saw cutting just prior to paving will be paid separately, per Section 02 41 13.
 - b. Removing bituminous pavement will be paid separately, per Section 02 41 13.
 - c. The Bid Unit Price includes both the bituminous course mixture and asphalt binder material.
- 6. Remove and Replace Bituminous Driveway and Remove and Replace Bituminous Trail: Measurement will be by the square yard. Payment will include all costs related to patching the driveway or trail to the thicknesses shown on the Drawings, including sawcutting just prior to paving per Section 02 41 13, removing bituminous pavement per Section 02 41 13, excavation and subgrade preparation, aggregate base, and the bituminous wearing course.
- 7. Patch Bituminous Street: Measurement will be by the square yard. Payment will include all costs related to patching the street to the thicknesses shown on the Drawings, including excavation, aggregate backfill, Class 5 aggregate base, bituminous initial lift(s), tack coat(s), and bituminous final lift:
 - a. Saw cutting just prior to paving will be paid separately, per Section 02 41 13.
 - b. Removing bituminous pavement will be paid separately, per Section 02 41 13.
- 8. Remove and Replace Bituminous Street: Measurement will be by the square yard. Payment will include all costs related to patching the street to the thicknesses shown on the Drawings, including sawcutting just prior to paving per Section 02 41 13, removing bituminous pavement per Section 02 41 13, excavation and subgrade preparation, aggregate backfill, Class 5 aggregate base, bituminous initial lift(s), tack coat(s), and bituminous final lift.
- 9. Bituminous Wedge: Measurement will be by weight in tons of material placed and accepted. Payment will include all costs related to constructing the Bituminous Wedge per the Standard Detail and as specified:
 - a. Silt fence placed behind the curb and adjacent to the Bituminous Wedge will be paid per Section 01 57 13.
- 10. Bituminous sawcutting or milling that is required for joint construction will be paid per Section 02 41 13:
 - a. Removal of temporary bituminous ramps is considered incidental to the sawing bituminous pavement or milling Bid Item.
- 11. Bituminous Incentive and Disincentive Allowance: The allowance indicated in the Bid Form is maximum incentive based on the Engineer's estimated unit prices for the various bituminous bid items. The final incentive and disincentive will be based on the actual unit prices in the contract award. Payment will be based on the actual incentive or disincentive determined under MnDOT Spec. 2360.5.B.13, for bituminous placed per Paragraph 3.07. Example: if the allowance in the Bid Form is \$10,000 and the incentive is determined by the Engineer to be \$2,500, a quantity of 0.25 will be paid under the lump sum bid item, resulting in a total price of \$2,500 (i.e. $\$10,000 \times 0.25 = \$2,500$). Similarly, if a disincentive is determined to be \$1,525, a quantity of -0.1525 will be paid, resulting in an amount of -\$1,525 (i.e. $\$10,000 \times -0.1525 = -\$1,525$).
- 12. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. Minnesota Department of Transportation “Standard Specifications for Construction” 2020 Edition (MnDOT Spec.):
 - 1. 2360 – Plant Mixed Asphalt Pavement.
 - a. Within this document replace the words “Department Bituminous Engineer” or “District Materials Engineer” with the word “Engineer”.
 - 2. 2357 – Bituminous Tack Coat.
 - 3. 3139 – Graded Aggregate for Bituminous Mixtures.
 - 4. 3151 – Bituminous Material.
- B. American Society of Testing and Materials (ASTM):
 - 1. ASTM D2950 - Standard Test Method for Density of Bituminous Concrete in Place by Nuclear Methods.

1.04 SUBMITTALS

- A. Submit mixture design report to the Engineer. Conform to MnDOT Spec. 2360.2.E.5.b(2), 2360.2.E.9, 2360.2.F, and 2360.2.G.8.
- B. Submit mix design report for all projects, regardless of the size of the project.
- C. Submit Q/C results in accordance with MnDOT Spec. 2360.2.G.1, 2360.2.G.4 and MnDOT’s most recent Materials Control Schedule.
- D. Submit Q/C testing for Class B aggregates included in mix designs based on the following schedule:
 - 1. For every 5,000 tons of bituminous mixture placed on the project, or for mix placed 30 days after the previous submittal, perform and submit the following Q/C testing from Class B aggregate stockpile:
 - a. Soundness Testing (ASTM C 88)
 - b. Loss by Abrasion and Impact (ASTM C 131)
 - 2. Aggregate testing requirements shall be submitted on a per project basis. Individual tests and submittals are required for each project.
- E. Submit final lift paving schedule while providing a continuous operation to the extent feasible.

1.05 DEFINITIONS

- A. “Special” Mixture: A bituminous mixture that does not allow the use of Recycled Asphalt Pavement (RAP), MnDOT 3139.2.A.2.k; Recycled Asphalt Shingles (RAS), MnDOT 3139.2.A.2.h; Ash, MnDOT 3139.2.A.2.j; and Crushed Concrete and Salvaged Aggregate, MnDOT 3139.2.A.2.i.
- B. Irregular Paving:
 - 1. The entire circular portion “bubble” of a cul-de-sac.
 - 2. Portion of pavement that extends beyond the standard width of a street based on the width shown on the typical sections provided in the plan set.
- C. Street Paving: Paving of any portion of roadway except those defined as Irregular Paving.

1.06 SEQUENCING AND SCHEDULING

- A. Engineer will schedule Correlation Process for Nuclear Gauge Density Testing with the Prime Contractor's or Paving Subcontractor's (if appropriate) designated Quality Control Tester and Owners Verification Tester a minimum of 1 week prior to the first day of paving.
- B. Prime Contractor is responsible for scheduling an onsite pre-paving meeting with the Owner, Engineer, Paving Subcontractor (if appropriate), including the Paving Foreman a minimum 24 hours prior to the paving operations.
- C. Aggregate base and concrete curb and gutter to be completed and approved by the Engineer prior to placement of bituminous surfaces.
- D. Concrete pedestrian ramps to be completed and approved by the Engineer prior to placement of bituminous trail.
 - 1. Concrete pedestrian ramps must be protected during paving of bituminous trail. Method of protection must be approved by the Engineer.
- E. Concrete valley gutters to be completed and approved by the Engineer prior to placement of bituminous street.
 - 1. Concrete valley gutters must be protected during paving of bituminous street. Method of protection must be approved by the Engineer.
- F. Provide notice by 2:00 P.M. the day prior to any bituminous placement to allow for scheduling of the following activities. Notice must include mix designation, start time of placement, plant producing mix, and Foreman onsite during paving operations:
 - 1. Aggregate base DCP tests, per Section 32 11 23, prior to any bituminous being placed.
 - 2. Inspection of paving operations by a City representative, no paving will be allowed or accepted without inspection.
 - 3. Bituminous plant testing if required.
- G. Provide 48 hour notice for scheduling and noticing of the residents prior to paving operations.
- H. Sweeping of pavement must occur immediately prior to placement of the final lift. Swept surface must be approved by the Engineer prior to the placement of the final lift.
- I. Adjust structures prior to placement of bituminous wedge or bituminous final lift as specified in Section 33 05 18.
- J. Bituminous Wedge Placement:
 - 1. Minimum 6 days after placement of first lift of bituminous pavement.
 - 2. Completed prior to Private Utility Installation.
- K. Sidewalks, trails, and final restoration must be completed prior to final lift paving.
- L. Sequence Work to avoid construction traffic on the final lift.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Mixture Designation: Conform to MnDOT Spec. 2360.1.B, except as modified in the drawings and Bid Form:
 - 1. Residential Streets (Low Volume):
 - a. Wearing Course (Final Lift) = SPWEA330C, Special.
 - b. Wearing Course (Initial Lift) = SPWEA330C.
 - 2. Trails: Wearing Course = SPWEA230C.
 - 3. Driveways and Patching: Wearing Course = SPWEA230B.
 - 4. Bituminous Wedge: Non Wear Course = SPNWA230B.
- B. Conform to MnDOT Spec. 2360.2 and 3139 except as modified herein:
 - 1. Recycled Asphalt Shingles (RAS), MnDOT Spec. 3139.2.A.2.h, are not allowed in the wearing course mixtures.
 - 2. Ash, MnDOT Spec. 3139.2.A.2.j will not be allowed in the wearing course mixtures.
 - 3. Warm Mix Asphalt (WMA) will not be accepted as an approved alternative to HMA.
 - 4. See paragraph 1.05A for "Special" Mixture definition.
- C. Bituminous Tack Coat:
 - 1. Bituminous Material: Conform to MnDOT Spec. 2357:
 - a. Emulsified Asphalt, Cationic, CSS-1 or CSS-1h.
- D. Asphalt Binder Material: Conform to MnDOT Spec. 2360.1.B, Table 2360.1-2; MnDOT Spec. 3151 and as identified in the Mix Designation.
- E. Mixture Design: Conform to MnDOT Spec. 2360.2.E.

PART 3 EXECUTION

3.01 GENERAL

- A. Conform to the requirements of MnDOT Spec. 2360.3, except as modified herein.
- B. Review the proposed paving sequence with the Engineer prior to placement of each bituminous course (lift).
- C. The proposed sequence shall address the: longitudinal seams, compaction, traffic control, hauling routes, and placement of pavement markings.
- D. Preparation of Bituminous Lower Lift:
 - 1. Final clean up of the bituminous surface with the use of a power pickup broom and front end loader/skidsteer.
 - 2. Street sweeping operations must include the application of water to effectively make the pavement free and clear of material and debris to allow for successful application and adhesion of bituminous tack coat to the pavement. The appropriate amount of water shall be applied, eliminating dust as part of the sweeping operations.

- E. Bituminous Driveway Patching:
 - 1. Paving requires two lifts.
 - 2. Tack coat prior to final lift.
 - 3. Protection of concrete curb, incidental to placing both lifts of bituminous.
- F. Adjust structures conforming to the requirements of Section 33 05 18:
 - 1. Have a valve wrench on site during the paving operations for the purpose of final adjustments to the valve boxes to meet the specified tolerances. This work shall be considered incidental to the valve box adjustment bid item.
- G. Joints: Where new construction meets existing bituminous surfacing, the existing surface shall be uniformly milled or saw-cut straight, and bituminous tack coat applied prior to placement of each bituminous course (lift):
 - 1. For joint construction, an existing bituminous surface shall be considered to include any bituminous surface not paved on the same day as the new construction. The Owner may require milling or sawcutting on surfaces paved the same day, if, in the opinion of the Owner, the mix has cooled to a point where a new milled or sawed edge is necessary
 - 2. Construct 2 foot wide (min.) ramp where new construction does not match existing construction (i.e. initial lift to final lift).
 - 3. Longitudinal Joints: Utilize Maryland Joint construction method.
- H. Finish bituminous surface shall be flush with concrete surface at curb depression for pedestrian curb ramps.

3.02 RESTRICTIONS

- A. Conform to MnDOT Spec. 2360.3.A, except as modified herein.
- B. Following the street sweeping operations, the condition of the pavement surface must be approved by the Engineer prior to paving.
- C. Existing bituminous surfaces must be dry prior and during placement of any bituminous pavements.
- D. Bituminous surfaces shall not be constructed on frozen gravel base.
- E. Final Lift shall not be placed when the air temperature in the shade and away from artificial heat is 50 degrees or less.

3.03 EQUIPMENT

- A. Conform to MnDOT Spec. 2360.3.B.
- B. Nuclear Gauge:
 - 1. Troxler or Seaman Gauge capable of completing required tests.
 - 2. Contractor must provide a minimum of two gauges designated for the project.
 - 3. Nuclear gauges must be calibrated by the manufacturer or an approved calibration service within 12 months of its use on the project. Retain a copy of the manufacturer's calibration certificate with the gauge.

4. Contractor must conform to all Minnesota Department of Health requirements.

3.04 REQUIRED PERSONNEL

- A. Contractor must designate a Quality Control Tester to perform Nuclear Gauge Density Testing. Quality Control Tester must be able to provide proof of a minimum of 25 hours field experience performing Nuclear Gauge Testing.

3.05 TREATMENT OF SURFACE

- A. Bituminous Tack coat shall conform to MnDOT Spec. 2357, except as modified herein.
- B. Restrictions:
 1. The tack coat shall not be applied when the road surface is wet or when the weather conditions are unsuitable.
 2. The area for tack coat application shall be limited as directed by the Engineer.
 3. The Contractor shall have sole responsibility of claims of tack coat on personal property due to lack of notification or signage of the area being tack coated.
 4. No tack coat prior to placement of bituminous wedge.
 5. Cleanup of tack coat material tracked and build up onto adjacent roadway surfaces by truck hauling shall be performed on a daily basis, or as directed by the Engineer.
- C. Distributor Equipment: Conform to MnDOT Spec. 2360.3.B.2.d, except as modified herein:
 1. The Engineer at anytime can direct the Contractor to perform test strip to determine if the equipment is applying the specified application rate for the emulsion. All cost associated with this test strip is considered incidental to the tack application.
- D. Road Surface Preparation: Conform to MnDOT Spec. 2357.3.C.
- E. Application:
 1. At a uniform rate conforming to MnDOT Spec. 2357.3.D, but not greater than 0.07 gallon per square yard, new asphalt.
 2. Along the front edge of the concrete curb and gutter, prior to placement of bituminous initial lift.

3.06 MIXTURE QUALITY CONTROL

- A. Mixture Quality Management (Quality Control/Quality Assurance): Conform to MnDOT Spec. 2360.2.G., except as modified herein:
 1. Quality Assurance testing will be completed at the discretion of the Engineer, testing rates will not exceed Table 2360.2-7 and 2360.2-8.
- B. Bituminous plant inspections are required on all publicly bid projects and will be scheduled by Engineer.

3.07 PAVEMENT DENSITY

A. General:

1. This contract will utilize Nuclear Density Gauge testing for density determination for all pavement except as noted. Density testing shall be completed as described in this section and in accordance with MnDOT 2360.3.D.1 except as modified herein:
 - a. Delete the first paragraph of MnDOT 2360.3.D.1 and replaced with the following:
 - 1) Compact the pavement to at least the minimum required maximum density values in accordance with Table 2360.3-1.
 - b. Delete the first sentence of MnDOT 2360.3.D.1.e and replace with the following:
 - 1) Complete compaction within 8 hours of mixture placement and before completing density testing. All density testing must be done as soon as practical after the compaction process and before opening to traffic.
 - c. Modify Table 2360.3-3 as indicated below:

Daily Production (Tons)	Lots
0 to 1,000	1
1,001 to 2,000	2
2,001 to 3,600	3
3,601 to 5,000	4
5,001 +	6
 - d. Delete the following sections:
 - 1) 2360.3.D.1.h.
 - 2) 2360.3.D.1.i.
 - 3) 2360.3.D.1.j.
 - 4) 2360.3.D.1.k.
 - 5) 2360.3.D.1.l.
 - e. Delete the third sentence in the 1st paragraph of MnDOT Section 2360.3.D.1.m and replace with the following:
 - 1) The Contractor must notify the Engineer, in writing, by the third day of Paving or 1 day prior to the last day of paving of the first lift (whichever is sooner) of their intent to wave Maximum Density.
 - f. Pathways, Driveways, Patching shall conform to MnDOT Spec. 2360.D.2.

B. Longitudinal Joint Density, delete the following:

1. 2360.3.D.1.n.
2. 2360.3.D.1.o.
3. 2360.3.D.1.p.

C. Nuclear Gauge Correlation:

1. The QC (Contractor), Verification (Owner), and back-up gauges used on the project must complete the correlation process a minimum of one week prior to paving operations.
2. Engineer shall select a section of existing pavement to be used as the test site for the correlation process. The section does not have to be the same mix design.
3. Correlate all gauges to be used for density measurement on the project (minimum of two QC & two Verification).

- a. QC and Verification gauges will be correlated with Correlation Core results to determine a correction factor for each gauge. Correlation Cores will be obtained and tested by the Owner.
 4. All results for the Correlation Process must be recorded on the **Nuclear Gauge Correlation** form. The Owner will complete the form once core testing is complete, then will send it to the Contractor. The form should be completed and submitted to the Engineer prior to the first day of paving.
 5. Nuclear Gauge Correlation process may be waved at the Owners discretion on projects that do not include state of federal funding.
- D. Reference Site Monitoring:
1. After performing the gauge correlation process, the Engineer shall establish a project reference site. Reference site shall consist of a flat surface of concrete, asphalt or other material that will not be disturbed during the duration of the project and must be clearly marked. Perform reference site monitoring of all QC and QV gauges used on the project at the reference site.
 2. See Reference Site Summary – Instructions for the process.
 - a. Complete **Reference Site Summary** form and **Reference Site Daily Record** form as required.
- E. Target Maximum Density:
1. The target value is established using the mixture maximum specific gravity (Gmm). For the first day of paving with a mix design the target maximum density will be the Gmm value indicated on the mix design times 62.24 to get lb/ft³. The target maximum density for all other days will be the running average of four Gmm tests at the end of the previous day times 62.24 for your new lb/ft³. If four tests have not been completed the first day, the average of the first day's Gmm tests must be used for the second day target lb/ft³. This process will continue until a running average of four is established.
- F. Use of Nuclear Gauges on Bituminous Pavement:
1. During testing, the gauge must be placed on a flat level surface on the material being tested. The longest dimension of the gauge must be parallel and perpendicular to the longitudinal edge of the pavement.
 2. Conform to ASTM D2950 Standard Test Method for Density of Bituminous Concrete in Place by Nuclear Methods. Provide Engineer a copy of documented results from daily check at the end of each day. Perform nuclear gauge measurements using gamma radiation in the backscatter position. Each test shall be for a duration of 4 minutes of nuclear gauge count time.
- G. Contractor Quality Control Testing:
1. General:
 - a. Paving lots will be established, tested, and evaluated separately for each paving layer and mix type.
 - b. All test locations will be determined by the Engineer at random locations. The Engineer will provide test locations following compaction of the pavement. Two individual tests will be required at each test location. The second test shall be taken with the gauge rotated 90 degrees from the first test. The average of the two tests will be recorded and submitted to the Engineer at the end of each paving day.

- c. If the Engineer requests, additional testing may be required at no additional cost to the owner. Additional test results may be incorporated into the calculations for average lot density.
 - d. Density testing will be required at the discretion of the Engineer when the production of a specific mix type is between 0 to 300 tons.
 - 2. Street Paving Density:
 - a. Density tests will be performed on equal size lots based on the design street section. Each lot will consist of 5 test locations.
 - 3. Irregular Paving Density:
 - a. Density tests will be performed on lots of bituminous mixture placed consisting of a minimum of one density test performed per each occurrence of irregular pavement. Each lot will contain a maximum of 5 tests.
- H. Owner Verification:
 - 1. General:
 - a. One Verification test will be performed on each lot of bituminous mixture placed.
 - b. The Verification test must be located at the same location as a QC test.
- I. Tolerance Comparison and Dispute Resolution:
 - 1. Tolerance Comparison
 - a. Compare Verification test with corresponding companion test taken at the same location. If the QC and Verification tests differ by more than 1.5lb/ft³ Owner will check two additional locations within the same lot and compare the average of three Verification tests with the average of three corresponding QC tests.
 - If the difference in average is greater than 1lb/ft³, the average of the Verification tests will be used for that lot, and the Contractor will pay the Owner \$100 for each additional test completed.
 - If the difference in average is less than 1lb/ft³, the Contractors QC results will be used and no further action will be required.
 - 2. The testers may check gauges with the reference site monitoring (Reference Site Summary form) to determine if one of the gauges is out of tolerance.
- J. Contractor required documentation shall include completing the documents listed below and provided at the end of this technical specification section:
 - 1. **Nuclear Gauge Correlation**
 - 2. **Reference Site Summary**
 - 3. **Reference Site Daily Record**

Providing the completed documents above is considered incidental to the placement of the specified bituminous mix.

3.08 THICKNESS AND SURFACE SMOOTHNESS REQUIREMENTS

- A. Conform to MnDOT Section 2360.3.E.
- B. Structure Adjustment – Conform to Section 33 05 18 for tolerances.

3.09 TEMPORARY BITUMINOUS WEDGE

- A. Where concrete curb and gutter is installed, construct a temporary bituminous wedge meeting the following requirements:
 - 1. 8 or 10 feet wide from front edge of concrete curb and gutter.
 - 2. Thickness to be 1/4 inch over curb and taper to meet the non wear course base course mat elevation.

3.10 PATCH BITUMINOUS STREET, DRIVEWAY, OR TRAIL

- A. Perform patching at locations shown on the Drawings or as directed by Engineer.
- B. Remove existing bituminous per Section 02 41 13.
- C. Saw cut existing bituminous per Section 02 41 13.
- D. Excavate to the bottom of the aggregate base or aggregate backfill layer as shown on the Drawings and dispose of material per Section 31 23 00.
- E. Place aggregate backfill, as required, per Section 31 23 00.
- F. Place aggregate base per Section 32 11 23.
- G. Place bituminous pavement.
- H. Driveway patching requires bituminous placement in two separate equal lifts.

END OF SECTION

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Nuclear Gauge Correlation

(Instructions on back)

Project		Contractor		Date	
Project No.		Plant		Verification Company	
Owner		QC Tester		Verification Tester	

Core Density Results

Correlation Test #	1	2	3		
A. Weight in Air					
B. S.S.D Weight					
C. Weight in Water					
D. Volume (B-C)					
E. Core Density ((B/D)x62.24)					

Nuclear Density Readings	Gauge Serial No.		Standard Count	
F. Density 1				
G. Density 2				
H. Ave. Nuclear Density				
I. Individual Correction Factor (E-H), Show +/-				
Correction Factor to be applied to Nuclear Density Readings				

Nuclear Density Readings	Gauge Serial No.		Standard Count	
F. Density1				
G. Density2				
H. Ave. Nuclear Density				
I. Individual Correction Factor (E-H), Show +/-				
Correction Factor to be applied to Nuclear Density Readings				

Nuclear Density Readings	Gauge Serial No.		Standard Count	
F. Density1				
G. Density2				
H. Ave. Nuclear Density				
I. Individual Correction Factor (E-H), Show +/-				
Correction Factor to be applied to Nuclear Density Readings				

Nuclear Density Readings	Gauge Serial No.		Standard Count	
F. Density1				
G. Density2				
H. Ave. Nuclear Density				
I. Individual Correction Factor (E-H), Show +/-				
Correction Factor to be applied to Nuclear Density Readings				

OWNER

CONTRACTOR

Nuclear Gauge Correlation

Instructions:

1. Engineer to locate and identify a minimum of three correlation test locations. (*Engineer*)
2. Complete daily standard count prior to starting test. (*Contractor, Owner*)
3. For each gauge to be used on project (minimum of two QC and two Verification) perform two density tests at each correlation test location. Each test shall be for a duration of 4 minutes. The second test shall be taken with the gauge rotated 90 degrees from the first test. Record results in chart (F & G). (*Contractor, Owner*)
4. Calculate the Average Nuclear Density (H) for each test location. (Contractor, Owner)
5. Obtain a Correlation Core at each correlation test location. (*Owner*)
6. Determine the core bulk specific gravity for each Correlation Core per MnDOT Laboratory Test Method 1810 (A-E). (*Owner*)
7. Calculate the Individual Correction Factor (I) for each correlation test location. (*Engineer*)
8. Calculate the Correction Factor (Average of I for all locations) to be applied to each nuclear gauge. (Engineer)

Sketch location of tests below

Reference Site Summary

(Instructions on back)

Project		Contractor		Date	
Project No.		Plant		Verification Company	
Owner		QC Tester		Verification Tester	

Bulk Density Readings

Gauge Serial No.		
QC/Verification		
Density 1A		
Density 1B		
Density 2A		
Density 2B		
Density 3A		
Density 3B		
Density 4A		
Density 4B		
Density 5A		
Density 5B		
Gauge Reference Value (Average)		

Daily Check

[illegible]

Reference Site Summary Instructions

Instructions:

1. Engineer to locate and identify a Reference Site. (*Engineer*)
2. Complete daily standard count prior to starting test. (*Contractor, Owner*)
3. For each gauge to be used on project (minimum of two QC and two Verification) perform five density tests at Reference Site. Each test shall be for a duration of 4 minutes and consist of two gauge readings.
The second test shall be taken with the gauge rotated 90 degrees from the first test. (*Contractor, Owner*)
4. Calculate the average for each gauge to establish a reference value. Use the established reference value as a control to monitor the calibration of the gauge during the duration of the project. (*Contractor, Owner*)
5. A minimum of once per day, on every day of paving operations, perform one test at the Reference Site.
Record test result on **Reference Site Daily Record**. (*Contractor, Owner*)
6. Compare daily test results for each gauge to the gauges Reference Value. If the daily result is within 1lb/cf of the Reference Value for that gauge proceed with project testing. If the daily result is not within 1lb/cf, investigate the cause of the difference. Conduct 5 additional tests at the reference site once the cause of deviation is corrected. Calculate and record the average of the 5 additional tests on the **Reference Site Daily Record**. If the average of five tests is within 1 lb/cf proceed with project testing. If the average of five tests is not within 1lb/cf remove the gauge from the project and use different gauge. (*Contractor, Owner*)

Sketch location of tests below

Reference Site Daily Record

Project		QC/V Company	
Project No.		QC/ V Tester	
Owner		Gauge Serial #	

Reference Site Value for Gauge No.

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SECTION 32 13 14

CONCRETE WALKS, MEDIANS, AND DRIVEWAYS

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Cast-in-place concrete walkways, medians, driveways, and valley gutters.

B. Related Sections:

1. Section 02 41 13 - Selective Site Demolition.
2. Section 31 23 00 - Excavation and Fill.
3. Section 31 23 13 - Subgrade Preparation.
4. Section 32 11 23 - Aggregate Base Courses.
5. Section 32 16 13 - Concrete Curbs and Gutters.

1.02 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. 6 Inch Concrete Sidewalk: Measurement shall be on the basis of in-place square yard:
 - a. Payment of the Bid Item shall include the following:
 - 1) Concrete materials.
 - 2) Subgrade and base preparation.
 - 3) Placement and finishing of materials.
 - 4) Labor and equipment.
 - 5) Curing and protection.
 - 6) Backfilling.
 - b. Excavation for concrete sidewalk shall be measured and compensated per Section 31 23 00.
 - c. Aggregate base beneath concrete sidewalk shall be measured and compensated per Section 32 11 23.
2. Remove and Replace 6 Inch Concrete Sidewalk: This Bid Item shall be used for all concrete sidewalk removed and replaced on this Project without regard to thickness and is assumed to be all hand placed. Measurement shall be on the basis of in-place square yard of sidewalk removed and replaced:
 - a. Payment of the Bid Item shall include the following:
 - 1) Sawcutting at the removal limits.
 - 2) Removal and disposal of existing concrete and excess aggregate materials.
 - 3) Excavation and subgrade preparation.
 - 4) Aggregate base and concrete materials.
 - 5) Placement and finishing of materials.
 - 6) Labor and equipment.
 - 7) Curing and protection.
 - 8) Backfilling.
3. 6 Inch Concrete Pedestrian Curb Ramp: Measurement shall be on the basis of square feet of ramp actually constructed:

- a. Measurement of ramp shall not include adjacent concrete curb and gutter, which shall be measured and compensated separately.
 - b. Payment shall include the following:
 - 1) Concrete materials, including material under truncated dome.
 - 2) Subgrade and aggregate base preparation.
 - 3) Placement and finishing of materials.
 - 4) Labor and equipment.
 - 5) Curing and protection.
 - 6) Backfilling.
 - c. Excavation for concrete pedestrian ramp shall be measured and compensated per Section 31 23 00.
 - d. Aggregate base beneath concrete pedestrian ramp shall be measured and compensated per Section 32 11 23.
4. Remove and Replace 6 Inch Concrete Pedestrian Curb Ramp:
- a. Measurement of ramp shall be the final finished square feet of concrete placed.
 - b. Measurement of ramp shall not include adjacent concrete curb and gutter, which shall be measured and compensated separately.
 - c. Payment shall include the following:
 - 1) Sawcutting at the removal limits.
 - 2) Removal and disposal of existing concrete, bituminous, and excess aggregate materials.
 - 3) Excavation and subgrade preparation.
 - 4) Aggregate base materials, placement, and preparation.
 - 5) Concrete materials, including material under truncated dome.
 - 6) Placement and finishing of materials.
 - 7) Labor and equipment.
 - 8) Curing and protection.
 - 9) Backfilling.
5. Truncated Dome Panel, which is part of the concrete pedestrian curb ramp: Measurement shall be on the basis of square feet of Truncated Dome Panels actually constructed:
- a. Payment shall include the following:
 - 1) Truncated panel materials.
 - 2) Placement of truncated panels.
 - 3) Joint sealing material.
 - 4) Protection of truncated panels during construction.
 - b. Radial truncated domes will be measured along the long cord and multiplied by 2 feet to compute square feet.
6. 6 Inch Concrete Driveway (Residential) and 7 Inch Concrete Driveway (Commercial): Measurement shall be on the basis of in-place square yard:
- a. Payment of the Bid Item shall include the following:
 - 1) Concrete materials.
 - 2) Subgrade and Aggregate base preparation.
 - 3) Placement and finishing of materials.
 - 4) Labor and equipment.
 - 5) Curing and protection.
 - 6) Backfilling
 - b. Excavation for concrete driveway shall be measured and compensated per Section 31 23 00.

- c. Aggregate base beneath concrete driveway shall be measured and compensated per Section 32 11 23.
- 7. Remove and Replace 6 Inch Concrete Driveway (Residential) and 7 Inch Concrete Driveway (Commercial): Measurement shall be on the basis of in-place square yard of Concrete Driveway Apron removed and replaced:
 - a. Payment of the Bid Item shall include the following:
 - 1) Sawcutting at the removal limits.
 - 2) Removal and disposal of existing concrete pavement and excess aggregate materials.
 - 3) Excavation and subgrade preparation.
 - 4) Aggregate base and concrete materials.
 - 5) Placement and finishing of materials.
 - 6) Patching of adjacent street.
 - 7) Labor and equipment.
 - 8) Curing and protection.
 - 9) Backfilling.
- 8. 4 Inch Concrete Median: Measurement shall be on the basis of in-place square yard:
 - a. Payment of the Bid Item shall include the following:
 - 1) Concrete materials.
 - 2) Subgrade and aggregate base preparation.
 - 3) Placement and finishing of materials.
 - 4) Labor and equipment.
 - 5) Curing and protection.
 - 6) Backfilling.
 - b. Excavation for concrete median shall be measured and compensated per Section 31 23 00.
 - c. Aggregate base beneath concrete median shall be measured and compensated per Section 32 11 23.
- 9. Remove and Replace 4 Inch Concrete Median: Measurement shall be on the basis of in-place square yard of median removed and replaced:
 - a. Payment of the Bid Item shall include the following:
 - 1) Sawcutting at the removal limits.
 - 2) Removal and disposal of existing concrete and excess aggregate materials.
 - 3) Excavation and subgrade preparation.
 - 4) Aggregate base and concrete materials
 - 5) Placement and finishing of materials.
 - 6) Labor and equipment.
 - 7) Curing and protection.
 - 8) Backfilling.
- 10. Concrete Median Approach Nose: Measurement shall be on the basis of in-place square yard:
 - a. Payment of the Bid Item shall include the following:
 - 1) Concrete materials.
 - 2) Subgrade and aggregate base preparation.
 - 3) Placement and finishing of materials.
 - 4) Labor and equipment.
 - 5) Curing and protection.
 - 6) Backfilling.
 - b. Excavation for concrete median approach nose shall be measured and compensated per Section 31 23 00.

- c. Aggregate base beneath concrete median approach nose shall be measured and compensated per Section 32 11 23.
- 11. Remove and Replace Concrete Median Approach Nose: Measurement shall be on the basis of in-place square yard of median approach nose removed and replaced:
 - a. Payment of the Bid Item shall include the following:
 - 1) Sawcutting at the removal limits.
 - 2) Removal and disposal of existing concrete and excess aggregate materials.
 - 3) Excavation and subgrade preparation.
 - 4) Aggregate base and concrete materials.
 - 5) Patching of adjacent street.
 - 6) Placement and finishing of materials.
 - 7) Labor and equipment.
 - 8) Curing and protection.
 - 9) Backfilling.
- 12. Concrete Valley Gutter: Measurement shall be on the basis of in-place square yard:
 - a. Payment of the Bid Item shall include the following:
 - 1) Concrete materials.
 - 2) Subgrade and aggregate base preparation.
 - 3) Placement and finishing of materials.
 - 4) Reinforcement.
 - 5) Labor and equipment.
 - 6) Curing and protection.
 - 7) Backfilling.
 - b. Excavation for concrete valley gutter shall be measured and compensated per Section 31 23 00.
 - c. Aggregate base beneath concrete valley gutter shall be measured and compensated per Section 32 11 23.
- 13. Remove and Replace Concrete Valley Gutter: Measurement shall be on the basis of in-place square yard:
 - a. Payment of the Bid Item shall include the following:
 - 1) Sawcutting of existing pavement.
 - 2) Removal and disposal of existing concrete, bituminous, and excess aggregate materials.
 - 3) Excavation and subgrade preparation.
 - 4) Aggregate base and concrete materials.
 - 5) Reinforcement.
 - 6) Placement and finishing of materials.
 - 7) Patching of adjacent street.
 - 8) Labor and equipment.
 - 9) Curing and protection.
 - 10) Backfilling
- 14. High Capacity Concrete Apron: Measurement shall be on the basis of each:
 - a. Payment of the Bid Item shall include the following:
 - 1) Concrete materials.
 - 2) Subgrade and aggregate base preparation.
 - 3) Placement and finishing of materials.
 - 4) Reinforcement.
 - 5) Labor and equipment.

- 6) Curing and protection.
 - 7) Backfilling.
 - b. Excavation for high capacity concrete apron shall be measured and compensated per Section 31 23 00.
 - c. Aggregate base beneath high capacity concrete apron shall be measured and compensated per Section 32 11 23
15. Concrete Spillway: Measurement will be by the square feet of spillway constructed.
- a. Payment of the Bid Item shall include the following:
 - 1) Excavation and subgrade preparation.
 - 2) Removal and disposal of all excess materials.
 - 3) Aggregate base and concrete materials.
 - 4) Placement and finishing of materials.
 - 5) Labor and equipment.
 - 6) Curing and protection.
 - 7) Backfilling.
16. Concrete Truck Apron: Measurement will be by depth of concrete on the basis of in-place square yard:
- a. Payment of the Bid Item shall include the following:
 - 1) Concrete materials.
 - 2) Subgrade and aggregate base preparation.
 - 3) Placement and finishing of materials.
 - 4) Reinforcement including tie bars and dowel bars.
 - 5) Curing and Projection.
 - 6) Backfilling.
 - b. Excavation for concrete truck apron shall be measured and compensated per Section 32 11 23.
 - c. Aggregate base beneath concrete pavement shall be measured and compensated per Section 32 11 23.
17. 6 Inch Concrete Hydrant Access Pad or Mailbox Pad: Measurement shall be on the basis of square feet of Concrete Pad actually constructed:
- a. Payment of the Bid Item shall include the following:
 - 1) Excavation and subgrade preparation.
 - 2) Removal and disposal of all excess materials.
 - 3) Aggregate base and concrete materials.
 - 4) Placement and finishing of materials.
 - 5) Labor and equipment.
 - 6) Curing and protection.
 - 7) Backfilling.
18. Maturity Testing for Compressive Strength: Measurement shall be Lump Sum for testing all concrete curb, driveways, and valley gutters. Payment shall include, but is not limited to, maturity curve establishment and all testing and necessary equipment to complete the maturity determination for each type of concrete mix used for curbs and driveways on the project.
19. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. American Society of Testing Materials (ASTM):
C260 - Air-Entraining Admixtures for Concrete.
- B. Minnesota Department of Transportation "Standard Specifications for Construction", 2020 Edition (MnDOT Spec.):
 - 1. 2211 – Aggregate Base.
 - 2. 2461 – Structural Concrete.
 - 3. 2521 – Walks.
 - 4. 3101 – Portland Cement.
 - 5. 3113 – Admixtures for Concrete.
 - 6. 3702 – Preformed Joint Fillers.
 - 7. 3754 – Poly-Alpha Methyl Styrene (AMS) Membrane Curing Compound.

1.04 SUBMITTALS

- A. Submit MnDOT approved design mix for each concrete mix designation used.
- B. The Contractor is responsible for developing the maturity curve for each specified mix and delivering a copy of the results to Engineer no later than two weeks prior to placement.
- C. The Contractor is responsible for taking maturity readings and delivering a copy of the results to the Engineer by the end of the each work day on a daily basis, until the concrete meets the specified strength. The Contractor shall provide the testing data from the in-place maturity measuring devices through a cell phone App or electronically.

1.05 SEQUENCING AND SCHEDULING

- A. Provide notice by 2:00 P.M. of the day prior to any concrete curb and gutter placement, to allow time for scheduling of the following activities. Notice must include mix designation, start time of placement, plant producing concrete, and Foreman onsite during placement:
 - 1. Aggregate base DCP tests (per Section 32 11 23) prior to any concrete curb being placed.
 - 2. Inspection of curbing operations by a City representative. No curbing will be allowed or accepted without inspection.
 - 3. Concrete field and plant testing if required.
- B. Complete construction of concrete pedestrian ramps prior to the paving of bituminous path and construction of the concrete sidewalk.
- C. Complete construction of concrete sidewalks following the paving of the bituminous initial lift wearing course and following the installation of Private Utilities.
- D. Begin construction of the concrete driveway aprons, concrete hydrant access pads, mailbox pads, and concrete medians no sooner than 24 hours after placement of the adjacent concrete curb and gutter.
- E. Construct concrete valley gutter prior to the paving of bituminous initial lift.

1. Concrete valley gutters must be protected during the paving of bituminous street. Method of protection must be approved by the engineer.
 2. On street rehabilitation projects, valley gutters shall be constructed in halves to provide access for residents.
- F. All concrete placed between October 1 and October 15 must be high early strength concrete.
- G. Under no circumstances will concrete be allowed to be placed after October 15, without prior approval from the Engineer.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Concrete to conform to MnDOT Spec. 2461, except as modified herein:
1. Portland Cement: Conform to MnDOT Spec. 3101:
 - a. Type 3 air-entraining concrete produced by using Type I Portland Cement.
 2. Air-Entraining Admixtures: conform to MnDOT Spec. 3113:
 - a. Conforming to ASTM C260.
 - b. Not to be added to the concrete mixtures in the field without approval from Engineer.
 3. Mix Designation and Classification:
 - a. Sidewalk, Pedestrian Ramps, Hydrant Pads and Medians: Mix No. 3F52A.
 - b. Valley gutters: Mix No. 3HE52A.
 - c. Residential and Commercial Driveways: Mix No. 3HE52A.
- B. Truncated Dome Panels: Approved products:
1. East Jordan Iron Works – Cast Iron Uncoated.
 2. Neenah Foundry Company – Cast Iron Uncoated.
 3. Natural color – unpainted.
- C. Preformed Joint Filler: Conform to MnDOT Spec. 3702.
- D. Curing Compound: Conform to MnDOT Spec. 3754:
1. Curing compound shall contain a fugitive dye.
 2. Spot Removal and replacement projects: Curing compound shall conform to ASTM C309, Type 1-D, clear with fugitive dye, Class B applied at a rate of 200 square feet per gallon.
- E. Sub-Grade Base Material:
1. Aggregate Backfill: Conform to Section 31 23 00.
 2. Aggregate Base: Conforming to Section 32 11 23.

PART 3 EXECUTION

3.01 GENERAL

- A. Concrete contractor shall have at least two people with a current ACI concrete flatwork technician or flatwork finisher certification, and at least one of them must be onsite for all concrete pours.
- B. Provide copies of batch tickets for concrete mix at the time of material delivery to Site.

- C. Construct concrete sidewalk, pedestrian ramps, driveways, medians, median approach noses, and valley gutters at the locations and elevations indicated on the Drawings.
- D. Construct sidewalks and medians to conform to the typical section shown on the Drawings.
- E. Construct concrete driveway aprons to conform to Standard Detail Plates STR-17 and STR-18.
- F. Construct concrete median approach nose per Standard Detail Plate STR-38.
- G. Construct concrete valley gutters to conform to Standard Detail Plate STR-16 and prior to the paving of bituminous street.
- H. Construct High Capacity Concrete Apron to conform to Standard Detail Plate STR-15.
- I. Construct concrete hydrant pads to conform to Standard Detail Plate STR-37.
- J. Construct concrete curb ramp to conform to MnDOT Standard Details, current version, and prior to the paving of bituminous trail.
- K. Verify locations with Engineer in the field prior to construction.
- L. The completed concrete work shall give the appearance of uniformity in surface contour and texture, and shall be accurately constructed to line and grade. The required joints, edges, and flow lines shall show neat workmanship. The concrete work shall be in full accordance with the Standard Detail Drawings. Any deviations from the Standard Detail Plates may be cause for removal and replacement at the Contractor's expense. No price reductions will be allowed as a means to correct deviations.
- M. Re-tempering of concrete which has partially hardened with or without additional materials or water is prohibited.
- N. Remove and Replace Concrete Sidewalks, Concrete Pedestrian Ramps, Concrete Driveways, Concrete Medians, Concrete Median Approach Noses:
 - 1. Perform patching at locations shown on the Drawings or as directed by the Engineer per Standard Detail Plate STR-42.
 - 2. Remove existing concrete per Section 02 41 13.
 - 3. Saw cut existing concrete per Section 02 41 13.
 - 4. Excavate to the bottom of the aggregate base layer and dispose of the material per Section 31 23 00.
 - 5. Place aggregate base per Section 32 11 23.
 - 6. Place concrete pavement.
- O. Construct Concrete Spillway:
 - 1. Construct a concrete spillway at locations shown on the Drawings or as directed by the Engineer.
 - 2. 6 inches thick (minimum).
 - 3. 5 feet wide (minimum).
 - 4. Construct spillway such that the storm water is conveyed directly to the bottom of the drainage way, thereby minimizing erosion in the general area.

P. Concrete washout locations shall conform to the requirements of the NPDES Permit.

3.02 FOUNDATION PREPARATIONS

- A. Placement of the aggregate base or granular material to support the concrete work shall conform to Section 32 11 23 or Section 31 23 13. Compaction of subgrade base shall conform to MnDOT Spec. 2211.3.D.2.c.
- B. The foundation shall be approved by the Engineer prior to placement of concrete material.

3.03 FORMS

- A. Conform to MnDOT Spec. 2521.3.C.

3.04 JOINT CONSTRUCTION

- A. Conform to MnDOT Spec. 2521.3.D.2, except as modified herein:
 - 1. Match joints of adjacent concrete work.
 - 2. Transverse expansion joints for sidewalk:
 - a. 200 foot intervals.
 - b. Concrete areas that are poured separately.
 - 3. Contraction joints shall be formed. Sawed joints not allowed.

3.05 METAL REINFORCEMENT

- A. Conform to MnDOT Spec. 2472, except as modified herein:
 - 1. Install 3 No. 4 steel reinforcing rods in lower portion of the valley gutter section with minimum 2 inch coverage on all sides.

3.06 PLACING AND FINISHING

- A. Conform to MnDOT Spec. 2521.3.D and 2531.3.C for manual placement or 2531.3.D for slip form, except as modified herein:
 - 1. Any deviation in the design curvature of concrete edges in excess of 3/8 of an inch, measured with a 10 foot straight edge, will be considered unacceptable.
 - 2. Any surface area allowing the entrapment of water at a depth 1/8 inch or greater will be considered unacceptable.
 - 3. Unacceptable work shall be removed and replaced with acceptable Work as directed by the Engineer. Acceptance of Work by price reduction will not be allowed.
- B. Pedestrian Curb Ramp - Truncated Dome:
 - 1. Truncated Dome Panels - Conform to the manufacturer's recommendations for placement.
 - 2. Truncated dome panels shall be placed (wet set) on a minimum of 6 inches concrete and prior to finishing the adjacent concrete surface of the pedestrian ramp. The joint between the panel and concrete shall be finished with 1/2 inch radius edging tool.
 - 3. Conform to MnDOT Standard Detail Plate No. 7038A for specified truncated dome surface pattern dimensions. Refer to the Drawings for actual ramp size, shape, and slopes.
 - 4. Multiple Truncated Dome panels shall be rectangular or radial plates of equal size and shall be joined together per the manufacturer's recommendation.

5. Joint space between truncated dome panels shall be no greater than 1/4 inch in width.
6. Radius style Truncated Dome Panels required when exceeding 5-foot dimension from back of curb.

3.07 CONCRETE CURING AND PROTECTION

- A. Conform to MnDOT Spec. 2521.3.E and 2521.3.E.1.a, except as modified herein:
 1. Coat all surfaces with membrane curing compound within 30 minutes after finishing at the specified rate.
 2. The membrane-curing compound must be applied at 2 different directions perpendicular to each other. Curing compound containing fugitive dye must provide a uniform solid white opaque coverage (equal to a white sheet of typing paper) on all exposed concrete surfaces.
 3. A second application of membrane curing compound shall be applied 4 to 8 hours after the first application at the specified rate.
 4. Protect concrete against hot weather conditions as defined in the PCA Design and Control of Concrete Mixtures as when the rate of evaporation of bleed water per hour exceeds 0.2 lb. of water per square foot per hour. A chart published by the ACI and PCA can be used to predict the bleed water rate.
 5. Cold weather curing, when temperatures fall below 40 degrees F during placement or within the following 24 hours, shall conform to MnDOT Spec. 2521.3.E.3.a and 2521.3.E.1.b blanket curing method, except as modified below:
 - a. If temperatures are projected to fall below 32 degrees within 24 hours of concrete placement, insulated blankets shall be used for curing.
 - b. All costs associated with blanket curing shall be incurred by the Contractor.
 6. Failure to comply with these provisions will result in a price reduction for the concrete Bid Item involved in accordance with MnDOT Spec. 1503.
 7. The freshly finished surface shall be protected, surfaces pitted by rain will be considered unacceptable.
 8. Removal and replacement of any concrete section damaged by traffic, rain, cold weather, or other causes occurring prior to final acceptance shall be the responsibility of the Contractor.

3.08 HIGH EARLY CONCRETE

- A. Conform to MnDOT Spec. 2461.2.E.2.b(2), except as modified herein:
 1. High early concrete shall be designed to provide a maximum water/cementitious ratio of 0.42.
 2. High early concrete shall be designed to provide a minimum flexural strength of 500 psi and a minimum compressive strength of 3,000 psi in 48 hours.

3.09 CONCRETE STRENGTH BY MATURITY TESTING

- A. When utilized on a project, the intent of the maturity testing is so the Contractor can proceed with work once concrete has achieved maturity.
- B. Determining concrete maturity (time temperature factor, TTF) and estimating in-place concrete strength is a two-step procedure as follows:
 1. Maturity Curve:
 - a. Create maturity curve in accordance with MnDOT section 2461.G.6.a(1)
 - b. Complete No later than 2 weeks prior to construction.

- 2. Equipment:
 - a. Conform to MnDOT 2461.g.6.a(2).
- 3. Estimating in-Place Strength:
 - a. Estimate in place strength in accordance with MnDOT 2461.G.6.a(3).
- C. Early-strength concrete shall achieve sufficient strength to be opened to traffic within three days of placement, or earlier if the compressive strength of 3000 psi is achieved.
- D. Changes in Concrete Mixture:
 - 1. Conform to MnDOT 2461.G.6.d.

3.10 BACKFILLING

- A. Backfill to protect the concrete and perform vibratory operations adjacent to concrete no sooner than 72 hours after placement of the concrete, after concrete field control strength cylinders have reached a compressive strength of at least 3,000 psi, or concrete strength by maturity testing has reached a compressive strength of 3,000 psi.
 - 1. Concrete field control strength cylinders will only be cast when requested by contractor in accordance with 1.05.A.

3.11 FIELD QUALITY CONTROL

- A. Any sidewalk, driveway, pedestrian ramp, etc. damaged by the Contractor shall be removed and replaced by the Contractor, and will be incidental to the Project.
- B. The Owner shall have an independent testing laboratory perform the following tests as a minimum. The test locations will be determined by the Engineer:
 - 1. 1 air entrainment test per day, per Project (per concrete mix).
 - 2. 1 slump test per day, per Project (per concrete mix).
 - 3. 1 set of cylinders for compression test per day, per Project (per concrete mix).
 - a. Additional cylinders may be cast to be tested to confirm when concrete has reached maturity.
- C. The Contractor will be responsible for maturity testing per day that concrete is being poured on the Project (per concrete mix) when a bid item is provided. Refer to Section 32 16 13, Paragraph 3.10.

END OF SECTION

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SECTION 32 16 13

CONCRETE CURBS AND GUTTERS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Cast-in-place concrete curb and gutter.
- B. Related Sections:
 - 1. Section 02 41 13 - Selective Site Demolition.
 - 2. Section 32 11 23 - Aggregate Base Courses.

1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Concrete Curb and Gutter: Measurement shall be by the linear foot measured along the face of the curb at the gutter line for each type. Payment shall include materials, preparation, placement, finishing, curing, protection, and backfilling. Measurement shall not include frames/castings that are located along the face of curb.
 - 2. Remove and Replace Concrete Curb and Gutter: This Bid Item shall be used for all concrete curb and gutter removed and replaced on this Project without regard to type or size and is assumed to be all hand placed. Measurement will be per linear foot along the face of curb. Payment will include all costs, including labor, materials, and equipment necessary to complete the work, including sawcutting at the removal limits and disposal of the material per Section 02 41 13, stripping and offsite disposal of soil per Section 31 00 00, construction of new curb and gutter, and patching of adjacent street.
 - 3. Maturity Testing for Compressive Strength: Per Section 32 13 14.
 - 4. No separate measurement or payment for modifications at driveways, pedestrian ramps, transition sections, or B618 curb installed at catch basins and radii.
 - 5. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. American Society of Testing Materials (ASTM):
 - 1. C260 - Air-Entraining Admixtures for Concrete.
- B. Minnesota Department of Transportation "Standard Specifications for Construction", 2020 Edition (MnDOT Spec.):
 - 1. 1503 – Conformity with Contract Documents.
 - 2. 2211 – Aggregate Base.
 - 3. 2461 – Structural Concrete.
 - 4. 2531 – Concrete Curbing.
 - 5. 3101 – Portland Cement.
 - 6. 3113 – Admixtures for Concrete.

7. 3702 – Preformed Joint Fillers.
8. 3754 – Poly-Alpha Methyl Styrene (AMS) Membrane Curing Compound.

1.04 SUBMITTALS

- A. Submit MnDOT approved design mix for each concrete mix designation used.
- B. If utilized on a project, the Contractor is responsible for developing the maturity curve for each specified mix and taking maturity readings. See Section 32 13 14.

1.05 SEQUENCING AND SCHEDULING

- A. All temporary stockpile located within the boulevard area or other areas behind the concrete curb and gutter must be removed prior to curb placement.
- B. Concrete curb and gutter construction precedes installation of pavement.
- C. Provide notice by 2:00 P.M. of the day prior to any concrete curb and gutter placement, to allow time for scheduling of the following activities. Notice must include mix designation, start time of placement, plant producing concrete, and Foreman onsite during placement:
 1. Aggregate base DCP tests (per Section 32 11 23) prior to any concrete curb being placed.
 2. Inspection of curbing operations by a City representative. No curbing will be allowed or accepted without inspection.
 3. Concrete field and plant testing if required.
- D. Horizontal and vertical alignment established with “stringline” and or forms for concrete curb and gutter placement shall be approved by the Engineer prior to concrete placement. Notify the Engineer a minimum of 4 hours (one half day) prior to placement of concrete to allow for review and approval.
- E. Complete backfilling within 6 days of original placement, or per applicable in Milestones per Section 00 52 10, Paragraph 4.02.A.1.
- F. All concrete placed between October 1 and October 15 must be high early strength concrete.
- G. Under no circumstances will concrete be allowed to be placed after October 15, without prior approval from the Engineer.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Concrete to Conform to MnDOT Spec. 2461, except as modified herein:
 1. Portland Cement: Conform to MnDOT Spec. 3101:
 - a. Type 3 air-entraining concrete produced by using Type I Portland Cement.
 2. Air-Entraining Admixtures: Conform to MnDOT Spec. 3113:
 - a. Conforming to ASTM C260.
 - b. Not to be added to the concrete mixtures in the field without approval from Engineer.

3. Mix Designation and Classification for Concrete Curb and Gutter:
 - a. Manual Placement Mix No. 3F52.
 - b. Slip Form Placement Mix No. 3F32.
- B. Pre-Formed Joint Filler: Conform to MnDOT Spec. 3702.
- C. Curing Compound: Conform to MnDOT Spec. 3754, except as modified below:
 1. Curing compound shall contain a fugitive dye.
 2. Remove and Replace Concrete Curb and Gutter (spot repairs): Curing compound shall conform to ASTM C309, Type 1-D, clear with fugitive dye, Class B applied at a rate of 200 square feet per gallon.

PART 3 EXECUTION

3.01 GENERAL

- A. Concrete contractor shall have at least two people with a current ACI concrete flatwork technician or flatwork finisher certification, and at least one of them must be onsite for all concrete pours.
- B. Provide copies of batch tickets for concrete mix at the time of material delivery to the Site.
- C. Construct concrete curb and gutter at the locations and elevations indicated on the Drawings. Any concrete curb and gutter that is longer than 200 linear feet continuously, shall be placed using slip form placement.
- D. Construct the style or type of curb and gutter as shown on the Drawings.
- E. Construct intersection curb radii and transitions to conform to the detail on the Drawings.
- F. Construct transition sections at inlet structures to conform to the detail on the Drawings.
- G. Construct concrete curb ramp depressions to conform to the detail on the Drawings.
- H. Construct curb transitions for driveways to conform to the detail on the Drawings. Locations to be verified by Engineer at the time of construction.
- I. Stamp the concrete curb and gutter for sewer and water service locations conforming to Standard Detail Plate STR-11.
 1. Stamping must conform to the dimensions indicated on the detail plate.
 2. The location of the "W" & "S" shall be located on the face of the concrete curb.
 3. The location of the "W" & "S" stamp shall be staked by the engineer.
 4. Stamping of the service locations shall be considered incidental to the placement of the concrete curb.
 5. "W" & "S's" not placed by the specified stamp will not be accepted and will require removal and replacement.
- J. The completed concrete work shall give the appearance of uniformity in surface contour and texture, and shall be accurately constructed to line and grade. The required joints, edges, and flow lines shall show neat workmanship. The concrete curb shall be in full accordance with the

Standard Detail Drawings. Any deviations from the Standard Detailed Plates may be cause for removal and replacement at the Contractor's expense. No price reduction will be allowed as a means to correct the deviations.

- K. Re-tempering of the concrete which has partially hardened with or without additional materials or water is prohibited.
- L. Concrete washout locations shall conform to the requirements of the NPDES.

3.02 FOUNDATION PREPARATIONS

- A. Support on a compacted aggregate base extending 1 foot behind the back of curb:
 - 1. Conform to typical sections as shown on the Drawings.
 - 2. Conform to Section 32 11 23 and MnDOT Spec. 2211.3.D.2.c.

3.03 FORMS

- A. Conform to MnDOT Spec. 2531.3.B.

3.04 JOINT CONSTRUCTION

- A. Conform to MnDOT Spec. 2531.3.E, except as modified herein:
 - 1. Contraction joints: 10 foot intervals.
 - 2. Transverse expansion joints:
 - a. 400 foot intervals.
 - b. Adjacent to hand placed curb.
 - 3. Contraction joints shall be formed. Sawed joints not allowed.

3.05 PLACING AND FINISHING

- A. Conform to MnDOT Spec. 2531.3.C, except as modified herein:
 - 1. The top surface of the curb and gutter shall have a brush finish at right angles to the curb line.

3.06 CONCRETE CURING AND PROTECTION

- A. Conform to MnDOT Spec. 2531.G and 2531.3.G.1.a, except as modified herein:
 - 1. Coat all surfaces with membrane curing compound within 30 minutes of concrete placement unless otherwise directed by Engineer.
 - 2. The membrane-curing compound must be applied in 2 different directions perpendicular to each other to provide a uniform solid white opaque coverage (equal to a white sheet of typing paper) on all exposed concrete surfaces.
 - 3. A second application of membrane curing compound shall be applied 4 to 8 hours after the first application at the specified rate.
 - 4. Protect concrete against hot weather conditions as defined in the PCA Design and Control of Concrete Mixtures as when the rate of evaporation of bleed water per hour exceeds 0.2 lb. of water per square foot per hour. A chart published by the ACI and PCA can be used to predict the bleed water rate.

5. Cold weather curing, when temperatures fall below 40 degrees during placement or within the following 24 hours, shall conform to MnDOT Spec. 2531.3.G.3.a and 2531.3.G.1.b blanket curing method or method approved by the Engineer, except as modified below:
 - a. If temperatures are projected to fall below 32 degrees within 24 hours of concrete placement, insulated blankets shall be using for curing.
 - b. All costs associated with blanket curing shall be incurred by the Contractor.
6. Failure to comply with these provisions will result in a price reduction for the concrete curb and gutter Bid Item involved in accordance with MnDOT Spec. 1503.
7. The freshly finished surface shall be protected. Surfaces pitted by rain will be considered unacceptable.
8. Removal and replacement of any curb section damaged by traffic, rain, cold weather, or other causes occurring prior to final acceptance shall be the responsibility of the Contractor.

3.07 BACKFILLING

- A. Backfill to protect the concrete and perform vibratory operations adjacent to concrete no sooner than 72 hours after placement of the concrete, after concrete field control strength cylinders have reached a compressive strength of at least 3,000 psi, or concrete strength by maturity testing has reached a compressive strength of 3,000 psi.
 1. Concrete field control strength cylinders will only be cast when requested by contractor in accordance with 1.05.A.
 2. Tolerance within 0.3 feet to the top of curb elevation.

3.08 HIGH EARLY CONCRETE

- A. Conform to MnDOT Spec. 2461.2.E.2.b(2), except as modified herein:
 1. High early concrete shall be designed to provide a maximum water/cementitious ratio of 0.42.
 2. High early concrete shall be designed to provide a minimum flexural strength of 500 psi and a minimum compressive strength of 3,000 psi in 48 hours.
 3. High early concrete may be included as a separate Bid Item.

3.09 REMOVE AND REPLACE CONCRETE CURB AND GUTTER

- A. It is anticipated that sections of curb and gutter or sidewalk may be cracked, broken or have settled over time. Removal and replacement will be identified by the Engineer as part of a street rehabilitation type project.
- B. Sawcut at removal limits per Section 02 41 13.
- C. Do not disturb any material beyond the limits required to form for new construction (assumed 2 feet maximum from the back and 6 inches beyond the edge of new work).
- D. Complete stripping and offsite disposal of soil per Section 31 00 00.
- E. Install new curb and gutter as described previously in this Section.

3.10 CONCRETE STRENGTH BY MATURITY TESTING

- A. Refer to Section 32 13 14, Paragraph 3.09.

3.11 WORKMANSHIP AND FINISH

- A. Conform to MnDOT Spec. 2531.3.I, except as modified herein:
 - 1. Any deviation in the design curvature of concrete edges in excess of 3/8 of an inch, measured with a 10 foot straight edge, will be considered unacceptable.
 - 2. Acceptance of Work by price reduction will not be allowed.

3.12 FIELD QUALITY CONTROL

- A. Any curb damaged by the Contractor shall be removed and replaced by the Contractor, and will be incidental to the Project.
- B. The Owner shall have an independent testing laboratory perform the following minimum tests. The test locations shall be determined by the Engineer:
 - 1. 1 air entrainment test per day, per Project (per concrete mix).
 - 2. 1 slump test per day, per Project (per concrete mix).
 - 3. 1 set of cylinders for compression tests per day, per Project (per concrete mix).
 - a. Additional cylinders may be cast to be tested to confirm when concrete has reached maturity.
- C. The Contractor will be responsible for maturity testing per day that concrete is being poured on the Project (per concrete mix).

END OF SECTION

SECTION 32 17 23
PAVEMENT MARKINGS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Pavement markings for control and guidance of traffic.
- B. Related Sections:
 - 1. Section 01 33 00 - Submittal Procedures.

1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Lines:
 - a. Lines shall be measured by the linear foot on the basis of length actually applied, regardless of color:
 - 1) Separate measurement will be made on the basis of type and nominal width.
 - 2) Double yellow lines shall be measured to include both lines per linear feet of quantity because they are applied simultaneously.
 - b. For the paint pavement markings, the second application shall be measured the same as the first application; for example: 1,000 LF of application painted twice would be paid as 2,000 LF.
 - c. All permanent lines and messages shall be Ground In (GR IN) to pavement surface.
 - 2. Messages:
 - a. Messages shall be measured on the basis of each applied:
 - 1) Separate measurement will be made for each type of message.
 - 2) Separate measurement will be made for paint messages and thermoplastic messages.
 - 3. Payment of each Bid Item shall be compensation in full for all costs incidental thereto, including but not limited to surface preparation, traffic control measures, maintaining the Work, removal of temporary pavement markers, together with any other expenses incurred in completing the Work that are not specifically included for payment under the Contract Bid Items.
 - 4. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. Minnesota Department of Transportation "Standard Specifications for Construction", 2020 Edition (MnDOT Spec.):
 - 1. 2582 – Pavement Markings.
 - 2. 3356 – Preformed Thermoplastic.
 - 3. 3590 – Multi-Component Liquid Pavement Markings (Multi Comp).

- 4. 3591 – Water-Based Traffic Paint.
- 5. 3592 – Drop-On Glass Beads.
- B. MnDOT Application Specification for Conventional Pavement Marking Materials 3-Minute Dry Alkyd and High Solids Latex.
- C. MnDOT Temporary Traffic Control Zone Layouts – Field Edition.

1.04 SUBMITTALS

- A. Submit the following consistent with Section 01 33 00:
 - 1. 1 copy of the chosen multi-component lot or batch formulation.
 - 2. Pavement Marking Contractor Qualifications/Certifications.
 - 3. MnDOT Certification approvals.

1.05 SEQUENCING AND SCHEDULING

- A. Prime Contractor is responsible for scheduling an onsite pre-signing meeting with the Owner, Engineer, and Signing Subcontractor (if appropriate) a minimum of 24 hours prior to the installation of any signing.
- B. Conform to the requirements of MnDOT Spec 2582.3 except as modified herein:
 - 1. Multi-Component Liquid Pavement Markings:
 - a. Place ground-in markings immediately after completion of the wear course bituminous paving and following the grinding operations.
 - b. Place non-ground-in or per manufacturer recommendations on MnDOT's approved products list.
 - c. Place all markings indicated as Multi-Component striping on Drawings.
 - 2. Temporary Paint Pavement Markings:
 - a. Place following completion of the final bituminous wearing course or interim bituminous course.
 - b. Place immediately after paving and allowing pavement surface to cool.
 - 3. Pavement Markings Thermoplastic:
 - a. Place following bituminous wearing course placement.
 - b. Place all markings indicated as pavement marking thermoplastic on Drawings.
- C. Complete application of pavement markings under traffic.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Paint:
 - 1. Conform to MnDOT Spec 3591.2 except as modified herein:
 - a. High Solids Water Based:
 - 1) Free of toxic heavy metals, including lead, mercury, and cadmium.
 - 2) Track Free Time - 3 minutes or less.
 - 3) Yellow Prime Pigment - Color Index Pigment Yellow No. 65 or No. 75.
 - 4) White Color - Flat white.

- 5) Yellow Color - Color No. 33538 of Federal Standard 595.
- b. 3-Minute Dry Alkyd:
 - 1) Free of toxic heavy metals, including lead, mercury, and cadmium.
 - 2) Track Free Time - 3 minutes or less.
 - 3) Yellow Prime Pigment - Color Index Pigment Yellow No. 65 or No. 75.
 - 4) White Color - Flat white.
 - 5) Yellow Color - Color No. 33538 of Federal Standard 595.
- B. Preformed Thermoplastic Pavement Marking:
 - 1. As manufactured by Ennis-Flint or approved equal.
 - a. White Lines: 125mil Premark Preformed Thermoplastic.
 - b. Arrows: Premark Preformed Thermoplastic – 8330241L (Left Turn), 8330241R (Right Turn), 8330240 (Straight), 8330142L (Combination Left-Straight), 8330142R (Combination Right-Straight).
 - c. Sealer: 600/300 two part sealer tube, #7 – 102EF.
 - 2. <http://www.ennisflintamericas.com>.
- C. Glass Beads:
 - 1. Conform to MnDOT Spec. 3592.
- D. Multi-Component Liquid Pavement Markings (Multi Comp):
 - 1. Conform to MnDOT Spec. 3590.

2.02 EQUIPMENT

- A. General:
 - 1. Vehicles used shall be deployed and equipped with traffic control devices set forth in the “Minnesota Manual on Uniform Traffic Control Devices, Field Manual.”
 - 2. Shadow vehicle with truck-mounted attenuator shall be used on streets with posted speed equal to or greater than 40 M.P.H. or ADT greater than 1,500 vehicles per day.
 - 3. Equipment used for spray applications shall be capable of applying glass beads by a pressurized system at a rate of at least 25 lbs/gal.
 - 4. Capable of accumulating footage applied per gun.
 - 5. Stainless steel components in the delivery system required for water-based materials.
 - 6. The only acceptable equipment for installation of Premark Thermoplastic is an infrared heater (Street Heat SR-20 or SR-28 as manufactured by Ennis-Flint).

PART 3 EXECUTION

3.01 GENERAL

- A. The pavement marking crew shall include at least 1 technical expert knowledgeable in each of the following areas:
 - 1. Equipment operation.
 - 2. Application techniques.
 - 3. Traffic control.
 - 4. Safety regulations.

- B. All pavement markings shall be ground in (GR IN) or recessed. Conform to MnDOT Spec. 2582.3.B.7 Recessing.
- C. The filling of tanks, pouring of materials, or cleaning of equipment shall not be performed on unprotected pavement surfaces, unless adequate provisions are made to prevent spillage of material.
- D. Thermoplastic pavement markings installers must show proof of certification for Premark Thermoplastic installation.

3.02 PREPARATION

- A. Locations:
 - 1. In general accordance with the Drawings:
 - a. Location of marking designating no passing zones to be coordinated with corresponding traffic signs.
 - 2. The Engineer will place necessary "Spotting" at appropriate points:
 - a. Horizontal control.
 - b. Starting and stopping points.
 - c. Broken line intervals will not be marked.
 - d. Longitudinal joints, pavement edges, and existing markings shall serve as horizontal control when so directed.
 - e. Notify Engineer at least 48 hours in advance when requesting spotting locations.
 - 3. Edge lines and lane lines are to be broken only at intersections with public roads and at private entrances if they are controlled by a yield sign, stop sign, or traffic signal.
 - 4. The break point is to be at the start of the radius for the intersection or at marked stop lines or crosswalks.
- B. Street Surface:
 - 1. Engineer may direct cleaning of surface as necessary immediately prior to marking application:
 - a. Brushing with non-metallic rotary broom.
 - b. Other cleaning method approved by Engineer.
 - c. Air blast following cleaning.
 - 2. Surface must be dry.
 - 3. Minimum surface temperature is 50 degrees F.
- C. Traffic Control:
 - 1. Conform to latest edition of MnDOT "Temporary Traffic Control Zone Layouts – Field Edition."
 - 2. Shadow vehicle with truck-mounted attenuator shall be used on streets with posted speed equal to or greater than 40 M.P.H. or ADT greater than 1,500 vehicles per day.

3.03 APPLICATION

- A. General:
 - 1. Tolerance:

- a. Width: A tolerance of 1/4 inch under or 1/4 inch over the specified width will be allowed for striping provided the variation is gradual and does not detract from the general appearance.
 - b. Length: Broken line segments may vary up to 2-3/4 inches from the specified lengths provided the over and under variations are reasonably compensatory.
 - c. Alignment: Deviations from the control guide shall not exceed 2 inches.
 - d. Establishment of application tolerances shall not relieve the Contractor of his responsibility to comply as closely as practicable with the planned dimensions.
- 2. Material shall not be applied over longitudinal joints.
- 3. 4 inch broken line consists of 10 feet of paint and 40 feet space (1 cycle).
- 4. If same equipment used for different color material with change in color, an amount of material equal to fifteen 10 foot long stripes shall be wasted prior to beginning application with the new color.
- 5. Conditions:
 - a. Markings shall not be applied when wind or other conditions cause a film of dust to be deposited on the pavement surface after cleaning and before the marking material can be applied.
 - b. Except when used as a temporary marking, pavement markings shall only be applied in seasonable weather when air temperature is 50 degrees F or higher.
- B. Glass Beads:
 - 1. Shall be applied immediately after application of paint or multi-component markings.
 - 2. Rate of application shall be 8 lbs. per gallon.
- C. Pavement Marking Thermoplastic:
 - 1. Grind pavement surface prior to application.
 - 2. Apply per the manufacturer's instructions for application requiring EF 2-part sealer.
 - 3. Width of thermoplastic must match design pavement marking width. For example, 12-inch wide thermoplastic must be used for 12-inch stop bar. Two 6-inch wide strips of thermoplastic will not be allowed to be used to create a 12inch stop bar.
- D. Multi-Component Liquid Pavement Markings:
 - 1. Conform to MnDOT Spec. 2582.

3.04 CORRECTION OF DEFECTS

- A. All pavement markings not conforming to the requirements of the Specifications shall be removed and replaced, or otherwise repaired to the satisfaction of the Engineer.
- B. Where yield computations show a deficiency in material usage of not more than 20-percent, Owner may require satisfactory repair or may accept the Work at a reduced Bid Unit Price that is in direct proportion to the percent of the deficiency.
- C. Where yield computations show a deficiency in material usage in excess of 20-percent, Owner will require removal and replacement to the satisfaction of the Engineer, unless other means are approved by the Engineer.
- D. If removal and replacement is required, at least 90-percent of the deficient line shall be removed.

- E. Width of removal shall be 1 inch wider on all sides than the nominal width of the marking to be removed.
- F. Removal of unacceptable Work shall be accomplished with sand or water blasting equipment, unless other means are authorized by the Engineer. Bituminous street surfacing shall not be damaged by the removal operation.

END OF SECTION

SECTION 32 80 00
IRRIGATION SYSTEM

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Design, Furnish and install an underground irrigation system as conceptually shown on Drawings and as specified herein. The Irrigation Plan is for conceptual purposes only and it is the Contractor's responsibility to design the irrigation system addition and provide approved shop drawings for the irrigation system.
2. Work to be included under this Section shall consist of but not be limited to the following:
 - a. Furnishing and installing automatic sprinkler heads.
 - b. Sizing, furnishing, and installation of irrigation cabinet, booster pump, backflow preventer, underground piping and conduit including connections to the existing water main and water service into the irrigation cabinet.
 - c. Supply of power, electrical connections, and necessary equipment for complete operation to supply irrigation system with required volume of water.
 - d. Installation, connection, and adjustment of Irrigation Control System, including controller adjustment, control valves and all control wire sized appropriately.
 - e. Installation of required thrust blocks.
 - f. Installation of concrete equipment pad for service cabinet.
 - g. Installation of concrete equipment pad for service cabinet.
 - h. Other miscellaneous work shown on the plans or specified herein.
 - i. Warranty and system start-up and shut down as specified herein.

B. Related Sections:

1. Section 26 05 59 – Irrigation System Electrical Supply
2. Section 32 14 13 – Concrete Walks, Medians, and Driveways

1.02 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. Irrigation System: Measurement will be per lump sum and shall include irrigation design, equipment, materials, labor to furnish and install the irrigation system as shown on the Drawings and as specified including supply of power, and as-built drawings.

1.03 SEQUENCING AND SCHEDULING

- A. Prior to starting work, submit a schedule showing the order and completion of Work for review and approval by Owner.
- B. Contractor shall install irrigation crossings under streets, trails, and sidewalk prior to placement of aggregate backfill and/or aggregate base course on streets, trails, and sidewalks.
- C. All irrigation system components other than conduit crossings shall not be installed until all utility, concrete, bituminous, topsoil placement and finish grading, and site furnishings have been completed.

D. Irrigation system shall be installed and fully operational prior to turf restoration.

1.04 SUBMITTALS

A. Submit all required items before commencement of Work in accordance with Section 01 33 00.

B. Shop drawings

1. Provide irrigation design to Engineer prior to commencement of Work.
2. For each item specified in the Drawings, provide information showing detail, location, and manufacturers product information.

C. Contractor shall provide record drawings, operations and maintenance manuals, and warranty information to the Engineer at the completion of the project.

1.05 QUALITY ASSURANCE

A. Qualifications

1. Contractor: Must be a Minnesota Licensed Technology System Contractor in “good standing” with the Minnesota State Board of Electricity at the time of bid submission. Contractor shall also currently employ a licensed Power limited technician which is required by law to work on irrigation system.
2. Contractor must provide at least one person at all times during execution of this portion of work who is thoroughly familiar with the type of materials being installed and is directly responsible for all work performed under this Section.

B. As-Built Drawings

1. Contractor shall prepare and maintain accurate record drawings of all underground concealed work.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Delivery and Acceptance

1. Package to prevent damage during shipment, handling, storage, and installation. Maintain protective covering in place and in good repair until removal is necessary.
2. Contractor shall remove all shipping materials as necessary to inspect products for damage immediately upon delivery and coordinate inspection by Owner’s Representative.

B. Storage and Handling

1. Contractor shall repack and store products in a secure area and protect from damage and adverse environmental conditions until installation is performed. Products shall be protected from damage during handling and installation.

C. Waste Management and Disposal

1. Dispose of all waste generated from packaging and installation as in accordance with applicable regulations.
2. Any excess material is the property of the Contractor and shall be disposed of off-Site.

1.07 WARRANTY

- A. Upon completion of irrigation system installation and training, and initial acceptance of Engineer, Contractor shall warranty all materials and workmanship for the period of One Year and shall include one complete operating season from Start-up to shut down. Any defects in materials, needed repairs, adjustments and required maintenance will be responsibility of Contractor at no additional cost to the Owner.
- B. At end of One Year warranty period, the Contractor shall conduct a thorough review of the complete irrigation system with Owner's Representative and make any needed repairs or adjustments necessary at no additional cost to the Owner.
- C. Included in the irrigation system warranty, the Contractor shall complete the initial start-up of the system, system shut down and winterization at end of the first season, and system start-up the following season. These services shall be performed under the supervision of the Owner's representative and performed at no additional cost to the Owner.

1.08 OPERATIONS AND MAINTENANCE MANUALS AND TRAINING OF MAINTENANCE PERSONNEL

- A. The Contractor shall provide four (2) copies of operation and maintenance manuals for the all portions of the irrigation system, including sprinklers and automatic control system. The manuals shall be prepared specifically for the equipment furnished and shall include all required catalog cut sheets, drawings, instructions and other materials required to instruct operating and maintenance personnel in the proper use, adjustment, operation and repair of equipment furnished.
- B. Upon completion of the work and acceptance by the owner, the Contractor and/or supplier shall be responsible for the training of maintenance personnel in the operation and maintenance of the automatic control system and pop-up sprinklers. The Contractor and/or supplier of the control system shall set the initial watering schedules and programming of the automatic control system in the presence of City maintenance staff. The initial programming shall be as required by the Owner to meet the needs of the facility. Changes in the programming and instructions on how to make such changes shall be the responsibility of the supplier.

PART 2 PRODUCTS

2.01 MATERIALS

- A. General:
 - 1. All irrigation components shall be manufactured by Rain Bird Corporation as shown in the plans and details.
 - 2. All materials incorporated into this system shall be new and without flaws or defects and of quality and performance as specified and meeting the requirements of this system. All materials shall have a minimum guarantee of one year against material defects or defective workmanship.
 - 3. Any material specified by name and/or model in the specifications or on the plans shall be deemed to be used for the purpose of identifying the materials and insuring the specific use of that material in the construction of the system. No substitutions will be permitted without the prior written approval by the Engineer or Owner.

B. Pipe:

1. Pipe shall be Class 160 PVC pipe. The pipe shall be made from clean, virgin N.S.F. Approved Type 1, Grade 1 (PVC 1120) PVC conforming to ASTM resin specifications D1784 - 60T. Pipes shall be pressure rated for 160 psi @ 73.4 degrees F. and shall meet requirements set forth in Commercial Standard C.S. 256-63 with standard dimension ratio SDR-26. All PVC pipe 3 inch in diameter or greater shall have rubber gasket joints. All PVC pipe less than 3 inch in diameter shall be belled end with solvent weld joints.
2. All Swing Joints shall be constructed of Schedule 80 PVC with threaded and coupled ends as manufactured by Spears Manufacturing Co., Sylmar, California, or approved equal.
3. Pipe Identification:
 - a. Pipe shall be continuously and permanently marked with the following information: Type of pipe, working pressure at 73.4 degrees F., and N.S.F. approval.
4. Pipe Delivery:
 - a. All pipe shall be delivered to the site in unbroken bundles, packaged in such a manner as to provide adequate protection for the pipe ends, either threaded or plain.

C. Pipe Fittings and Connections:

1. All fittings for pipe 4 inches and over shall be ductile iron.
2. All pipe fittings 2 inches and under to be installed shall be molded fittings manufactured of the same material as the pipe and shall be suitable for either solvent weld or screwed connections. No fittings of other material shall be used.
3. When connecting plastic to metal, male adapters shall be used. The male adaptor shall be hand tightened, plus one turn with a strap wrench. Threaded joints shall be coated with Teflon tape.

D. Pop-Up Sprinklers:

1. All irrigation heads shall be manufactured by Rain Bird Corporation. Verify with Owner's representative prior to installation.
 - a. Turf Spray: Rain Bird 1804-PRS 15 Strip Series.
 - b. Shrub Spray: Rain Bird 1812 15 Strip Series.
 - c. Shrub Rotary: Rain Bird R-VAN24 1812-SAM-P45.
 - d. Turf Rotor: Rain Bird 3504-PC-SAM 2.0.
 - e. Turf Rotor: Rain Bird 5004-PC-R-LA.
2. All rotary pop-up sprinklers shall be provided with an on-off-auto-manual selector accessible from the surface with a special key.
3. Pressure regulation shall be preset by the factory according to nozzle set.

E. Wire:

1. All wire will be of sufficient size for its intended end use.
2. All electrical control and ground wire used to connect automatic remote control valves to the controllers shall be 600 volt, solid copper with PVC insulation and have UL approval for type

UF. All control wire shall be of different colors and common wire shall be white with green stripe. Minimum wire size shall be 14 gauge.

3. Splices of wire in the field must be absolutely waterproof so there is no chance for moisture or corrosion build-up on the joint. Requires 3M DBY or DBR Splice Kit.

F. Conduit for Wire:

1. Conform to section 26 05 59 Irrigation System Electrical Supply 2.01.

G. Concrete:

1. Concrete used in thrust blocks shall be a mix of one part cement, two parts sand and three parts gravel (washed sand and gravel should be used) and will be "dry" or "stiff" mix (minimum amount of water).
2. Concrete used for control cabinet base shall conform to 32 13 14 2.01.A except as modified herein:
 - a. Slab and Concrete Pad Mix No. 3F52A.
 - b. Foundation: conform to MnDOT 2461.2 mix design 1G52.
 - c. Curing Compound: conform to section 32 13 14 2.01.D.

H. Irrigation Control Cabinet:

1. Size as required to contain piping, fittings, backflow preventer, valves, meter, irrigation controller, and booster pump if required.
2. Manufactured by Povolny Specialties Inc. or approved equal.

I. Irrigation System Control:

1. Irrigation Controller shall be Rain Bird 2-Wire Decoder controller. All control valves shall be compatible with specified controller and be manufactured by Rain Bird Corporation. Shop drawings shall identify type, size, and location.
2. See plan for approximate location of controller and POC. Coordinate and verify with Owner on connection configuration and location prior to installation.
3. System controller must be capable of managing area as identified in the Drawings.

J. Booster Pump:

1. See section 26 05 59.

K. Valve and Box:

1. Remote control valve Model Rain Bird PEB-IVM.
2. Quick coupling valve model Rain Bird 3-RC ¾".
3. Valve box- N lock bolt and Q.C. heat bonded on cover.

L. Drip Irrigation

1. Salco flexible PVC line ¾ inch diameter.

PART 3 EXECUTION

3.01 STAKING

- A. The Contractor shall stake out all proposed lines prior to trenching operations. Contractor must have engineer and Owner approval prior to trenching. Contractor responsible for verification of existing drain tile locations prior to trenching.
- B. The location of the stakes will be checked by the Engineer or Owner prior to trenching or plowing.
- C. Location of controllers shall be as directed by the Engineer or Owner, but near the locations indicated on the Drawings.
- D. Stakes shall be clearly marked to designate the type of equipment to be installed at that point. The Contractor shall maintain the stakes until all equipment is in place and the location of all equipment is properly indicated on the record drawings.
- E. The Contractor shall replace any stakes disturbed to the correct position.

3.02 ADJUSTMENTS

- A. Where minor adjustments to the system layout may be required, as in connections to existing piping or in working around existing structures, the Contractor shall make the required adjustments at no additional cost to the Owner.

3.03 PROTECTION

- A. Actual construction on the site will cease during heavy rains or other inclement weather that will adversely affect the quality of the work or cause damage to the site.
- B. Work will be allowed to resume when, in the opinion of the Owner or Engineer, conditions are such that no excessive damage to the existing turf will occur.
- C. The Contractor shall utilize equipment and methods that will result in the least possible damage to the existing turf.
- D. The Contractor is responsible to protect all installed components of the irrigation system until the final restoration has been accepted. Any damage to system prior to acceptance of restoration will be replaced by Contractor at no cost to Owner.

3.04 EXCAVATION

- A. Contractor shall perform all excavation of every description and of whatever substances encountered, to the depth indicated on drawings or as otherwise specified. Contractor shall supply sleeves for his/her piping to pass under roads and walkways. During excavation, material suitable for back filling shall be placed in piles in an orderly manner, a sufficient distance from the banks of the trench to avoid sliding or sloughing back into the trench. All material not required or suitable shall be removed and wasted in a designated area within the limits of the project as instructed by the Engineer. Such grading shall be done as may be necessary to prevent surface water from flowing into the trenches or other excavation and any water accumulating therein shall be removed by pumping or by other approved methods. Such sheeting and shoring shall be done as necessary to provide for the protection of the work and the safety of the personnel at no cost to owner.
- B. Any known existing water, sewer, drainage, electrical and other useful lines will be noted on the drawings or otherwise marked on the ground. It is the responsibility of the Contractor to repair any damage to existing materials. Repairs must be done to the satisfaction of the Owner.

- C. The cutting of tree roots shall be avoided.
- D. Where rocks and other abrasive substances are encountered, they shall be removed from the line of trenching and disposed of offsite or at a location within the project limits as instructed by the Engineer.
- E. When placing sprinklers in existing turf, the Contractor shall place the excavated soil onto a drop cloth placed next to the hole.

3.05 INSTALLATION OF PIPE AND PIPE COMPONENTS

- A. Pipe and accessories shall be handled in such a manner as to insure delivery to the trench in sound, undamaged condition. Particular care shall be taken not to injure pipe coating. If the coating or lining of any type of pipe or fitting is damaged, the repair shall be made by the Contractor, at his/her expense, satisfactory to the Owner. Pipe shall be carried into position, not dragged. The interior of the piping and accessories shall be thoroughly cleaned of foreign matter before being lowered into the trench and should be kept clean during laying operations by plugging or other approved method. Before installation the pipe shall be inspected for defects by the Contractor. Material found to be defective before or after laying shall be replaced with sound material without additional expense to the Owner. Rubber gaskets that are not to be installed immediately, shall be stored in a cool dark place and out of the direct rays of the sun.
- B. All wiring shall be laid alongside the pipe.
- C. Cutting of pipe shall be done in a neat and workmanlike manner without damage to the pipe. The edge shall be true and at a right angle to the pipe. The end shall be reamed out to the original diameter of the pipe. Unless otherwise authorized by the Owner or recommended by the manufacturer, cutting shall be done with an approved mechanical cutter.
- D. When work is not in progress, exposed ends of pipe, fittings and valves shall be securely closed so that no trench water, earth, or other substance will enter the pipe or fittings.
- E. All pipe shall be installed in accordance with manufacturer's recommendations.
- F. Where solvent joints are used, only solvent recommended by the pipe manufacturer should be used. The solvent weld joints shall be made in the following manner:
 - 1. Thoroughly clean the mating pipe and fitting with a clean, dry cloth. Use of an approved liquid primer, purple in color shall be used.
 - 2. Apply a uniform coat of solvent to the outside of the pipe with a non-synthetic bristle brush.
 - 3. Apply solvent to fitting in a similar manner.
 - 4. Re-apply a light coat of solvent to the pipe and quickly insert it into the fitting.
 - 5. Give the pipe or fitting a quarter turn to insure even distribution of solvent and make sure the pipe is inserted to the full depth of the fitting socket.
 - 6. Wipe off excess solvent that appears at the outer side of the fitting.
 - 7. Care should be taken as to not use an excess amount of solvent, thereby causing a burr or obstruction to form on the inside of the pipe.
 - 8. The joints shall be allowed to set at least 12 hours before pressure is applied to the system.

3.06 SLEEVES

- A. The Contractor shall provide sleeves where shown on plans.

3.07 INSTALLATION OF CONTROL WIRE

- A. All control shall be installed in the piping trenches wherever possible. Wire shall be snaked into the trench as loose as possible and with as much slack as possible to allow for expansion and contraction of the wire.
- B. If it is so desired, rather than leaving slack in the wire, expansion joints in the wire may be provided at 200 foot intervals by making 5 to 6 turns of the wire around a 1 inch piece of plastic pipe.
- C. The wire shall be installed alongside the pipe. Where it is necessary to run wire in a separate trench, the wire shall be installed at a depth of not less than 24 inches.
- D. Control wire between the automatic controller and the remote control valves shall be laid in the pipe trenches not less than 18 inches deep, and via the shortest main line route between controller and valve. Control wire shall then be placed into the trench to one side of the pipe in as loose a manner as possible to allow for expansion and contraction. Extra wire in the form of expansion joints shall be left at all connections and valves.
- E. All Control wire installed in conduit located on an exterior surface or that emerges from the ground outside of an enclosure shall be type rigid steel in accordance with MnDOT Spec. 3801.

3.08 INSTALLATION OF THRUST BLOCKS

- A. Concrete thrust blocks must be provided on the thrust side whenever the pipe line:
 - 1. Changes in direction, as at tees and bends.
 - 2. Changes in size, as at reducers.
 - 3. Stops, as at a dead end.
 - 4. At valves where thrust may be expected.
- B. Thrust blocks are to be made of concrete and placed between the fitting and the trench wall. The concrete shall be fresh and extend to undisturbed (freshly cut) trench wall.
- C. On the smaller sizes of pipe, up to and including 4 inch pipe, the construction of horizontal thrust blocks requires only the simplest of forms; the stiff concrete is shaped to block a wedge with its widest part against the solid trench wall; larger blocks require some form of construction at the sides and the top to achieve proper bearing area with a minimum amount of concrete. In a stable clay soil, a 4 inch line will require 2 square feet of bearing area, a 6 inch pipe will require 6 square feet of bearing area and a 10 inch pipe will require 16 square feet of bearing area.
- D. If the ground is too soft to provide proper support for the thrust block, the Contractor will furnish and install clamps and tie rods for the retainment of the fitting.

3.09 BACKFILLING

- A. Initial Backfilling
 - 1. Selected fill dirt or sand shall be used for backfill if soil is rocky. If rocky subsoil conditions are encountered, the trenching depth should be 2 inches below normal depth to allow for proper bedding.

2. The initial backfill will always be done by hand and shoveled in evenly along both sides of the pipe and hand tamped into place. Care will be exercised to insure the soil does not bridge and fail to go under the pipe. Next, another layer will be shoveled in and tamped to provide a 4 inch to 6 inch cover over the pipe.
3. The excavated area around the sprinkler risers and sprinkler heads shall be backfilled by hand with select material free of large rocks, roots or foreign debris. If, in the opinion of the Engineer or the Owner, the excavated material is not suitable for use in backfilling, the Contractor shall furnish clean, fine sand for that purpose from an off-site source at no expense to Owner.

B. Final Backfilling

1. After the wiring has been installed and examined by the Owner, the trench shall be carefully backfilled with excavated materials approved for backfilling. The remaining backfill shall contain no lumps or rocks no larger than 3 inches. The top 6 inches of backfill shall be good topsoil, acceptable to the Owner and shall be free of lumps, rocks, subsoil, and trash.
2. The trenches will be accepted as completed when they are left in a condition to receive sod or seed without further grading.
3. Trench settlements that occur before or during the correction period shall be repaired in a manner acceptable to the Owner at the Contractor's expense.
4. The Contractor shall remove and dispose of any excess excavated material, rocks, debris continuously as the construction areas are backfilled so as to cause the least possible disruption to the existing turf.

3.10 POP UP SPRINKLERS

- A. Sprinklers shall be set plumb and level with the turf at the locations called for on the drawings. Elevation of the sprinkler heads is critical and the contractor shall exercise care to set them exactly on grade.
- B. All threaded fittings shall be OCV screwed malleable, mild iron. An appropriate joint compound shall be used.
- C. After all new sprinkler piping, risers and sprinkler heads are in place and connected, and all necessary division work has been completed, all control valves should be opened and a full head of water used to flush out the system. After the system is thoroughly flushed, the system will be tested for operation in accordance with design requirements under normal operating pressure.

3.11 CONTROL CABINET

- A. Control cabinet shall be located no further than 15 feet from source of power.
- B. Cabinet base placement consistent with section 32 13 14 PART 3.
- C. Construct the mounting bracket assembly for the control cabinet using 5/8 inch bolts anchored inside the control cabinet.

3.12 IRRIGATION SYSTEM CONTROLLERS

- A. Central Controller:
 1. The central controller will be installed at location as indicated in the Drawings.

2. Power supply for central controller and wiring from the source of power to the controller and pumps, if required, shall be included under this Contract.
3. The controller shall be installed in strict conformance with the manufacturers' recommendations and under the supervision of the supplier.

3.13 LIGHTNING ARRESTERS

- A. Each Controller shall include an Intermatic 117 VAC surge arrester Model number AG2401. This device shall be installed on the primary power supply and wired according to manufacturer's recommendations. Each Satellite or cluster of Satellites shall have a ground rod, 5/8 inch diameter by 8 feet long copper clad, attached to the grounding lug inside of the pedestal, using an 8 gauge bare copper wire or larger.

3.14 TESTING

- A. Where possible, new piping shall be subjected to a hydrostatic pressure test maintaining for at least one hour at a pressure of at least 120 psi.
- B. Cracked or defective pipe or fittings disclosed in the test shall be replaced by the Contractor with sound material and the test repeated until the results are satisfactory with the Owner and show no leakage or loss of pressure.

3.15 SPRINKLER LOCATIONS

- A. It shall be the Contractor's responsibility to establish the location of all sprinkler heads on all areas indicated on the plans in order to assure proper coverage of all areas.

3.16 WARRANTY

- A. Upon completion of irrigation system installation and training, and initial acceptance of Engineer, Contractor shall warranty all materials and workmanship for the period of One Year and shall include one complete operating season from Start-up to shut down. Any defects in materials, needed repairs, adjustments and required maintenance will be responsibility of Contractor at no additional cost to the Owner.

END OF SECTION

SECTION 32 92 00

TURF AND GRASSES

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Restoration of construction area by installation of topsoil, topsoil/compost mixture, seed, sod, soil amendments, mulch, and erosion control.

B. Related Sections:

1. Section 01 33 00 - Submittal Procedures.
2. Section 01 57 13 - Temporary Erosion and Sediment Control.

1.02 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. Seeding: Measurement will be based upon pounds of seed placed as specified, according to type of seed mixture. Payment will include soil amendments, furnishing and installing seed, preparation of surface, establishment, and all incidental items associated with the work.
2. Sodding: Measurement will be based upon units of square yards of sod installed complete in place as specified, including soil amendments, furnishing and installing sod, preparation of surface, establishment, and all incidental items associated with the work.
3. Mulch Material: Measurement will be based upon units of acres, according to type, complete in place as specified. Payment will include preparation of seedbed, fertilizer, furnishing and installing mulch including disk anchoring, and all correlated activity.
4. Rolled Erosion Prevention: Measurement will be based upon units of square yards of area restored, according to the type of blanket installed. Payment will include all costs related to furnishing and placing fertilizer, blanket, and all correlated activity.
5. Hydraulic Matrix:
 - a. Measurement will be per acre of area restored, according to the type hydraulic matrix used. Payment will include all costs related to furnishing and placing fertilizer, hydraulic matrix, and all correlated activity.
 - b. Measurement will be per square yard of area restored, according to the type hydraulic matrix used. Payment will include all costs related to furnishing and placing fertilizer, hydraulic matrix, and all correlated activity.
6. Topsoil Borrow: Measurement will be per cubic yard (loose volume) of material hauled to the Site. Payment will include all costs related to furnishing the topsoil:
 - a. All costs related to placing, shaping, and compacting the topsoil at locations shown on the Drawings or as directed by the Engineer shall be incidental to the Boulevard Grading Bid Item. Where boulevard grading is not required, all costs are considered incidental to the various Seed or Sod Bid Items.
7. Topsoil/Compost Mixture: Measurement will be per cubic yard (loose volume) of material hauled to and placed on the Site. Payment will include all costs related to furnishing the topsoil, compost, thoroughly mixing the compost with topsoil, and placing the mixture:

- a. All costs related to placing, shaping, and compacting the topsoil/compost mixture at locations shown on the Drawings or as directed by the Engineer shall be incidental to the Boulevard Grading Bid Item. Where boulevard grading is not required, all costs are considered incidental to the various Seeding, Sodding, or Planting Bid Items.
8. Emergency Overflow Swale Grading and Restoration, Including Seed and Erosion Control Blanket: Payment for the grading and restoration of the emergency overflow swale will be made at the Unit Price per square yard. This shall be considered full compensation for all labor, equipment, and materials associated with the work as specified, including the seed and erosion control blanket:
 - a. No separate measurement and payment for seed and erosion control blanket will be made for areas paid for as Emergency Overflow Swale.
9. Application of Water for Turf Establishment: Measurement shall be based on each 1,000 gallons (MG) of water applied to restored areas. Payment at the Unit Price shall be considered payment in full for all labor, equipment, water, and material necessary to complete the watering as directed:
 - a. Compensation will be made for all watering activity during the initial 45 day maintenance period for seed.
 - b. Compensation for watering will be made for all watering activity during and following the 30 day maintenance period for sod.
10. Furnishing and installation of items to secure required restoration materials, including staples for erosion control blanket, shall be considered included in the Bid Item for that particular material. No separate measurement or payment will be made for such items.
11. All costs related to sweeping and cleaning any pavement, driveways, trails, sidewalks, etc. that are impacted by restoration activities shall be considered incidental to the restoration Bid Items. No payment will be made under the Street Sweeper With Operator and Skidsteer (Bobcat) With Operator Bid Items for this work.
12. Measurement of restored areas shall be on the area actually covered. No additional compensation will be made for overlapping of restoration materials, such as erosion control blanket.
13. Payment for Bid Items included within this section will be made per MnDOT Spec. 2575.5.I. Partial payment of 50-percent of the contract unit items, with the remaining partial payment after proper maintenance and acceptance of the vegetative cover.
14. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. Minnesota Department of Transportation "Standard Specifications for Construction", 2020 Edition (MnDOT Spec.):
 1. 2575 – Establishing Vegetation and Controlling Erosion.
 2. 2574 – Soil Preparation.
 3. 3876 – Seed.
 4. 3877 – Topsoil Material.
 5. 3878 – Sod.
 6. 3881 – Fertilizer.
 7. 3882 – Mulch Material.
 8. 3884 – Hydraulic Erosion Control Products.
 9. 3885 – Rolled Erosion Prevention Products.

10. 3890 – Compost.

B. Minnesota Department of Transportation Seeding Manual 2014 (MnDOT Seeding Manual).

1.04 SUBMITTALS

A. Provide the following submittals consistent with Section 01 33 00:

1. Seed:
 - a. Provide source and invoice for seed to be used for this Project.
 - b. Producer's certificate of compliance – Written documentation verifying compliance of mixture of seed furnished. Include percentage of various seed species, year of production, germination rate, seed bag tags, and weed seed content. Submit to the Engineer at least 5 days prior to delivery.
 - c. Species within native seed mixes species shall have their origin documented by the Minnesota Crop Improvement Association (MCIA) to certify that the product is a local ecotype plant.
 - d. Provide Engineer with seed bag tags used for identification purposes.
2. Topsoil per MnDOT Spec 3877.3.
3. Sod certification per MnDOT Spec 3878.2.
4. Compost material per MnDOT Spec 3890.3.

1.05 PLANT ESTABLISHMENT PERIOD

- A. The Establishment Period for plants shall begin for immediately after installation, with the approval of the Engineer, and continue until the date that the Engineer performs a final inspection:
1. The establishment period for sod is 30 days.
 2. The establishment period for seeded areas is 45 days.
 3. The germination period and initial growth for seeded areas is 14 days.

1.06 SEQUENCING AND SCHEDULING

- A. Provide submittals prior to preconstruction meeting.
- B. Notify the Engineer 30 days prior to placement topsoil/compost mixture to allow for inspection, sampling, and testing if necessary.
- C. Notify the Engineer at least 3 days in advance of hauling topsoil borrow on Site so the Engineer may review grades prior to placement.
- D. Begin final restoration within 7 calendar days of the bituminous initial lift paving or interim bituminous course paving and demonstrate continuous progress until completed, or as modified in Milestones per Section 00 52 10, Paragraph 4.02.A.1.
- E. Roadway Rehabilitation projects, begin final restoration within 5 calendar days of the bituminous initial lift paving and demonstrate continuous progress until completed, or as modified in Milestones per Section 00 52 10, Paragraph 4.02.A.1.

PART 2 PRODUCTS

- 2.01 TOPSOIL: Topsoil Borrow Conforming to MnDOT Spec. 3877.2.B, Loam Topsoil Borrow:
- A. Loam Topsoil Borrow must be supplied from an off-site source tested in accordance with Paragraph 3.13.A., meeting the requirement of 100% of the material passing the ¾ inch sieve.
 - B. No existing on-site topsoil is to be used, unless approved by City Engineer.
- 2.02 FERTILIZER: Conform to MnDOT Spec. 3881.2.B.3, TYPE 3.
- A. Provide plant fertilizer that is commercial grade and uniform in composition and conforms to applicable state and federal regulations.
 - B. Slow-release fertilizer. A minimum of 70-percent of the nitrogen component shall be a slow-release water insoluble nitrogen.
 - C. Fertilizer shall contain a minimum percentage by weight 10-10-10 (NKP).
- 2.03 SOD: Conform to MnDOT Spec. 3878.2.C, Mineral Sod.
- 2.04 SEED: Conform to MnDOT Spec. 3876:
- A. Lawns: MnDOT Mixture 25-151.
 - B. General Roadside: MnDOT Mixture 25-141.
 - C. Temporary Spring Cover: MnDOT Mixture 21-111.
 - D. Temporary Fall Cover: MnDOT Mixture 21-112.
 - E. Temporary Mix: MnDOT Mixture 21-113.
 - F. Pond Edge Mix: MnDOT Mixture 33-261.
- 2.05 MULCH: Conform to MnDOT Spec 3882:
- A. Type 1, clean grain straw unless identified otherwise.
 - B. Hydraulic erosion control products may be used in lieu of mulch with the approval of the Engineer.
- 2.06 HYDRAULIC EROSION CONTROL PRODUCTS (HECPS): Conform to MnDOT Spec 3884
- A. Hydraulic Matrix:
 - 1. Mulch: Conform to MnDOT Spec. 3884.2.B.2
 - 2. Bonded Fiber Matrix (BFM): Conform to MnDOT Spec 3884.2.B.4

2.07 ROLLED EROSION PREVENTION PRODUCTS: Conform to MnDOT Spec 3885

- A. Erosion Control Blanket, Category 20, Straw unless identified otherwise in the Drawings.
- B. Turf Reinforcement Mat, Category 70 unless identified otherwise in the Drawings.

2.08 COMPOST: Conform to MnDOT Spec. 3890.2.B, Grade 2 Compost.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Review restoration areas with the Engineer. Determine locations for seed or sod. Schedule for restoration of areas may be revised to fit field conditions:
 - 1. No compensation will be allowed for areas considered to be needlessly restored if restoration activities are performed without the authorization of the Engineer.
- B. Finish grades are to be inspected and approved by the Engineer prior to start of restoration.

3.02 DELIVERY AND STORAGE

- A. Delivery:
 - 1. Notify the Engineer of the delivery schedule in advance so the plant material may be inspected upon arrival at the Site. Remove unacceptable plant material from the Site immediately.
 - 2. Deliver fertilizer and lime to the Site in the original, unopened containers bearing the manufacturer's guaranteed chemical analysis, name, trade name or trademark, and in conformance to state and federal law. In lieu of containers, fertilizer and lime may be furnished in bulk and a certificate indicating the above information shall accompany each delivery.
 - 3. During Delivery: Protect sod from drying out and seed from contamination.
- B. Storage:
 - 1. Sprinkle sod with water and cover with moist burlap, straw, or other approved covering, and protect from exposure to wind and direct sunlight. Covering should permit air circulation to alleviate heat development.
 - 2. Keep seed, lime, and fertilizer in dry storage away from contaminants.

3.03 PREPARATION

- A. General: Conform to MnDOT Spec. 2575.3.A.
- B. Soil Preparation: Conform to MnDOT Spec. 2574.
- C. Fertilizers and Conditioners: Conform to MnDOT Spec. 3881 and 3879:
 - 1. Apply fertilizer at a rate of 400 lbs. per acre (9.2 lbs./1,000 sq. ft.).
 - 2. Where soil pH is lower than 5.5, apply lime at 3 tons per acre (140 lbs./1,000 sq. ft.).

3.04 TOPSOIL/COMPOST MIX

- A. Subgrade to be inspected and approved by Engineer prior to placement of topsoil/compost mix.
- B. Construct mix by thoroughly by blending topsoil and compost at 70-percent/30-percent ratio:
 - 1. Off site blending of topsoil and compost is required.
 - 2. The blended materials shall be screened to 1 inch size.
- C. 6 inch minimum compacted thickness.

3.05 SOWING SEED

- A. Seeding Preparation and Application: Conform to MnDOT Spec. 2574 and 2575.3.B for the mixes specified.
- B. Prior to placing hydraulic erosion control products (hydraulic matrix):
 - 1. Install seed prior to hydraulic matrix installation using a “brilliant type” seeder to evenly spread seed over the entire Site.
 - 2. The Site shall be harrowed or raked parallel to the slope contours following seeding.
 - 3. The Site shall be packed using a culti-packer or equivalent, following harrowing.
 - 4. Application of fertilizer.

3.06 PLACING SOD

- A. Conform to MnDOT Spec. 2575.3.F.
- B. Place, shape, and compact 6 inches of topsoil or 6 inches of topsoil/compost mix, as appropriate, prior to placement of sod.

3.07 MULCH: Conform to Section 01 57 13.

3.08 ROLLED EROSION PREVENTION PRODUCTS

- A. Erosion control blanket shall be installed immediately following seeding in accordance with MnDOT Spec. 2575.3.G.2, and as modified below.
- B. Raking or harrowing of soil/seed shall be done before installation of erosion control blanket.
- C. Install blanket parallel to the direction of flow in all cases.
- D. If permanent seeding is not available at the time of blanket installation, this material will have to be removed, re-seeded, and installed again as a permanent erosion control measure. If permanent seeding is available at the time of initial installation, a 1-time proper installation is acceptable.

3.09 HYDRAULIC EROSION CONTROL PRODUCTS

- A. Hydraulic Matrix:
 - 1. Apply in conformance with MnDOT Spec. 2575.3.E.

2. Raking or harrowing of soil/seed and slope (cat) tracking shall be done before installation of hydraulic matrix.
3. Apply hydraulic matrix in at least 2 opposing directions so that a shadowing effect leaving the back side of a soil clod unprotected is minimized.
4. Application Rate:
 - a. Slopes steeper than 1:4: Apply at a rate of 2,800 lbs per acre. Two applications may be necessary.
 - b. All other slopes: apply at a rate of 2,100 lbs per acre.
5. Apply hydraulic matrix immediately following seeding.

3.10 EMERGENCY OVERFLOW SWALE

- A. Construct emergency overflow swales at locations shown on the Drawings.
- B. Grade the overflows as staked and directed.
- C. Upon approval of the grading, place topsoil, seed, and erosion control blanket.
- D. Re-establish the emergency overflow swale as part of the final Site clean-up and restoration.

3.11 SWEEPING AND CLEANUP

- A. Immediately following the topsoil, seed and sod placement, sweep and clean all pavement, driveways, trails and sidewalks impacted these operations:
 1. Final clean up of the bituminous surface with the use of a power pickup broom and front end loader/skidsteer.
 2. Street sweeping operations must include the application of water to effectively remove fine materials from pavement areas. The appropriate amount of water shall be applied, eliminating dust as part of the sweeping operations.
 3. Respond within 24 hours of a request by the Engineer, with the necessary street sweeping equipment to perform the cleanup operations.

3.12 MAINTENANCE:

- A. Conform to MnDOT Spec. 2575.3.K, or as modified herein:
 1. Restored areas that have been satisfactorily completed and are disturbed by additional construction activity required by the timing and sequencing of the Work shall be restored over to the same requirements of the original work.
 2. Any sod that does not show definite growth and establishment 30 days after installation shall be replaced and established at the proper season by the Contractor at his/her expense.
 3. Seed maintenance shall be done in conformance with the MnDOT Seeding Manual – With the following exception: Water the seeded areas to ensure establishment:
 - a. Compensation will be made for all watering activity during the initial 45 day maintenance period for seed, per Bid Item for Application of Water for Turf Establishment.
 - b. At the end of the 45 day maintenance period, Engineer will make an inspection of all restored areas. Engineer may direct Contractor to continue watering of any area if deemed necessary. Frequency of watering shall be as directed and modified by the Engineer. Duration of watering shall continue at the directed frequency until Contractor is directed by Engineer to cease.

4. Weed control shall be the responsibility of the contractor during the initial 45 day establishment period. Weed control may include spot spraying and mowing to control weed growth.
5. Seeded areas that do not show seed germination 14 days after installation shall be replaced by the Contractor at his/her expense and watering will be required every day at a minimum.
6. Seeded areas that do not show definite growth and establishment 45 days after installation shall be replaced and established by the Contractor at his/her expense.
7. Watering of sod areas shall be done for a minimum period of 30 days from installation sufficient to ensure establishment of permanent vegetation:
 - a. At the end of the 30 day maintenance period, Engineer will make an inspection of all restored areas. Engineer may direct Contractor to continue watering of any area if deemed necessary. Frequency of watering shall be as directed and modified by the Engineer. Duration of watering shall continue at the directed frequency until Contractor is directed by Engineer to cease.

3.13 FIELD QUALITY CONTROL

- A. Topsoil Borrow:
 1. Source testing:
 - a. The Contractor shall split and test a sample from prospective source with the Owner prior to the preconstruction meeting.
 - b. The Contractor's QC sample and Owner's QA sample shall meet the requirements of Paragraph 2.01.A. If the requirements are not met the Contractor must provide material from another source.
 2. Placement testing:
 - a. The Contractor shall split and test a sample onsite at the time of placement with the Owner.
 - b. The Contractor's QC sample and Owner's QA sample shall meet the requirements of Paragraph 2.01.A. If the requirements are not met the material will be rejected. The Contractor is responsible for all costs associated with additional testing due to failing materials.

3.14 INSPECTION AND ACCEPTANCE

- A. Seeding and turf work will be inspected for acceptance in parts agreeable to the Engineer, provided Work offered for inspection is complete, including maintenance for the portion in question.
- B. Seeded areas will be inspected for germination and growth 14 days after placement. Any restored areas that do not show definite germination and growth, as determined by the Engineer, shall be replaced and re-established by the Contractor at his/her expense.
- C. At the conclusion of the establishment period(s), a final inspection of planting(s) will be made to determine the conditions of areas specified for landscaping.
- D. When inspected landscape work does not comply with requirements, replace rejected Work and continue specified maintenance until re-inspected by Engineer and found to be acceptable. Remove rejected materials from the Site.

- E. Seed evaluation at the conclusion of the establishment period related to acceptance, shall be based on at least 1 species per square foot with 90-percent of seeding per square foot being of the permanent seed species within the applied mix.
- F. Boulevard settlements that occur during the correction period and are greater than 1 inch as measured by a 10 foot straight edge will be repaired in a manner acceptable to the Owner at the Contractor's expense.

END OF SECTION

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SECTION 32 93 05

PLANTING MATERIALS, INSTALLATION, AND ESTABLISHMENT

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. This section covers the furnishing of all labor, materials, tools, equipment and performance of all work and services necessary or incidental to plant installation as indicated on the drawings or as specified herein.

1.02 PRICE AND PAYMENT PROCEDURES:

A. Measurement and Payment:

1. Measurement and compensation for the following items shall be paid according to the referenced specification or as modified below:
 - a. Deciduous Trees or Coniferous Trees: Measurement will be by each tree species, variety, and caliper and/or size range furnished and planted in accordance with the Drawings. Payment shall include:
 - 1) Excavation for tree planting hole.
 - 2) Furnishing and Planting of tree.
 - 3) Furnishing and installing accessories.
 - 4) Maintenance and watering, including furnishing and installing slow release watering bag.
 - b. Shrubs: Measurement will be by each shrub species, variety, and size range furnished and planted in accordance with the Drawings. Payment shall include:
 - 1) Excavation for planting hole.
 - 2) Furnishing and Planting of shrub.
 - 3) Furnishing and placing mulch.
 - c. Perennials: Measurement will be by each perennial species, variety, and size range furnished and planted in accordance with the Drawings. Payment shall include:
 - 1) Excavation for planting hole.
 - 2) Furnishing and Planting of perennial.
 - 3) Furnishing and placing mulch.
 - d. Transplant Tree: Measurement will be per each tree, regardless of size or type. Payment will include salvaging the tree, temporarily storing the tree during construction, and re-planting the tree as specified in the same general location and as directed by the Engineer.
2. All other work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. Minnesota Department of Transportation "Standard Specifications for Construction", 2020 (MnDOT Spec.):
1. 2571 – Plant Installation and Establishment.
 2. 3861 – Planting Materials.

3. 3881 – Fertilizer.
 4. 3882 – Mulch Material.
- B. American National Standards Institute (ANSI)
1. ANSI Z60.1 – American Standard for Nursery Stock.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Nursery Stock:
1. Plant materials shall conform to the requirements of MnDOT Spec. 3861 and ANZ60.1.
 2. No substitutions will be accepted without written approval from the Owner or Engineer.
 3. Treated burlap will be allowed on soil balls, as an exception to MnDOT Spec. 2571.3.F, and 3861.2.F, if vertical slits are cut through the burlap. The vertical slits shall be made at 6 inch intervals horizontally around the circumference of the root ball and shall be made from the top of the root ball extending downward and shall be done in a manner which does not damage the root system.
- B. Fertilizer: Conform to MnDOT Spec. 3881.2.B.3 - Type 3 - Slow-Release Fertilizer.
- C. Mulch: Conform to MnDOT Spec. 3882.2.E, and as modified herein:
1. Shredded hardwood mulch shall be provided free of dirt, ashes, sawdust, rocks, leaves, roots, black bark mold or any other debris.
- D. Soil moisture Amendment Pellets: Soil Moist Professional Granular by JRM Chemical, Inc. or approved equal.
- E. Slow Release Watering Bag: Treegator® Original or approved equal.

PART 3 EXECUTION

3.01 CONSTRUCTION REQUIREMENTS

- A. Planting operations shall not be started, nor shall any planting stock be delivered to the Project site, until all other work has been completed in the area of the proposed planting site as determined by the Engineer.
- B. Notify the Engineer orally or in writing, as designated by the Engineer, at least 24 hours prior to the start of any planting operations during this Contract, including layout staking, clearing, weed spraying, soil preparation, watering, mulching, plant protection, weeding and clean-up.
- C. All planting operations shall be performed during normal working hours and under conditions suitable for such work, as determined by the Engineer, unless otherwise authorized by the Engineer.
- D. The Engineer and City Parks Department will field stake the location of trees to be planted. All other plantings shall be staked by the contractor then reviewed and accepted by the City prior to installation.

- E. Trees delivered with the root flare more than 3 inches below the ball will be rejected.
- F. Set tree plumb and maintain throughout the establishment period. Place root ball on firm unexcavated or tamped soil. Tamp soil around base of the root ball with foot pressure so that root ball does not shift. Remove all flagging and labels.
- G. Prune branches to a minimum 5 foot to allow for a clear sight distance. Do not heavily prune the tree at planting. Prune only crossover limbs, co-dominant leaders and broken branches. Some interior twigs and lateral branches maybe pruned. Do not remove the terminal buds that extends to the edge of the crown.
- H. During the spring planting season, any evergreen plant delivered with new growth in advance stage of candling out will be rejected. Evergreen trees not fully branched from the bottom to top will be rejected and those terminal leaders exceeding 12 inches in length will be rejected.
- I. Trees planted within heavy soils, extend the excavation and backfill soil around the root ball to a point 6 inches below the bottom of the root ball to ensure adequate drainage.
- J. Establish final grade prior to planting trees.
- K. Balled and Burlapped Tree Planting:
 - 1. Construct planting hole to be 3 times as wide as the diameter of the root ball.
 - 2. Construct planting hole to be deep enough so the root flare is 1-2 inches above finished grade.
 - 3. Scarify the sides of the planting hole to avoid glazing.
 - 4. Remove any excess soil to expose the root flare after placing the tree in the planting hole and adjust the depth as necessary to keep root flare 1-2 inches above finished grade.
 - 5. Remove a minimum 2/3 of the wire basket and as much burlap as possible from the root ball.
 - 6. Remove all twine or rope and plastic wrap from the root ball.
 - 7. Backfill with soil from the original planting hole, tamping every few inches while backfilling. Keep the root flare exposed.
 - 8. Taper the outside edges of the backfill slightly below the original grade to help retain water.
- L. Container Grown Trees:
 - 1. Construct planting hole to be 3 times as wide as the diameter of the root ball.
 - 2. Construct planting hole to be deep enough so the root flare is 1-2 inches above finished grade.
 - 3. Scarify the sides of the planting hole to avoid glazing.
 - 4. Remove the container from the root ball by slicing the sides of the container. Use fingers or small tools to pull roots out of the outer layer of the potting soil, then cut or pull apart any circling roots.
 - 5. If the tree is heavily pot bound, use the box cut method to reduce the chance of girdling roots. Using a pruning saw, cut 1-3 inches off the roots on 4 sides, leaving a square or box to be planted.
 - 6. Remove any excess soil to expose the root flare after placing the tree in the planting hole and adjust the depth as necessary to keep root flare 1-2 inches above finished grade.
 - 7. Backfill with soil from the original planting hole, tamping every few inches while backfilling. Keep the root flare exposed.
 - 8. Taper the outside edges of the backfill slightly below the original grade to help retain water.

M. Mulching:

1. Place a layer of mulch 2-4 inches thick extending 1-2 inches past the outside of the planting hole.
2. Do not mulch in contact with tree trunk. Leave 2-3 inches of space between the root flare and mulch.
3. Place mulch within 48 hours of second watering.
4. The outside boundary of the mulch ring should be raised slightly to help retain water.
5. Stake only as needed and directed by the Engineer.
6. Stake when the root ball moves easily while the top of the tree is being moved back and forth or when the top cannot support itself and is bending.
7. Materials directly connecting to the tree should have a broad smooth surface.
8. Place stakes 6 inches inside the mulched area directly across from each other.
9. Wire or rope used to connect the stake to the tree should be loose enough to allow the tree to move slightly in all directions.
10. Stake the tree as low as possible, but not higher than $\frac{2}{3}$ the height of the tree.

N. Soil Moisture Amendment:

1. Apply per manufacturer's recommendations.
2. This item shall be considered incidental to the respective planting.

O. Shrub and Perennial Planting:

1. Excavate planting hole to a width of 2 times the container size.
2. Excavate planting hole to the depth of the container.
3. Furnish and install specified plant.
4. If plant is shipped in a container remove the container from the root ball by slicing the sides of the container. Use fingers or small tools to pull roots out of the outer layer of the potting soil, then cut or pull apart any circling roots.
5. Set root ball flush with finish grade.
6. Backfill with soil from the original planting hole. Respread any excess excavated material.
7. Place mulch 3 inches thick, unless otherwise specified on the drawings. Do not place mulch in contact with the plant. Place mulch within 48 hours of second watering.
8. Do not heavily prune at planting. Prune only broken or dead branches, retaining natural form.

P. The Plant Establishment Period shall be 2 years, and shall begin upon written approval of the work by the Engineer. Replacement of dead or defective trees or incidental materials shall be required immediately or as soon as is practicable within an appropriate period of time as ordered by the Owner or Engineer. It is anticipated that the plant establishment will be included in the specified warranty period and that no retainage will be held throughout the plant establishment period unless the Owner or Engineer determine that the materials or procedures warrant such a retainage.

Q. Watering during the Plant Establishment Period shall consist of maintaining adequate (but not excessive) soil moisture at all times. Each tree planted shall have a slow release watering bag furnished and installed per manufacturer's recommendation in addition to the watering requirements. It is recommended that after the initial thorough "watering in", every tree should receive a thorough watering, as necessary, at weekly intervals, on the average, throughout the growing season (approximately May 1 thru October 1). Avoid over watering all trees. **GENERAL** water guidelines for the average condition are as follows:

<u>Plant Type</u>	<u>Average Amount of Water Per Application</u>
Machine Transplanted Trees (3" caliper plus)	50 to 100 Gallons
Balled & Burlapped Trees	20 Gallons ±
Bare Root Trees	15 Gallons ±
Balled & Burlapped Shrubs	10 Gallons ±
Bare Root or Container Shrubs	7 Gallons ±

3.02 DISPOSAL OF EXCESS AND WASTE MATERIALS

- A. Remove excess and waste materials, including unacceptable excavated material, trash, and debris from the job site.

END OF SECTION

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SECTION 33 01 38

CURED-IN-PLACE PIPE (CIPP) GRAVITY

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. This section covers the furnishing of all labor, materials, tools, equipment and performances of all work and services necessary or incidental to the installation of a resin-impregnated flexible liner which is inserted into the original conduit by use of a hydrostatic head. Methods that are pulled in and inflated rather than inverted will be considered, providing they meet the other provisions of this specification. When cured, the finished pipe (CIPP) will be continuous and tight fitting.

B. Related Sections:

1. Section 01 33 00 – Submittal Procedures.

1.02 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. Inline CIPP: Measurement will be per linear foot of liner installed, according to type and diameter of pipe. Payment shall be compensation in full for all equipment, materials, and labor required to complete the CIPP installation.
2. CIPP Short Liner: Measurement will be per each according to type of pipe, diameter, and length of short liner installed. Payment shall be compensation in full for all equipment, materials, and labor required to complete the CIPP short liner installation.
3. Lateral Reinstatement: Measurement will be per each, regardless of the size of the wye. Payment shall be compensation in full for all labor, materials, and equipment required to determine which are active, and complete the lateral reinstatements of all lateral lines conveying sewage in accordance with these specifications.
4. Trim Protruding Tap: Measurement will be per each. Payment shall be compensation in full for all labor, equipment and materials required to determine which taps are to be trimmed and subsequent trimming, regardless of tap diameter.
5. Lateral Service T-Liner: Measurement will be on the basis of each. Payment will constitute full compensation for all work and costs to furnish and install lateral service T-liner complete in place, including line cleaning and clearing before installation, bypass pumping, dewatering, sealing the liner at the ends, testing, and pre and post television inspection.
6. No alteration of Bid Unit Prices will be allowed due to modification of Project quantity by Engineer and Owner based on updated information from pre-construction television inspection.
7. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

- B. The furnishing and installing of specific items and /or the performance of work under certain circumstances shall not be individually paid in the absence of a specific bid item for the work. The costs shall be included in the unit price bid for the CIPP, as indicated. Such items of work include, but are not limited to:

1. Coordination with City to coordinate access to the sanitary sewer systems.
2. Securing and withdrawing from a water source.
3. Furnishing, installing and maintaining traffic control devices where necessary not already provided for by bid items.
4. Pre-installation and post-installation cleaning and televising.
5. Removal and disposal of internal debris from the sewer mainline and services prior to installation.
6. Bypass pumping unless otherwise specified and included in the bid form.
7. Providing all required notifications of restricted sewer service periods to the Owner and residents affected by the work as well as coordination of resident relocations and reimbursements, if applicable.
8. Installation of pipe pre-liners or grouting if required to install CIPP in areas of excess infiltration.
9. Dye testing as required to determine active laterals (where needed).
10. Installation of hydrophilic end seals at the ends of the liner in each manhole.
11. Removal of liner in manholes if pulling/inverting through manholes (unless manhole is being abandoned).
12. Excavation and restoration required to reinstate sewer services if the Contractor is unable to reinstate services via trenchless methods.
13. General project related restoration where not already provided by bid items.

1.03 REFERENCES

- A. This specification references below are made a part hereof by such reference and shall be the latest edition and revision thereof. In case of conflicting requirements between this specification and the ASTM referenced sections, this specification will govern.
 1. ASTM F2019 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Pulled in Place Installation of Glass Reinforced Plastics (GRP) Cured-In-Place Pipe (CIPP)
 2. ASTM F1216 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube.
 3. ASTM F1743 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Pull in and inflate and Curing of a Resin-Impregnated Tube.
 4. ASTM F2561 – Standard Practice for Rehabilitation of a Sewer Service Lateral and its Connection to the Main Using a One-Piece Main and Lateral Cured-in-Place Liner.
 5. ASTM D543 Test Method for Resistance of Plastics to Chemical Reagents
 6. ASTM D578 Standard Specification Glass Fiber Strands
 7. ASTM D638 Standard Test Method for Tensile Properties of Plastics.
 8. ASTM D790 Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
 9. ASTM D2122 Standard 1 Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings
 10. ASTM D2990 Standard Test Methods for Tensile, Compressive, and Flexural Creep and Creep-Rupture of Plastics
 11. ASTM D3567 Standard Practice for Determining Dimensions of “Fiberglass” (Glass-Fiber Reinforced Thermosetting Resin) Pipe and Fittings
 12. ASTM D5813 Standard Specification for Cured-in Place Thermosetting Resin Sewer Pipe

- B. Unless noted otherwise, the provisions in this section are in addition to the referenced specification.

1.04 SUBMITTALS

- A. Submit the following items consistent with Section 01 33 00:

1. Inline CIPP and CIPP Short Liner:

- a. The Contractor shall submit, prior to the installation or use of any lining materials or equipment, certified test results from the manufacturers which indicate that all materials conform to the applicable requirements.
- b. A copy of the license or certificate verifying the manufacturer's or licensor's approval of the INSTALLER.
- c. Chemical resistance submittals --- The Contractor shall submit test results of the resin proposed that meet the chemical resistance requirements of ASTM F2019, Section 5.2.6. The chemical resistance tests will be completed in accordance with Test Method D543.
- d. CIPP Field Samples ---Field sampling procedure shall be in accordance with ASTM 2019 and in accordance with ASTM D5813.
- e. MSDS Sheets --- The Contractor shall submit Material Safety Data Sheets for all resins, and other additives such as accelerants, colorants, and lubricants utilized in the pipe liner/lining process.
- f. Manufacturer Protocols - The Contractor shall submit manufacturer information that describes the materials, curing speeds/schedule, curing installation processes, installation pressures, temperature limitations, and recommended post curing documentation.
- g. Residential Informational Handout - The Contractor shall submit an informational hand out that describes the materials, processes, installation, pressures, temperature limitations, and odors associated with the lining process that shall be provided at the request of concerned residents.
- h. Proposed plan for temporary conveyance of sewer flows and bypass monitoring.
- i. Proposed construction schedule.
- j. Liner pipe thickness design for each pipe segment. No liner will be approved for installation until liner thickness calculations have been submitted and reviewed for conformance with the specification.
- k. Evidence of the INSTALLER's experience including a list of similar projects completed within the previous 2 years.
- l. Description of cure method(s) proposed by the Contractor.

2. Lateral Service T liner:

a. Product Data:

1) Resin:

- a) Long term creep test data confirming the resin system's 50-year design life in accordance with ASTM D2990.
- b) Chemical Resistance in accordance with ASTM F1216.
- c) Certificate of Compliance in accordance with ASTM F1216.
- d) Material Safety Data Sheets (MSDS).

2) Liner:

- a) Certificate of Compliance in accordance with ASTM 1216 for inversion tubes.
- b) Certificate of Compliance in accordance with ASTM 1743 for pull in place tubes.

- b. CIPP wall thickness design calculations in accordance with ASTM F1216. Design calculations will include applicable designs as follows:

- 1) 4- thru 6-inch diameter lateral liner assuming Fully Deteriorated conditions.
- 2) Main line pipe liner assuming Partially Deteriorated conditions when the main line pipe is lined.
3. Main line pipe liner assuming Fully Deteriorated conditions when the main line pipe is NOT lined.

B. Televising Log:

1. All televising and construction logs, or copies thereof, shall become the property of the Owner. This includes the videos made at the beginning of the project just prior to the installation of the liner.
2. Televising logs shall be provided in thumb drive format.
3. Two copies of all thumb drives shall be submitted.

1.05 QUALITY ASSURANCE

A. Televising completed work:

1. Provide Engineer a minimum 72-hour advance notice prior to televising to allow monitoring of the process.
2. Provide the Engineer with a copy of the TV inspection tape, DVD format.

B. Test samples of the cured material for physical strength before a sample may be taken from the wet out tube, clamped between flat plates, and cured in the down-tube.

PART 2 PRODUCTS

2.01 PREQUALIFICATION

A. Only bids for pre-qualified products will be accepted. Bids submitted for products or from Contractors that have not been pre-qualified may be rejected, pending review by the Owner. The Contractor and the proposed method of reconstruction and the product manufacturer's name shall be clearly identified on the bid.

B. Pre-qualified Products and Installers:

1. Insituform Technologies USA, LLC.
 - a. 1140 Bunker Lake Boulevard NW, Anoka, MN 55303, Telephone: 651-762-1238
2. (National Liner) Visu-Sewer
 - a. 3155 104th NE Lane, Blaine, MN 55449, Telephone: 763-252-0004
3. Veit Companies
 - a. 14000 Veit Place Rogers MN 55374, Telephone 763-428-2242
4. Granite Inliner
 - a. 16028 Forest Blvd N. PO Box 353, Hugo, MN 55038, Telephone 612-369-1633
5. Michels Pipe Service – A Division of Michaels Corporation
 - a. 817 West Main Street, P.O. Box 128, Brownsville, WI 53006, Telephone: 920-583-3132
6. Sak Construction
 - a. 864 Hoff Road, O'Fallon, MO 63366, Telephone 626-385-1000
7. Hydro-Klean
 - a. 333 NM 49th Place, Des Moines, IA 50313, Telephone 855-845-5326
8. SJ Louis Construction
 - a. 1351 Broadway St W, Rockville, MN 56369, Telephone 320-253-9291

C. Qualification Process:

1. Contractors wishing to qualify for this project must submit a copy of the license or certificate verifying the manufacturer's or licensor's approval, and evidence of the INSTALLER's experience including the number, total length, and locations of inversions installed to date using the proposed materials and methods together with the names and phone numbers of facility owners to the Engineer 5 days prior to the opening of bids to allow time for evaluation. The Contractor must have at least five (5) years of active experience installing the CIPP product.
2. The final decision to accept or reject the applicant lies solely with the Engineer and Owner. All decision will be based upon the long-term best interest of the City.

2.02 MATERIALS

- A. Liner - The liner material shall meet the requirements of ASTM F1216 and/or ASTM F2019.
- B. Resin - The resin system shall meet the requirements of ASTM F1216 and/or ASTM F2019. Neat resin shall be used for all lining of PVC pipes.
- C. Approved T liners:
 1. BLD "Service Connection Seal + Lateral" of BLD Services, LLC
 2. LMK "T-Liner" Main-to-Lateral Lining System

2.03 STRUCTURAL REQUIREMENTS

- A. The CIPP shall be designed as per ASTM F1216, Appendix X1. The CIPP design shall assume no bonding to the original pipe wall but a tight, intimate contact is required.
- B. The CIPP shall be designed using a Long Term Creep Retention Factor of fifty percent (50%) of the initial design flexural modulus as determine by ASTM D-790 test method. This value shall be used unless the Contractor submits long term test data (ASTM D2990) to substantiate a higher retention factor.
- C. The layers of the cured CIPP shall be uniformly bonded. It shall not be possible to separate any two layers with a probe or point of a knife blade so that the layers separate cleanly or the probe or knife blade moves freely between the layers.
- D. If separation of the layers occurs during testing of field samples, new samples will be cut from the work. Any reoccurrence may cause rejection of the work.
- E. The CIPP shall conform to the following properties:

	Standard	Min Value	Enhanced Value	UV Value
Flexural Strength	ASTM - D790	4,500 psi	4,500 psi	6,500 psi
Modulus of Elasticity	ASTM - D790	250,000 psi	400,000 psi	725,000 psi

F. The design parameters are:

Pipe diameter	8	Inches
Maximum depth from finished ground to invert	15	Feet
Minimum depth from finished ground to invert	8	Feet
Groundwater Depth	5 feet below surface	Feet
Cover density (assumed)	120	Lbs/cf
Design Safety Factor (1.5 for pipes 36 inches and larger)	2.0	Value
Ovality	5%	Percent
Enhancement Factor (K)	7.0	Value
Poisson's Ratio	0.3	Value
Level of Deterioration	Fully Det	Value
Creep Retention Factor	50%	Value
Soil Modulus	1000 (0-15 feet)	psi
Host Pipe Loading	H20 Highway	Value

G. The required structural CIPP wall thickness shall be based as a minimum, on the physical properties listed above and in accordance with the Design Equations in the appendix of ASTM F1216. The finished/cured liner thickness shall exceed minimum thickness requirements set forth by the equations in the appendix of ASTM F1216.

2.04 TESTING REQUIREMENT

- A. Chemical Resistance - The Contractor shall certify that CIPP shall meet the chemical resistance requirements of ASTM F1216, Appendix X2. CIPP samples for testing shall be of liner and resin system similar to that proposed for actual construction. It is required that CIPP samples with and without plastic coating meet these chemical testing requirements.
- B. Hydraulic Capacity - The Contractor shall certify that the CIPP shall have a minimum of the full flow capacity of the original pipe before rehabilitation. Calculated capacities may be derived using a commonly accepted roughness coefficient for the existing pipe material taking into consideration its age and condition. The roughness coefficient of the CIPP shall be verified by third party test data.
- C. CIPP Field Samples - When requested by the Owner, the Contractor shall submit test results from previous field installations in the USA of the same resin system and liner materials as proposed for the actual installation. These test results must verify that the CIPP physical properties specified in Section 2.3.D. have been achieved in previous field applications. Testing samples for this project shall be made and tested as described in Section 3.4.A.

PART 3 EXECUTION

3.01 GENERAL

- A. The Contractor shall secure his own source of water. The Contractor may contact the Owner to determine whether water is available from the Owner and the associated cost.
- B. It shall be the responsibility of the owner to locate and designate all manhole access points open and accessible for the work and provide rights of access to these points. If a street must be closed to traffic because of the orientation of the sewer, the Contractor shall furnish and install all necessary traffic control devices until the street is opened to traffic.
- C. Cleaning of Sewer Lines - The Contractor shall remove all internal debris out of the sewer line that will interfere with the installation of CIPP. The Contractor shall secure their own disposal site for all debris removed from the sewers.
- D. Bypassing Sewage - The Contractor shall provide for the flow of sewage around the section or sections of pipe designated for lining. The bypass shall be made by plugging the line at an existing upstream manhole and pumping the flow into a downstream manhole or adjacent system. The pump and bypass lines shall be of adequate capacity and size to handle the flow.
- E. Inspection of Pipelines - Inspection of pipelines shall be performed by experienced personnel trained in locating breaks, obstacles and service connections by closed circuit television. The interior of the pipeline shall be carefully inspected to determine the location of any conditions that may prevent proper installation of CIPP into the pipelines, and it shall be noted so that these conditions can be corrected.
- F. Line Obstructions - It shall be the responsibility of the Contractor to clear the line of obstructions such as solids and roots that will prevent the proper insertion of CIPP. If pre-installation inspection reveals an obstruction such as a protruding service connection, offset joint, or a collapse that will prevent the inversion process, and it cannot be removed by conventional sewer cleaning equipment, the Contractor shall immediately notify the Owner. The Owner may choose to have the Contractor make a point repair excavation to uncover and remove or repair the obstruction. Such excavation shall be considered as a separate pay item.
- G. The Contractor shall notify the Owner prior to initiating cleaning and flushing and shall coordinate his operations with the Owner.
- H. The Contractor shall determine the length and diameter of the pipe to be lined prior to fabrication of the liner. No additional compensation will be paid for measured diameters, which vary from measure indicated on the plans or bid form.
- I. The Contractor shall provide all necessary equipment, jigs, pipe pieces, sandbags, labor, etc. to install CIPP tube through the available access locations provided and shown on the plans. The Contractor shall also cut open, reinstate, and prepare the edges of cut surfaces in a clean and orderly fashion to reopen the pipe within manholes that have been lined through. No additional compensation shall be made for lined through manholes, and such items of work shall be considered incidental to the contract.

3.02 NOTIFICATION

- A. Notice required. At least six days before the start of lining, the Contractor shall provide notice, including the approximate schedule of lining, as described below.

1. Written notice must be given to the adult residents of buildings, and to the owner or administrator of any property directly served by the sewer to be lined.
 2. The notice must be mailed or hand delivered to the owner or administrator of a child care building, school building, commercial business, and/or industry.
 3. The notice may be put on or under the door of each residence, one notice for each single-family building and one notice for each unit of a multi-unit building.
- B. Contents of notice to residents, administrator and Owner. The notice shall specify the days and the hours during which sewer service will be restricted.
- C. Reminder Notice: A written, or verbal reminder notice shall be delivered at least 48 hours prior to the actual work.

3.03 CONSTRUCTION REQUIREMENTS

- A. CIPP installation shall be in accordance with ASTM F1216, Section 7, or ASTM F2019, Section 6.4 with the following additional requirements:
1. Resin Impregnation - The quantity of resin used for liner impregnation shall be sufficient to fill the volume of air voids in the liner with additional allowances for polymerization shrinkage and the loss of resin through cracks and irregularities in the original pipe wall. A vacuum impregnation process shall be used. A roller system shall be used to uniformly distribute the resin throughout the liner.
 2. Liner insertion shall be performed in accordance with manufacturer's recommendations and in such a way to fully extend the liner to its termination point, hold the liner tight against the pipe wall, and produce dimples at service connections and flared ends at maintenance holes. Lubricants may be used as necessary. Care shall be taken so as not to overstress the felt fiber.
 3. Unless otherwise indicated in the plans or authorized in writing by the Engineer, steam curing, water curing, and UV curing shall all be considered as an acceptable cure method for this project:
 - a. Steam Cure:
 - 1) After inversion is completed, suitable steam-generating equipment is required to distribute steam throughout the pipe.
 - 2) The equipment should be capable of delivering steam throughout the section to uniformly raise the temperature within the pipe above the temperature required to effect a cure of the resin.
 - 3) The temperature and pressure maintained in the pipe and the duration of the cure period shall be as recommended by the manufacturer.
 - 4) The curing of the CIPP must take into account the existing pipe material, the resin system, and ground conditions (temperature, moisture level, and thermal conductivity of soil).
 - 5) Cooling:
 - a) The new pipe should be cooled to a temperature below 113 degrees Fahrenheit before relieving the internal pressure within the section.
 - b) Cool-down may be accomplished by the introduction of cool water into the section to replace the mixture of air and steam being drained from a small hole made in the downstream end.
 - c) Care shall be taken in the release of head so that a vacuum will not be developed that could damage the newly installed pipe.

- b. Circulated Heated Water Cure:
 - 1) After inversion is completed, suitable heat source and water recirculation equipment are required to circulate heated water throughout the pipe.
 - 2) The equipment should be capable of delivering hot water throughout the section to uniformly raise the water temperature above the temperature required to effect a cure of the resin.
 - 3) The heat source should be fitted with suitable monitors to gauge the temperature of the incoming and outgoing water supply. Another such gauge should be placed between the impregnated tube and the pipe invert at the termination to determine the temperatures during cure.
 - 4) The temperature and pressure maintained in the pipe and the duration of the cure period shall be as recommended by the manufacturer.
 - 5) The curing of the CIPP must take into account the existing pipe material, the resin system, and ground conditions (temperature, moisture level, and thermal conductivity of soil).
 - 6) Cooling:
 - a) The new pipe should be cooled to a temperature below 100 degrees Fahrenheit before relieving the static head in the inversion stand pipe.
 - b) Cool-down may be accomplished by the introduction of cool water into the inversion stand pipe water to replace hot water being drained from a small hole made in the down-stream end.
 - c) Care shall be taken in the release of head so that a vacuum will not be developed that could damage the newly installed pipe.
- c. UV Cure – Follow ASTM F2019, Section 6.6 & 6.7:
 - 1) The approved system must utilize an outer and inner film to ensure that the liner remains intact during the insertion process and to protect the resin at all times during the installation and curing process from water and debris contamination and resin migration.
 - 2) A winch should be used to pull the glass fiber liner into position in the pipe. The pulling speed shall not exceed 15ft/min. The liner shall have a lateral fiberglass reinforcement band which runs the entire length of the liner ensuring that the pulling force is transferred to the band and not the fiberglass liner. Once inserted, end plugs shall be used to cap each end of the glass fiber liner to prepare for pressurizing the liner. As with all CIPP products liner restraints should be used in manholes.
 - 3) A slip sheet shall be installed on the bottom one third to one half of the pipe prior to liner insertion, for the purpose of protecting the liner during insertion and reduce the drag, or as recommended by the liner manufacture.
 - 4) The glass fiber liner shall be cured with UV light sources at a constant inner pressure. When inserting the curing equipment in the liner, care should be taken to not damage the inner film material.
 - 5) The UV light sources should be assembled according to the manufacture's specification for the liner diameter. For the liner to achieve the required water tightness and specified mechanical properties, the following parameters must be controlled during the entire curing process, giving the Engineer a record of the curing parameters over every segment of the entire length of the liner. This demonstrates that the liner is cured properly. The recording will include:
 - a) Curing Speed
 - b) Light Source and Wattage

- c) Inner Air Pressure
- d) Curing Temperatures
- e) Date and Time
- f) Length of Liner

This will be accomplished using a computer and data base that are tamper proof. During the curing process, infrared sensors will be used to record curing data that will be submitted to the Engineer with a post CCTV inspection on the portable hard drive.

- 6) The optimal curing speed, or travel speed of the energized UV light sources, is determined for each length of liner based on internal diameter, liner thickness, and exothermic reaction temperatures.
 - 7) The inner film material should be removed and discarded after curing to provide optimal quality of the final product.
- B. The liner pipe shall be continuous, without joints over the entire length of the pipe. The liner shall be free of all visual and material defects, including but not limited to foreign inclusions, dry spots, pinholes, and delaminations. The surface shall be smooth and free of waviness throughout the pipe.
- C. Any defects that will affect the structural integrity or hydraulic capacity of the reconstructed pipe shall be repaired or the liner shall be replaced at the Contractor's expense, including large radial or longitudinal wrinkles that occur in such a size as to reduce the thickness or nominal diameter of the finished CIPP product.
- D. Hydrophilic end seals are required to seal the ends of each CIPP liner as it connects to the manhole. These seals will be installed prior to CIPP to prevent water tracking between the CIPP product and the existing host pipe. End Seals shall be LMK Insignia Seals, Trelleborg Liner End Seal or Engineer approved equal.

3.04 REINSTATEMENT OF SEWER SERVICE LATERALS

- A. The Contractor shall certify he has a minimum of two complete working cutter units plus spare key components on the site before each inversion.
- B. Prior to installing the sewer liner (during the television process), the Contractor shall locate, dye-test and record the location of all sewer lateral connections that are in question. The Contractor shall immediately submit this information to the Owner. The Owner will then determine which, if any, sewer services are to be abandoned. Those services designated to be abandoned will not be reinstated.
- C. After the sewer lining is complete, the Contractor shall re-establish all service connections except those designated by the Owner to be abandoned. This shall be done without excavation from the interior of the pipe by means of a television camera and a remotely controlled cutting device.
- 1. If the Contractor is unable to re-establish the service connection from inside the pipe and excavation is necessary, no additional payment will be made for excavations for the purpose of reopening connections and the Contractor will be responsible for all costs and liability associated with such excavation and restoration work.

2. Reestablished service connections shall be clean and smooth, free of jagged edges and conform as closely as possible to the dimension of the existing service.
 3. Brush style cutters or similar device will be required to ensure that the laterals are smooth for potential CIPP lateral lining.
- D. The sewer main shall be lined prior to lining service laterals, unless approved otherwise by the Engineer.

3.05 INSPECTION

- A. CIPP samples shall be prepared and tested in accordance with ASTM F1216, Section 8.1 using either method proposed.
- B. Leakage testing of the CIPP shall be accomplished during cure while under a positive head. CIPP products in which the pipe wall is cured while not in direct contact with the pressurizing fluid (e.g., a removable bladder) must be tested by an alternative method approved by the Owner.
- C. Visual observation of the CIPP shall be in accordance with ASTM F1216, Section 8.4.

3.06 TELEVISIONING

- A. Televisioning is required both prior to liner installation and after the CIPP process has been completed.
- B. Televisioning shall be performed by experienced personnel trained in locating breaks, obstacles and service connections.
- C. All televisioning video shall be in color. Each individual reach of pipe between manholes shall be identified as a chapter on the video.
- D. Immediately prior to televisioning, the televisor shall discharge sufficient clear water into the pipe to clean the pipe and assist in identifying sags and misalignment.
- E. Post-lining televisioning shall carefully inspect the interior of the pipeline to identify any conditions which may indicate improper installation.
- F. A thumb drive and suitable log shall be kept of all televisioning and submitted to the Owner.

3.07 CLEAN-UP

- A. Upon acceptance of the installation work and testing, the Contractor shall clean-up the project area affected by the operations.

3.08 WARRANTY

- A. All lining work shall be fully guaranteed by the Contractor for a period of 2 years from the date of Final Acceptance. During this period, all serious defects discovered by the Owner or Engineer shall be removed and replaced by the Contractor in a satisfactory manner at no cost to the

Owner. In addition, the Owner may conduct independent televised inspections, at its own expense, of the lining work at any time prior to the completion of the guarantee period.

END OF SECTION

SECTION 33 01 40

SEWER PIPE JOINT SEALING

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Rehabilitation of deteriorated and leaking gravity pipe joints by grout sealing.
- B. Related Sections:
 - 1. Section 00 31 00 – Available Project Information
 - 2. Section 01 33 00 – Submittal Procedures

1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Seal Pipe Joint: Measurement will be per each joint sealed by diameter of pipe. Payment will constitute full compensation for all work and costs to setting up and sealing the joint and air testing to verify seal.
 - 2. Chemical Grout: Measurement will be per gallon based on gallons of grout required to seal joint/crack. Payment will include all costs related to furnishing and installing the grout with root inhibitor as specified.

1.03 REFERENCES

- A. National Association of Sewer Service Companies (NASSCO):
 - 1. PACP – Pipeline Assessment Certification Program.

1.04 SUBMITTALS

- A. Submit the following items consistent with Section 01 33 00:
 - 1. License of certificate verifying manufacturer's/licensor approval of installer.
 - 2. Construction schedule and sequence.
 - 3. Product data and manufacturer's recommended installation procedures.
 - 4. Installer Completed Project List Which Includes: Project name and the names and phone numbers of the facility owners.
 - 5. Post sealing televising report:
 - a. Submit 1 copy of the Written Report and Video report within 30 days of completion of televising.
 - b. Report Requirements:
 - 1) Each run shall consist of a starting and ending structure number and a zero reading on the counter at center of the starting structure.
 - 2) Examine each joint sealed by using the pan and tilt feature.
 - 3) Take a still photograph at each joint sealed.
 - 4) Take a still photograph of each air test.
 - c. Submit a video report in thumb drive format with audio, including a printable version of the written report and full video of all televised pipe runs.

PART 2 PRODUCTS

2.01 JOINT SEAL MATERIALS

- A. Joint Grout:
 - 1. The grout shall be either Acryamide Gel or Urethane Gel.
 - 2. The grout shall contain a root inhibitor such as Avanti Barrier 50W or approved equal.

PART 3 EXECUTION

3.01 PRE-INSTALLATION PROCEDURES

- A. Review leaking pipe joints with Engineer prior to sealing joints:
 - 1. Clean existing pipe by removing interior debris with high-pressure washing:
 - a. Method of cleaning shall be reviewed with and approved by the Engineer.
 - b. Cost for initial cleaning shall be incidental to the Project.

3.02 INSTALLATION AND AIR TESTING

- A. Prepare joint, grout seal joint, and air test in accordance with the recommended specification for sewer system rehabilitation prepared by the National Association of Sewer Service Companies (NASSCO).

3.03 POST SEALING TELEVISION INSPECTION

- A. Sanitary segments with sealed joints must be in a clean and ready condition prior to the television inspection.
- B. Immediately clean any lines found to be dirty prior to televising. Costs for all such cleaning shall be the responsibility of the Contractor.
- C. Personnel completing the televising must be PACP certified.
- D. Review of the television inspection of the grouted pipe joints will be performed by the Engineer to verify the joint has been sealed and leaking has stopped.

END OF SECTION

SECTION 33 01 46

MANHOLE REHABILITATION

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Rehabilitation of manhole walls by sealing joints or lining.
- B. Related Sections:
 - 1. Section 00 31 00 – Available Project Information
 - 2. Section 01 33 00 – Submittal Procedures
 - 3. Section 33 39 00 – Sanitary Utility Sewer Structures

1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Spray Line Sanitary Structure: Measurement will be per linear feet for each size of structure lined, measured from the top of the bench to the top of the cone or bottom of top slab section. Payment will include all costs related to setting up, preparing the surface of the structure, wall patching, applying the spray liner, and providing certification of product application, as specified.
 - 2. Spray Line Storm Structure: Measurement will be per linear feet for each size of structure lined, measured from the top of the bench to the top of the cone or bottom of top slab section. Payment will include all costs related to setting up, preparing the surface of the structure, wall patching, applying the liner, and providing certification of product application, as specified.
 - 3. Seal Manhole Joint: Measurement will be per each manhole by diameter of joint sealed. Payment will constitute full compensation for all work and costs to setting up and sealing the joint and air testing to verify seal.
 - 4. Chemical Grout: Measurement will be per gallon based on gallons of grout required to seal joint/crack. Payment will include all costs related to furnishing and installing the grout with root inhibitor as specified.
 - 5. Patch Structure: Measurement per each storm sewer or sanitary sewer structure patched, regardless of the size of structure or areas patched. Payment will include all cost associated with patching structure walls, doghouses, inverts, benches, rings or any other portion of the structure as specified or as identified in the Drawings.
 - 6. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 SUBMITTALS

- A. Submit the following items consistent with Section 01 33 00:
 - 1. License of certificate verifying manufacturer's/licensor approval of installer.
 - 2. Construction sequence.
 - 3. Product date and manufacturer's recommended installation procedures.

4. Installer Completed Project List Which Includes: Project name and the names and phone numbers of the facility owners.

1.04 QUALITY ASSURANCE

- A. Applicator's Qualifications: Applicator of products shall be approved by product manufacturer.
- B. Certification of Product Application: Upon completion of surface coating, an inspection shall be made by a representative of the manufacturer to ascertain that the product has been applied according to the manufacturer's published specifications and details.
- C. Warranty: Contractor shall warrant the workmanship and products for 1 full year after final Project acceptance. Warranty shall cover manhole coating deterioration, spalling of concrete, or other failure of the coating. Failure of the warranty shall be repaired by the Contractor at no charge to the Owner.

PART 2 PRODUCTS

2.01 SANITARY STRUCTURE SPRAY LINER

- A. Hydrogen sulfide and corrosion resistance liner such as Zebron, Spectrasheild, or approved equal.
- B. Polyurethane Coatings: High Performance, 2 part, 100 percent solids polyurethane coating, Zebron series, No. 386.
 1. Physical properties:
 - a. Color: Cream
 - b. Specific Gravity (ASTM D792): 1.3 (10.84 lbs per gal)
 - c. Tensile Strength (ASTM D638): 2500 psi at 77 degrees F (25 degrees C)
 - d. Elongation (ASTM D638): Recoverable; 67 percent at 77 degrees F (25 degrees C)
 - e. Flexibility (ASTM D792): No effect bending 0.5 mm plate coated with 20 mils over 8 mm diameter mandrel.
 - f. Abrasion Resistance (ASTM D4060): 2.12 oz. (20mg)
 - g. Thermal Conductivity (ASTM C177): 0.000723 cal. Per sec. cm² per degree C per cm at 20 degrees C (0.175 btu per hr. ft. at 77 degrees F)
 - h. Permeability (ASTM E96): 0.262 gms per m² per 24-hrs; 0.0358 U.S. perms
- C. Modified Polyurea barrier, polyurethane foam, two part application, Spectrasheild.
 1. Physical properties two part component barrier coat:
 - a. Color: Pink
 - b. Tensile Strength (ASTM D412-06): 2550
 - c. Elongation (ASTM D412-06): 269
 - d. Tear Strength (PLI) (ASTM D624-00) 428
 - e. Flexibility (1/8" mandrel)(ASTM D522-13): pass
 - f. Abrasion (mg loss) (ASTM D4060-14): 23 CS17 Wheel, 1 kg per 1000 cycles
 - g. Viscosity – B Side: 300 cps
 - h. Viscosity – A Side: 350 cps
 2. Physical properties polyurethane foam:
 - a. Density (ASTM D1622): 4 –10 lb/cu ft
 - b. Compressive Strength (ASTM D1621): 90 – 150 psi

- c. Closed Cell Content (ASTM D1940): >95%
- d. Water Absorption (ASTM D2842): 0.020 (gm/cc)
- e. Water Vapor Transmission (ASTM E96): 0.61 perms
- f. Shear Strength (ASTM C273): 225 – 250 psi
- g. Recycled Content: Side R 16.5 %
- h. Viscosity - Side A: @ 77°F 200 cps
- i. Viscosity - Side R: @ 77°F 660 cps

2.02 STORM STRUCTURE SPRAY LINER

- A. Hydrogen sulfide and corrosion resistant liner such as Quadex GeoKrete, Strong Company StrongSeal, or approved equal.

2.03 JOINT SEAL MATERIALS

- A. Chemical Grout:
 - 1. The grout shall be either Acryamide Gel or Urethane Gel.
 - 2. The grout shall contain a root inhibitor such as Avanti Barrier 50W or approved equal.

2.04 PATCH STRUCTURE

- A. Ready Mix Mortar Materials: Sand Mix, 4,000 PSI
- B. Mortar: Pre-mix bag intended for underground use conforming to ASTM C270 Type M, minimum compressive strength of 2,500 psi.

PART 3 EXECUTION

3.01 GENERAL

- A. Spray line structures as directed by Engineer.
- B. Follow manufacture's installation specifications.

3.02 STRUCTURE SURFACE PREPARATION

- A. Clean all loose concrete and debris from the rings, interior walls, and floor of the manhole by using a high-pressure water blast.
- B. Patch any voids in the walls or rings with mortar prior to lining.
- C. Prior to lining, remove from the manhole all materials left as a result of the cleaning.
- D. Clean any exposed, oxidized rebar to a "white metal" SSPC-SPS finish profile by sandblasting.
- E. Review leaking manhole joints with Engineer prior to sealing joints.

3.03 SANITARY STRUCTURE SPRAY LINER

- A. If Zebron is used, minimum 125 mil liner thickness.

B. If Spectrashield is used, minimum 500 mils total thickness.

3.04 STORM STRUCTURE SPRAY LINER

A. Coat all interior surfaces with a minimum ½" liner thickness.

3.05 PATCH STRUCTURE

A. Clean areas to be patched by removing debris, loose concrete, and any other foreign materials.

B. Patch area with mortar to provide smooth patch that seals the structure.

END OF SECTION

SECTION 33 05 06

TRENCHING AND BACKFILLING

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Trenching requirements for underground piping and appurtenances, including requirements for excavation, backfill, and compaction.

B. Related Sections:

1. Section 01 33 00 - Submittal Procedures.

1.02 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. Trench Excavation: Excavation and backfilling of trench and associated excavation for pipe bedding shall be included in the price of pipe provided.
2. Pipe Bedding All costs associated with providing the bedding material as shown on the Drawings and Standard Detail Plate BED-1 shall be considered incidental to the pipe material.
3. Rock Excavation: Measured from the top of the rock to a point 12 inches below the outside barrel of pipe and 12 inches from each side of outside diameter of pipe (at bell). The minimum trench width of Rock Excavation shall be 48 inches. For measurement purposes, volume will be computed based on vertical walls for the width specified above. Payment for Rock Excavation shall be at the Unit Price per cubic yard. Any additional Rock Excavation required for shelving or OSHA Standards will not be measured for payment and will be considered incidental to the Rock Excavation Bid Item:
 - a. The estimated quantity of Rock Excavation shown in the various parts of the Bid Form were calculated as described above, based on the top of rock elevations determined by either soil borings and/or test hole excavations. No guarantee is made as to the actual quantity of Rock Excavation that will be encountered in this Project. No variation from the Unit Price for Rock Excavation will be considered or allowed due to quantity variation.
 - b. Separate Bid Items have been provided for Rock Excavation – Soft Rock and Hard Rock. Payment will be made based on the method of rock excavation actually used in the field. Any excavation performed with a standard backhoe bucket will not be considered rock excavation.
4. Haul Excess Rock Off Site (LV): Measurement will be by the cubic yard of material hauled off site, based on a truck count. Payment will include all costs related to hauling and disposing of the material off the Site.
 - a. Any excess rock hauled off site must be approved by Engineer prior to removing.
5. Sand Cushion: Measurement shall be by the units of linear feet. Payment at the Unit Price shall include all costs related to providing the material as shown on the Drawings and Standard Detail Plate.
6. Granular Material: Measurement shall be by the ton of material compacted in place as determined from weight tickets delivered to the Engineer and shall include all costs related to providing the material as shown on the Drawings and Standard Detail Plate.

7. Improved Pipe Foundation: Measurement shall be by the linear foot for each 6 inch layer placed below pipe bedding, not including the first 6 inches:
 - a. For example, if 2 feet of foundation material is required under a pipe; 6 inches of material is required for bedding, and payment will be made for 3 linear feet of pipe foundation material, 6 inches deep, per foot of pipe installed.
 - b. No payment will be made without the knowledge or consent of the Engineer.
 - c. No payment will be made for subgrade rock installed for de-watering purposes only, unless specified.
 - d. No payment will be made for disposing of excavated material off the Site that has been created by placement of improved pipe foundation.
8. Temporary Bracing and Sheet piling: Considered part of the excavation costs with no additional compensation to Contractor, unless provided for otherwise.
9. Density Tests:
 - a. Passing Tests: All costs paid by Owner.
 - b. Failing Tests: All costs will be deducted from payments to Contractor.
10. Dewatering: No explicit, direct payment is made for this work. Include the costs in the Unit Prices for the pipe or structure installed.
11. Excavation Special (Pothole Existing Private Utility): This Bid Item is for potholing and exposing existing private utilities that may be in conflict with the proposed public utilities. Measurement will be per each location exposed regardless of the number of utilities in the respective location. Payment will include all cost related to exposing the potential conflict:
 - a. The quantity shown on the Bid Form is an estimated amount. Payment will be based on the quantity actually used, regardless of the estimated quantity. No revision to the Contract Unit Price shall be considered or allowed due to variations of the actual quantity from the estimated amount.
12. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. Minnesota Department of Transportation "Standard Specifications for Construction", 2020 (MnDOT Spec.):
 1. 2106 - Excavation and Embankment – Compacted Volume Method.
 2. 3149 - Granular Material.
 3. 1711 - Use of Explosives.
- B. American Society of Testing Materials (ASTM):
 1. A798 -Standard Practice for Installing Factory-Made Corrugated Steel Pipe for Sewers and Other Applications.
 2. D2321 - Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications.
- C. American Water Works Association (AWWA):
 1. C150 - Thickness Design of Ductile-Iron Pipe.
 2. C151 - American National Standard for Ductile-Iron Pipe, Centrifugally Cast for Water.

1.04 SUBMITTALS

- A. Provide the following submittals consistent with Section 01 33 00:
 - 1. Product Data for each Borrow Material:
 - a. Name and location of source.
 - b. Results of gradation tests.

1.05 DEFINITIONS

- A. Bedding: The soil material adjacent to the pipe which makes contact with the pipe foundation, walls of the trench, and upper level of backfill. The purpose of bedding is to secure the pipe to true line and grade, and to provide structural support to the pipe barrel.
- B. Foundation: Soil material beneath the pipe bedding.
- C. Improved Pipe Foundation: Foundation provided by importing material from sources outside the Site. Required when foundation is soft or unstable.
- D. Coarse Filter Aggregate: Free draining mineral product used around draintile pipe.
- E. Rock Excavation (Hard Rock): Includes such rocks that are **not** decomposed, weathered, or shattered, and which will require blasting, hydro-hammering, barring, wedging, or use of air tools for removal. Also included are any boulders, concrete, or masonry structure (except concrete pavement, curb and gutter, and sidewalk) exceeding 1 cubic yard.
- F. Rock Excavation (Soft Rock): Includes such rocks that are decomposed, weathered, or shattered, and which will require the use of ripping equipment, such as rock buckets and ripper hooks.
- G. Pipe Zone: That part of the trench below a distance of 1 foot above the top of the pipe.
- H. Sand Cushion: Aggregate bedding material used around pipe in areas where rock excavation is encountered, where pipe insulation is used, and when crossing existing utilities.
- I. Granular Material: Includes the area below the subgrade and above the pipe zone when shallow pipe is installed in areas of rock excavation.

1.06 SEQUENCING AND SCHEDULING

- A. Known existing underground utilities are shown on the Drawings in a general way. Owner does not guarantee the locations as shown on the Drawings. Anticipate variations in both the vertical and horizontal locations of underground utility lines from those shown on the Drawings.
- B. Uncover utilities and verify both horizontal and vertical alignments sufficiently in advance of construction to permit adjustments in the Work. Determine location of existing utilities and identify conflicts before excavating trench for pipe installation.
- C. Notify Gopher State One Call before starting construction in a given area, requesting utility locations in the field.

- D. Provide continuance of flow of existing sewer and other facilities.
- E. Backfill and compact all trench excavations promptly after the pipe is laid.
- F. Salvage and re-spread existing topsoil within trench and spoil pile areas. This work shall be considered incidental to the pipe installation.

1.07 WARRANTY

- A. Trench settlements that occur during the correction period and are greater than 1/2 inch as measured by a 10 foot straight edge will be repaired in a manner acceptable to the Owner at the Contractor's expense.

PART 2 PRODUCTS

2.01 PIPE BEDDING MATERIAL

- A. Comply with MnDOT Spec. 3149.2.B for Granular Material, modified with the following:
 - 1. No existing onsite granular material encountered during construction may be used unless approved by Engineer, based on quality control gradations provided by the Contractor for the onsite material being placed. The rate of testing will be determined based on changes of the existing material, or as determined by Engineer.
 - 2. 1 inch maximum aggregate size.
 - 3. Only virgin materials allowed.

2.02 IMPROVED PIPE FOUNDATION MATERIAL

- A. Comply with MnDOT Spec. 3149.2.H, as modified herein:
 - 1. Crushing Requirements: At least 50-percent of the material by weight retained on the No. 4 sieve shall have 1 or more crushed faces.

2.03 SAND CUSHION MATERIAL

- A. Comply with MnDOT Spec. 3149.2.B for Granular Material, modified with the following:
 - 1. No existing onsite granular material encountered during construction may be used unless approved by Engineer, based on quality control gradations provided by the Contractor for the onsite material being placed. The rate of testing will be determined based on changes of the existing material, or as determined by Engineer.
 - 2. 1 inch maximum aggregate size.
 - 3. Only virgin materials allowed.

2.04 BACKFILL MATERIAL

- A. Suitable materials selected from the excavated materials to the extent available and practical.
- B. Suitable materials are mineral soils free of rubbish, trees, stumps, branches, debris, frozen soil, oversize stone (greater than 1 cubic foot), concrete and bituminous chunks, and other similar unsuitable material.

- C. When suitable materials are not available, as determined by the Engineer, comply with MnDOT Spec. 3149.2.B for Granular Material.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Prior to construction, inspect existing utility structures and surface features, and document condition.
- B. Re-inspect foundation soils if rain fall or snow has occurred after initial inspection but prior to placing pipe and bedding.
- C. Prior to construction, perform the Excavation Special (Pothole Existing Utility) for the purpose of determining possible conflicts between existing private utilities and proposed public utilities. Allow sufficient time for private utility companies to relocate facilities or Engineer to redesign public utilities.

3.02 PREPARATION

- A. Notify Utility Owners to field mark their utility locations.
- B. Protect as necessary surface features, such as utility poles, trees, structures, pavement, etc., that are not designated on the Drawings to be removed.
- C. Notify utility companies of progress schedule so they can accomplish any necessary relocations and removals that they have agreed to relocate, remove, or support.
- D. Implement traffic control.
- E. Complete temporary removal or relocation of surface features, such as fences, shrubs, signs, and mailboxes.
- F. Strip off existing topsoil from within the trench excavation limits and stockpile. Separate vegetative strippings from salvageable topsoil and dispose of appropriately.
- G. Crossing Under Existing Utility Lines:
 - 1. Use extreme care when excavating in the vicinity of underground utility lines to avoid damage to protective coatings or surfaces.
 - 2. Where possible and as authorized by the utility, temporarily remove the utility line, install the new pipe, and reinstall the utility line.
 - 3. Where existing line cannot be removed or is not feasible to remove, securely support, excavate under, backfill under and around the utility line to 100-Percent Standard Proctor Density.
 - 4. Report and repair damaged lines prior to backfilling trench.
- H. Rock Excavation:
 - 1. Contractor shall submit a blasting plan for review and approval by the Engineer.
 - 2. Use of explosives comply with MnDOT Spec. 1711.

3.03 CONSTRUCTION

- A. Conform to ASTM C2321 and C1479, or modified herein.
- B. Trench Excavation:
 - 1. Excavate trench to alignment and grade shown on the Drawings.
 - 2. The trench width at the surface may vary and depends on the depth of trench and nature of the excavated material encountered. However, it shall be of ample width to permit the pipe to be laid and jointed properly and the backfill to be placed and compacted properly.
 - 3. Correct any part of the trench that is inadvertently excavated below grade with approved material compacted to 100-Percent Standard Proctor Density.
 - 4. Brace, shore, or sheet trench and provide drainage. Comply with applicable State Regulations relating to industrial safety to a safe angle of repose. Angle of repose may be no less than that required by the Accident Prevention Division of the State Industrial Commission or the requirements of the Occupational Safety and Health Act (OSHA), whichever is most restrictive.
 - 5. Pile all excavated material in a manner that will not endanger the Work or obstruct sidewalks, driveways, gutters, etc.
 - 6. Segregate soils in the excavated material that are not suitable for trench backfill and dispose of in a manner that is consistent with the requirements specified herein under "Backfill Above Pipe Zone."
 - 7. Dispose of excess excavated materials off of right-of-ways and easements in a suitable site selected by the Contractor.
 - 8. Haul materials, other than natural soil materials that are suitable as backfill material, to an approved landfill as directed by the Engineer.
 - 9. It is anticipated that private utility crossings will be encountered and may interfere with the proposed public utilities.
 - a. Pothole and expose existing private utility crossings to determine location and elevation.
 - b. Perform construction activities in the vicinity of the private utilities so as not to disturb the existing crossings.
 - 10. If frost thickness exceeds 6 inches, all frost chunks must be removed from the Site and non-frozen material must be used to backfill the excavation.
- C. Water Control:
 - 1. Dewater the ground as necessary to excavate the trench and install the pipe. All pipe and structures shall be laid in a dry condition prior to backfill. Maintain groundwater level a minimum of 1 foot below the pipe invert. Measure the rate of flow from dewatering pumps at the beginning of the dewatering operation(s) and once per week thereafter. Keep a daily log of hours pumped.
- D. Trench Bottom:
 - 1. Excavate to a sufficient depth to ensure adequate foundation when the bottom of the trench is soft or where in the opinion of the Engineer unsatisfactory foundation conditions exist. Bring excavation up to pipe grade with thoroughly compacted granular materials meeting the requirements of Improved Pipe Foundation Material.
 - 2. Provide temporary support, remove, relocate, or reconstruct existing utilities located within the trench excavation. Utility shall designate method employed. Use particular care and provide compacted fill or other stable support for utility crossings to prevent detrimental displacement, rupture, or failure.

3. Excavate to expose existing utilities that cross in close proximity to the planned pipe line to determine the utilities' exact location sufficiently ahead of pipe installation to plan for the avoidance of grade conflict. Measure to determine the utilities' location relative to the planned pipe line location. A deviation from the alignment, grade, and location to avoid conflict may be ordered by the Engineer.
4. In locations where rock affects the pipe foundation, excavate the trench 12 inches below the pipe and place sand cushion material up to the top of the pipe zone. Blend suitable on Site backfill material with any rock (1 cubic foot maximum size) that is placed back in trench. Dispose of excess rock at a suitable location outside the Site:
 - a. Sand Cushion: The removal and disposal of the unsuitable material within the trench and below the invert elevation, and the replacement up to invert elevation with the appropriate bedding material.
 - b. Granular Borrow: The removal and disposal of unsuitable material within the trench, above the pipe zone, and replacement up to the subgrade with appropriate backfill material, per Standard Detail Plate BED-4. No additional compensation will be allowed for wider or deeper trenches in rock excavations.
 - c. For PVC, Corrugated PP, and HDPE Pipe, the sand cushion shall be placed to 1 foot above the pipe and shall be paid as pipe bedding. The remainder of the trench up to the top of the rock shall be backfilled with granular backfill material.
5. Improved Pipe Foundation: When unsatisfactory foundation conditions exist, excavate to a depth consisting of solid materials. Fill to pipe grade with thoroughly compacted granular materials meeting the requirements of Improved Pipe Foundation Material.

3.04 PIPE BEDDING

- A. PVC Pipe: Bed pipe in accordance with ASTM D2321 and Standard Detail Plate BED-1, 3, and 4.
- B. RCP: Bed pipe in accordance with ASTM C1479 and Standard Detail Plate BED-2, 3, and 4.
- C. DIP: Bed pipe in accordance with AWWA Standard C150 and C151 and Standard Detail Plate BED-2, 3, and 4.
- D. HDPE Pipe: Bed pipe in accordance with ASTM D2321 and Standard Detail Plate BED-1, 3, and 4.
- E. Corrugated Metal Pipe: Bed pipe in accordance with ASTM A798 and Standard Detail Plate BED-2, 3, and 4.
- F. The pipe trench directly under the pipe shall be loosely placed un-compacted material per the Standard Detail Plates.
- G. Use only selected materials free from rock, boulders, debris, or other high void content substances to a level 1 foot above the top of pipe. Remove ledge rock, boulders, and large stones to provide at least 6 inch clearance from pipe.
- H. Dig bell holes of ample dimension at each joint such that the pipe barrel rests continuously on the bedding.

3.05 BACKFILL WITHIN PIPE ZONE

- A. Backfill immediately after pipe is laid. Restrain pipe as necessary to prevent their movement during backfill operations.
- B. Place material completely under pipe haunches in uniform layers not exceeding 4 inches in depth.
- C. Hand (shovel/slice) tamp along pipe within haunch zone to provide a solid pipe foundation.

3.06 BACKFILL ABOVE PIPE ZONE

- A. Use suitable materials meeting the requirements of Backfill Material.
- B. Place in uniform depth layers not to exceed 12 inches before compaction. Complete the compaction of each layer before placing material for the succeeding layer.
- C. Compact each layer by mechanical means until it meets the requirements of MnDOT Spec. 2106.3.G.1. Trenches shall be compacted to a minimum of 95-percent, except to 100-percent in the upper 3 feet:
 - 1. Trenches between existing or future buildings or structures shall be compacted to a minimum of 100-percent for the entire depth of the trench.
- D. The method and means of placement and type of compaction equipment used is at the discretion of the Contractor. However, all portions of the trench backfill must meet minimum specified compaction requirements.
- E. Any deficiency in quantity of backfill material (caused by shrinkage or settlement) shall be supplied at no additional cost to the Owner.
- F. Excavated material not suitable or required for backfill shall be disposed of outside of the Site.
- G. It is assumed that all backfilling of trenches will be performed using on Site, excavated trench material. If the Contractor is unable to meet the specified density requirements using that material due to excess moisture content or other circumstance beyond their control, they shall immediately notify the Engineer of such condition. Following investigation of the circumstances, the Engineer, Contractor, and Owner shall mutually agree upon the proper course of action to address the issue.
- H. Any excavated rock that is placed back in the trench shall be crushed to a maximum rock size of 12 inches and adequately mixed with suitable on Site backfill material before being placed and compacted in the trench.

3.07 FIELD QUALITY CONTROL

- A. Density Tests: to be performed by an approved soils testing firm at various locations and depths throughout the Site as directed by the Engineer. Cooperate fully and provide assistance as necessary to complete these tests.

- B. Failed density test areas shall be excavated and re-compacted until the density requirements are met.

END OF SECTION

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SECTION 33 05 18

ADJUST MISCELLANEOUS STRUCTURES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Adjustment of utility structures.
- B. Related Sections:
 - 1. Section 01 57 13 – Temporary Erosion and Sediment Control.
 - 2. Section 33 10 00 – Water Utilities.

1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Payment at the Bid Unit Price for all items is considered compensation in full for all materials and Work required to furnish and install the Bid Item in place.
 - 2. Adjust Manhole Casting Including New HDPE Adjustment Rings: Measurement per each. Payment will include furnishing and installing new HDPE adjustment rings and fabric, installing new or salvaged casting, excavation, backfilling, salvaging and reinstalling aggregates, and bituminous patch when located within a paved surface.
 - a. Existing Manholes:
 - 1) Payment shall include removal and disposal of existing rings, mortar, and fabric.
 - b. New manholes and valve boxes in non-bituminous surfaced areas:
 - 1) No separate payment for adjustment to final grade will be made. Adjustment of the structure shall be considered incidental to the Bid Items for the furnishing and installation of each type of structure.
 - 3. Adjust Manhole Casting (Cast Iron Manhole Adjusting Ring): Measurement per each. structure adjusted by means of furnishing and installing steel adjusting ring as specified.
 - 4. Adjust Valve Box: Measurement per each. Payment will include installing new or salvaged casting, excavation, backfilling, salvaging and reinstalling aggregates, and bituminous patch when located within paved surface.
 - a. New valve boxes in non-bituminous surfaced areas:
 - 1) No separate payment for adjustment to final grade will be made. Adjustment of the structure shall be considered incidental to the Bid Item for Valve and Box.
 - 5. Adjust Catch Basin Casting Including New HDPE Adjustment Rings: Measurement per each. Payment will include excavation, furnishing and installing new HDPE adjustment rings and fabric, installing new or salvaged casting, and backfilling.
 - a. Existing Catch Basins:
 - 1) Payment shall include removal and disposal of existing rings, mortar, and fabric.
 - 6. Clean Out or Curb Box Protective Cover: Measurement will be per each and shall include excavation, furnishing, and installation.
 - 7. Extend Hydrant Barrel: Measurement will be by the linear foot of adjustment made, including the heavy-duty rod assembly, if required.

8. Valve Box Extension: Payment for the furnishing and installation of valve box extension sections on either new or existing valve boxes shall be made on the basis of the linear feet of extension sections installed.
9. All work associated with the surfacing removal, excavation, material replacement, compaction, and patching necessary for the adjustment of structures within bituminous surfaced areas shall be considered incidental to the adjustment.
10. For street rehabilitation projects, or if required by the Engineer, use of parachute is incidental to manhole adjustment.
11. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. American Society of Testing and Materials (ASTM):
 1. ASTM A48 – Specification for Gray Iron Casting.
 2. ASTM D1248 – Polyethylene Plastics Molding and Extrusion Materials.
- B. Minnesota Department of Transportation “Standard Specifications for Construction” 2020 Edition (MnDOT Spec.):
 1. 3733 – Geosynthetic Materials.

1.04 DEFINITIONS

- A. Adjust Manhole or Catch Basin Casting: A change in rim elevation accomplished for manholes or catch basins through the addition or removal of adjustment rings only. Adjustment does not include the addition or removal of sections from the structure.
- B. Adjust Valve Box: A change in elevation of the top of the valve box accomplished through the raising or lowering of the existing top section of the valve box only. Adjustment does not include the addition or removal of sections from the valve box.
- C. Remove and Replace Adjustment Rings: The process of removing the existing concrete adjustment rings from an existing structure and placing new rings on manholes and catch basins.

1.05 SEQUENCING AND SCHEDULING

- A. Contractor, Engineer, and Owner shall inspect all existing structures prior to beginning construction.
- B. Owner will remove any foreign material found in the existing structures prior to construction. Remove any foreign material that enters the structures during construction. Notify owner any time foreign materials enter structures regardless of the amount of material.
- C. When temporarily removing existing castings and valve box top sections, place castings and valve top sections in the boulevard area directly behind the curb, and in line with the existing structure for the purpose of locating the plated structure and valve box.

- D. Use care when removing bituminous surfacing around existing structures to avoid damage to existing materials. Replace any castings or valve box materials damaged during the surfacing removal with equal materials at no cost to the Project.
- E. Bituminous street patching associating with the structure adjustment shall be completed the same day as the structure is adjusted, including manhole casting protection.

PART 2 PRODUCTS

2.01 ADJUSTING RING

- A. High-Density Polyethylene (HDPE): Molded high-density polyethylene conforming to ASTM D1248.
- B. Cast Iron Manhole Adjusting Ring: R-1979 Series adjusting ring as manufactured by Neenah Foundry, or approved equal.

2.02 ADHESION MATERIALS

- A. Ram-Nek material, or approved equal.
- B. Sealant (For HDPE Rings):
 - 1. DOW 999 – A building caulking and glazing sealant, or approved equal.
 - 2. Open cell polyurethane foam sealant with adhesive backing.

2.03 HYDRANT EXTENSIONS

- A. Sections: Match existing hydrant manufacturer and model.

2.04 CASTINGS

- A. Manhole, Catch Basin Frames, and Covers:
 - 1. Requirement: ASTM A48.
 - 2. Material: Class 35 cast iron. Best grade. Free from injurious defects and flaws.
 - 3. Finish: Coal tar pitch varnish.
 - 4. Finish Preparation: Sandblast.
 - 5. Machine cover and frame contact surface for non-rocking protection.
 - 6. Type and Style:
 - a. NEENAH R-1642 Type “B”, Platen Lid, 2 concealed pick holes, or approved equal, for sanitary manholes. Covers stamped with “SANITARY SEWER”. Use 2 inch letters.
 - b. NEENAH R-1642 Type “B”, Platen Lid, Open Hole, or approved equal, for storm manholes. Covers stamped with “STORM SEWER”. Use 2 inch letters.
 - c. NEENAH R-1642-A, short casting – 5 inch height.
 - d. NEENAH R-3067-VB (use at low points), and R-3067-V (not at low points), or approved equal, for storm sewer catch basin manholes and catch basins.
 - e. NEENAH R-4342, or approved equal, for beehive catch basin manholes.
 - f. NEENAH R-3290-A (Type A grate), or approved equal, for storm sewer catch basins within commercial driveway entrances.
 - g. NEENAH R-1755 E, Water tight casting.

- h. NEENAH R-3501TB, or approved equal, for storm sewer catch basins within surmountable curb at residential driveway entrances.

B. Cleanout and curb box protection: Ford Type A1

2.05 VALVE BOX

A. Risers:

1. Valve box riser to fit the Tyler No. 6850, 6855, 6860, or 6865 top section and drop lid, or approved equal.
2. Tyler No. 69 gate valve extension screw adjustable, or approved equal.
3. Cast iron valve adjusting rings are not allowed.
4. Conform to the requirements of Section 33 10 00.

2.06 GEOSYNTHETIC MATERIALS

- A. Non-woven filter fabric type 1 in accordance with MnDOT Spec. 3733.B for use in conjunction with HDPE rings.

PART 3 EXECUTION

3.01 GENERAL

- A. The necessary vertical alignment will be determined by the Engineer and generally as indicated on the schedule of adjustments.
- B. Where existing frame is within 0.10 feet of grade, no adjustment is to be made.
- C. Raise or lower the frame to match the street or gutter.
- D. Protect existing structures from damage.
- E. Prevent sand, concrete, or any other debris from entering the structures.
- F. HDPE rings to be used on all structures.
- G. Adjust all structures located in non bituminous surface areas to final design grade.
- H. Immediately following removal of existing casting and adjusting rings, cover structure opening with suitable steel plate to prevent foreign debris from entering structure. Secure plate to top slab or cone with Ram-Nek.
- I. For street rehabilitation projects, or if required by the Engineer, use parachute or approved equal to prevent debris from entering structures while active work is being done on or near an existing structure.
- J. Installation of Cast Iron Manhole Adjustment Rings shall be as directed by the Engineer.

3.02 PREPARATION

- A. Call utility owners to field mark their utility locations.
- B. Verify exact location of existing utilities.

3.03 ADJUST MANHOLE AND CATCH BASIN FRAME

A. HDPE Adjusting Ring:

- 1. See Standard Detail Plate STR-23.
- 2. Remove all dirt, debris, dust, and other deleterious material from surface prior to placement of first ring.
- 3. Install adhesive for manhole adjusting rings as per the following:

Location of Sealant	Type of Sealant
Between casting and last ring:	3/4 inch by 3/4 inch open cell polyurethane foam sealant and 1/2-inch bead of DOW 999
Between intermediate rings:	½ inch bead of DOW 999
Between cone/top slab and first ring:	3/4 inch by 3/4 inch open cell polyurethane foam sealant and ½ inch bead of DOW 999

- 4. Sealant to be placed around entire circumference of each unit with no gaps.
- 5. Utilize a variety of thickness of flat units and sloping units to match the required grade and slope of the area at the location of the structure:
 - a. Shims are not allowed.
 - b. HDPE rings must be stacked plumb and cannot be staggered.
- 6. Total Thickness of Rings Allowed: Minimum of 3 inches, maximum of 12 inches.
- 7. Wrap entire casting and ring system with geotextile. For structures with cone section, geotextile wrap to extend over a minimum length of 18 inches of the cone.

- B. New adjusting rings shall be used on all casting adjustments, regardless of whether casting is salvaged, existing, or new.

C. Cast Iron Manhole Adjusting Ring:

- 1. Use of the adjustment ring shall be as directed by the Engineer.
- 2. Install per manufacture's recommendations.
- 3. 1- 5/8 inch minimum to 2.0 inch maximum steel ring height.
- 4. Apply adhesive as recommended by the manufacture.
- 5. Only 1 steel ring allowed for adjustment from the initial lift of wear course grade to the final wear course grade.

3.04 ADJUST VALVE BOX

- A. Adjust box by screwing top section up or down.
- B. Prevent sand, chunks of concrete, or any other debris from entering the valve box:
 - 1. Short sections inserted inside the existing top section are not allowed to perform adjustment, unless specified.

- C. Install approved sections as needed for extension by removing top section, installing additional extension, and re-installing top section.
- D. Patch road to match existing pavement section.

3.05 HYDRANT EXTENSIONS

- A. Remove upper section.
- B. Install extension kit as per manufacturer's requirements.
- C. Replace upper and lower rod assemblies with heavy-duty for extensions in excess of 18 inches.
- D. Replace the upper section.

3.06 SCHEDULE OF ADJUSTMENTS

- A. Manholes Outside of Street Areas:
 - 1. Permanently adjust casting to design rim elevation at time of structure installation.
- B. Manholes Within Street Areas with Concrete Curb and Gutter (Final Wearing Course Paved the Same Year as the Initial Lift Wearing Course):
 - 1. At time of structure installation, install casting directly upon top slab or cone section with Ram-Nek material.
 - 2. Prior to street construction, remove casting from all new and existing manholes and cover structure opening with suitable steel plate. Secure plate to top slab or cone with Ram-Nek.
 - 3. Following initial lift wearing course paving perform adjustment:
 - a. Locate structure and expose.
 - b. Remove steel plate. Permanently place HDPE rings on structure. Permanently place casting on top ring with adhesive. Wrap filter fabric over casting and rings. For structures with cone section, fabric shall extend a minimum of 18 inches down cone.
 - c. Replace and compact gravel base material. Patch initial lift wearing course around structure:
 - 1) Bituminous patch to be 6 feet by 6 feet, minimum.
 - d. Top of casting to be 1/4 to 3/8 inch lower than the final wearing course grade, as measured with a 6 foot straight edge centered on the structure.
 - e. Perform adjustment no more than 5 working days prior to placement of bituminous final wearing course, unless approved by Engineer.
- C. Manholes Within Street Areas with Concrete Curb and Gutter (Final Wearing Course Paved the Following Year or Later):
 - 1. At time of structure installation, install casting directly upon top slab or cone section with Ram-Nek material.
 - 2. Prior to street construction, remove casting from all new and existing manholes and cover structure opening with suitable steel plate. Secure plate to top slab or cone with Ram-Nek.
 - 3. Following non-wearing course paving perform adjustment:
 - a. Locate structure and expose.

- b. Remove steel plate. Permanently place HDPE rings on structure. Permanently place casting on top ring with adhesive. Wrap filter fabric over casting and rings. For structures with cone section, fabric shall extend a minimum of 18 inches down cone.
 - c. Replace and compact gravel base material. Patch initial lift wearing course around structure:
 - 1) Bituminous patch to be 6 feet by 6 feet, minimum.
 - d. Top of casting to be 1/4 to 3/8 inch lower than the initial lift wearing course grade, as measured with a 6 foot straight edge centered on the structure.
 - e. Adjustment of all manholes must be completed within 15 working days after the start of placement of the initial lift wearing course. Adjustment will not be allowed prior to initial lift wearing course paving.
 - 4. Prior to final wearing course paving (the following year or later), perform adjustment:
 - a. Permanently adjust casting to final grade with steel adjusting ring.
 - b. Top of casting to be 1/4 to 3/8 inch lower than the final wearing course grade, as measured with a 6 foot straight edge centered on the structure.
 - c. Perform adjustment no more than 5 working days prior to placement of bituminous final wearing course, unless approved by Engineer.
- D. Street Catch Basins:
 - 1. Within Concrete Curb and Gutter:
 - a. At time of structure installation, place HDPE rings and casting on dry.
 - b. Establish erosion control around structure per Section 01 57 13. Structure to be allowed to accept runoff during this condition. Basin grate shall not be covered with fabric or other impervious material.
 - c. Immediately prior to concrete curb and gutter installation, remove erosion control and permanently adjust casting to proper grade.
 - d. Pour concrete curb and gutter adjacent to structure, permanently setting casting into curb line.
- E. Valve Boxes Outside of Street Areas:
 - 1. Permanently adjust box to design rim elevation at time of valve installation.
- F. Existing Valve Boxes Outside of Street Areas:
 - 1. Permanently adjust box to design rim elevation prior to final restoration work.
- G. Valve Boxes Within Street Areas with Concrete Curb and Gutter (Final Wearing Course Paved the Same Year as the Initial Lift Wearing Course):
 - 1. At time of valve installation, install box.
 - 2. Prior to street construction, lower top section of box sufficiently to avoid damage during street base construction.
 - 3. Perform adjustment following initial lift wearing course paving:
 - a. Locate box and expose.
 - b. Adjust box to final wearing course grade by raising of top section.
 - c. If top section cannot be raised to proper grade, install valve box extension section.
 - d. Replace and compact gravel base material. Patch initial lift wearing course around structure:
 - 1) Bituminous patch to be 4 feet by 4 feet, minimum.

- e. Top of box to be 3/4 inch lower than the final wearing course grade, as measured with a 6 foot straight edge centered on the box.
 - f. Perform adjustment no more than 5 working days prior to placement of bituminous final wearing course, unless approved by Engineer.
- H. Valve Boxes Within Street Areas with Concrete Curb and Gutter (Final Wearing Course Paved the Following Year or Later):
 - 1. At time of valve installation, install box.
 - 2. Prior to street construction, lower top section of box sufficiently to avoid damage during street base construction.
 - 3. Perform adjustment following initial lift wearing course paving:
 - a. Locate box and expose.
 - b. Adjust box to initial lift wearing course grade by raising of top section.
 - c. If top section cannot be raised to proper grade, install valve box extension section.
 - d. Replace and compact gravel base material. Patch initial lift wearing course around structure:
 - 1) Bituminous patch to be 4 feet by 4 feet, minimum.
 - e. Top of box to be 3/4 inch lower than the initial lift wearing course grade, as measured with a 6 foot straight edge centered on the box.
 - f. Adjustment of valve boxes must be completed within 15 working days after the start of placement of the bituminous initial lift wearing course. Adjustment will not be allowed prior to paving.
 - 4. Prior to final wearing course paving (the following year or later), perform adjustment:
 - a. Remove initial lift wearing course around valve box. Remove sufficient material to allow for compaction of the gravel base.
 - b. Adjust box to final wearing course grade by raising of top section.
 - c. If top section cannot be raised to proper grade, install valve box extension section.
 - d. Replace and compact gravel base material. Patch initial lift wearing course around structure:
 - 1) Bituminous patch to be 4 feet by 4 feet, minimum.
 - e. Top of box to be 3/4 inch lower than the final wearing course grade, as measured with a 6 foot straight edge centered on the box.
 - f. Perform adjustment no more than 5 working days prior to placement of bituminous final wearing course, unless approved by Engineer.

3.07 TRAFFIC CONTROL

- A. Place construction advisory signs, 36 inch by 36 inch, stating “Construction Zone” and “Proceed at Your Own Risk” in black letters on an orange field at all entrances to the Project prior to beginning final adjustment of structures within bituminous surfaced areas.
- B. Exposed edges of manhole castings and valve boxes raised prior to bituminous wear course paving shall be painted with “White” or “Pink” paint.
- C. Provide appropriate traffic control devices to protect the traveling public during all phases of the structure adjustment work.

3.08 FIELD QUALITY CONTROL

- A. For adjustments made within bituminous surfaced areas, any settlements of the bituminous surfacing below the rim of the adjustment structure will require removal and replacement of the bituminous surfacing at the expense of the Contractor.
- B. Secure manholes and structures immediately after completion or before suspension of operations at the end of working day with castings or suitable alternative device.
- C. Adjust manhole and catch basin frames as described above. Thorough tamping of the material around manhole and catch basin frames is required. Where existing frame is within 0.10 feet of grade, no adjustment is to be made. In such cases the crown or gutter shall be either lowered or raised, as the case may be, to put the street and frame at the same grade.
- D. No shims of any material will be allowed.
- E. Adjust valve boxes as described above. Thorough tamping of the material around the valve box is required. All valve boxes shall be clean, straight, plumb, and keyable, allowing a 4 inch schedule 40 pipe to be placed and centered over the valves operating nut from the street surface. This alignment check will be performed on all valves after the final adjustment of the valve box and prior to placement of the bituminous wearing course. Supply the alignment tool (4 Inch Schedule 40 Pipe) and perform this test with the Owner's representative.
- F. Settlements around structure adjustments that occur during the correction period and result in the casting being higher than the bituminous wearing course will be repaired in a manner acceptable to the Owner at the Contractor's expense.

END OF SECTION

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SECTION 33 05 20

RECONSTRUCT MISCELLANEOUS STRUCTURES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Reconstruction of existing utility and drainage structures.
- B. Related Sections:
 - 1. Section 02 41 13 - Selective Site Demolition.
 - 2. Section 33 05 06 - Trenching and Backfill.
 - 3. Section 33 05 18 - Adjust Miscellaneous Structures.
 - 4. Section 33 10 00 - Water Utilities.
 - 5. Section 33 31 00 - Sanitary Utility Sewer Piping.
 - 6. Section 33 39 00 - Sanitary Sewerage Structures.
 - 7. Section 33 40 00 - Stormwater Utilities.

1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Add Manhole or Catch Basin Section: Measurement per each section installed, according to the height, size, and type of section. Payment will include all costs related to furnishing and installing the section, including excavation, salvaging and reinstalling the cone section or top slab, backfilling, and compaction.
 - 2. Remove and Replace Cone Section or Top Slab: Measurement per each cone section replaced on an existing sanitary sewer structure, according to size. Payment will include all costs related to furnishing and installing the new section, including excavation, removal and disposal of existing cone section, backfilling, and compaction.
 - 3. Remove and Replace Casting: Measurement per each replaced, according to type. Payment shall include removal and disposal of existing casting and furnishing new casting. Installation of the casting will be included under the adjustment bid item by type of casting as described in Section 33 05 18.
 - 4. Install Step: Measurement will be per each. Payment will include all costs related to furnishing and installing a step within a storm sewer or sanitary sewer structure. Payment will include removal of existing step.
 - 5. Remove and Replace Step: Measurement per each. Payment will include all costs related to removing, furnishing, and installing the step.
 - 6. Remove and Replace Inside Drop Pipe: Measurement will be per each. Payment will include all costs related to removing the existing riser pipe and furnishing and installing a new riser pipe including bend.
 - 7. Reconstruct Invert: Measurement per each and shall include all costs associated with removals of existing concrete base, concrete work for new invert, and all work related to doghouses.
 - 8. Reconstruct Doghouse: Measurement per each and shall include all costs associated with all work related to removing the existing doghouses and constructing new.

9. Watermain Evaluation Excavation: Measurement per each and shall include all costs related to excavating the existing water main fitting or valve, exposing all bolts for inspection by Engineer, and backfilling. Payment under this bid item will only be made if the fitting or valve is determined to be acceptable by Engineer and does not require any repair. Additional bid items have been provided for fitting or valve evaluation excavations requiring repair.
10. Watermain Evaluation Excavation and Fitting Bolt Replacement: Measurement per each and will include all costs related to excavating to the existing watermain fitting, replacing all fitting T-bolts with Cor-Blue bolts, and backfilling.
11. Watermain Evaluation Excavation, Valve Repair, and Valve Box Replacement: Measurement per each and will include all costs related to excavating to the existing watermain fitting, repairing the existing valve, removing and replacing valve box, and backfilling.
 - a. Valve repairs include:
 - 1) Remove and replace wrench nut
 - 2) Remove and replace wrench nut cap screw
 - 3) Remove and replace bonnet gasket, bolts, and nuts
 - 4) Remove and replace stuffing box gasket, bolts, and nuts
 - 5) Remove and replace stem O-rings (2 or 3 each)
 - 6) All repairs above completed with Grade 316 stainless steel bolts and nuts
 - 7) Remove and replace all T-bolts with Cor-Blue bolts
12. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. American Society of Testing and Materials (ASTM):
 1. ASTM A615 - Specification for Deformed and Plain Billet - Steel Bars for Concrete Reinforcement.
 2. ASTM C139 - Specification for Concrete Masonry Units for Construction of Catch Basins and Manholes.
 3. ASTM C150 - Specification for Portland Cement.
 4. ASTM C206 - Specification for Finishing Hydrated Lime.
 5. ASTM C478 - Specification for Precast Reinforced Concrete Manhole Sections.

1.04 SEQUENCING AND SCHEDULING

- A. Contractor, Engineer, and Owner shall inspect all structures prior to beginning construction.
- B. Owner will remove any foreign material found in these structures prior to construction.
- C. Remove and dispose of any foreign material which enters the structures during the construction period.

PART 2 PRODUCTS

2.01 CONCRETE MATERIALS

- A. Standard Portland Cement Type 1, clean washed sand, crushed rock, and gravel free from deleterious materials for monolithic concrete manholes and all manhole bases.

- B. Portland Cement: Comply with the requirements of ASTM C150.
- C. Design Mix: Subject to the approval of the Engineer. Use proper water-Cement Ratio to obtain 4,000 psi in 28 days.
- D. Mortar Materials:
 - 1. Cement: Type 1 Standard Portland Cement conforming to ASTM C150.
 - 2. Lime: Normal finishing hydrated lime meeting the requirements of ASTM C206.
 - 3. Mix Proportions:
 - a. 1-part cement to 3-parts of suitable plaster sand for mortar used for plastering the exterior walls of block manholes, catch basins, adjusting rings, and lift holes. Use lime or mortar mix in the amount necessary to make a suitable mixture for plastering purposes, but not to exceed 15 percent by volume.
 - b. 1-part Portland cement to 2 parts of sand to which lime or mortar mix may be added but not to exceed 15 percent by volume for mortar used for laying concrete block.
- E. Reinforcing Steel: Comply with the requirements of ASTM A615, Grade 60.

2.02 PRE-CAST CONCRETE MANHOLES

- A. Sanitary Sewer sections conform to 33 39 00.
- B. Storm Sewer sections conform to 33 40 00.

2.03 PRE-CAST SEGMENTAL BLOCK

- A. Conform to ASTM C139.

2.04 MANHOLE STEPS

- A. Reinforced Polypropylene plastic steps with No.2 deformed grade steel rod.

2.05 CASTINGS

- A. Conform to Section 33 05 18.

PART 3 EXECUTION

3.01 TRENCHING AND BACKFILLING

- A. Conform to the requirements of Section 33 05 06.

3.02 REMOVALS

- A. Conform to the requirements of Section 02 41 13.

3.03 EXAMINATION

- A. Field verify size of structure prior to ordering materials.

3.04 PROTECTION

- A. Secure structures immediately after completion or before the end of working day with castings or suitable alternative device.
- B. Clearly mark structures to avoid damage by vehicular traffic.

3.05 RECONSTRUCT MANHOLE OR REPLACE MANHOLE SECTION

- A. Salvage and reinstall existing casting or install new casting.
- B. Salvage and reinstall structure top slab or cone section and mid sections as required.
- C. Remove structure section or cone as required to match Drawings.
- D. Install new structure or cone.
- E. In absence of the o-ring joint seal manhole section using Ram-neck, or approved equal, gasket material applied in accordance with manufacturers recommendations.
- F. Rings: install in conformance with Section 33 05 18.
- G. Neatly mortar lift holes.
- H. Excavate around entire structure to the required depth for reconstruction, After new sections are in place backfill and compact around structure.

3.06 RECONSTRUCT INVERT OR DOGHOUSE

- A. Jack hammer or remove entire existing invert or doghouse.
- B. Place grout to create smooth seeping invert and/or doghouse.

3.07 WATERMAIN EVALUATION EXCAVATION AND REPAIR

- A. The drawings depict locations of the initial watermain evaluation excavations. At these locations, the contractor shall excavate to the existing watermain valve or fitting and expose all bolts. The Engineer will evaluate the condition of the bolts and determine if a repair is needed.
- B. If a repair is not needed, the contractor will be paid for one "Watermain Evaluation Excavation" as described above.
- C. If a repair is needed, the Contractor will be paid for one "Watermain Evaluation Excavation, Valve Repair, and Valve Box Replacement" or "Watermain Evaluation Excavation and Fitting Bolt Replacement" as described above.
- D. The locations shown on the plans are the initial watermain evaluation locations. Depending on the results of the watermain evaluation, additional watermain evaluations and possible repairs at other valves or fittings along the corridor may be completed as directed by the engineer.

END OF SECTION

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SECTION 33 05 28

CONDUIT FOR PRIVATE UTILITIES

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Placement of PVC and ductile iron pipe conduits to be used at a later date by private utility contractors, developers, and the City of Cottage Grove.

B. Related Sections:

1. Section 33 05 06 - Trenching and Backfilling.
2. Section 33 14 18 - Water Utility Service Laterals.
3. Section 33 31 14 - Sanitary Sewerage Services.

1.02 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. Conduit Crossings based on the number of conduits per crossing: Measurement shall be per linear foot of crossing. For example, if a location is determined to require 3 conduits, the Contractor would be paid for the length of the crossing (not the total length of all 3 conduits) under the Bid Item for 3 conduits. Payment at the Unit Price will be considered compensation in full for the installation of the conduits as shown in the Drawings, including conduit, excavation, backfill, compaction, and steel fence posts, regardless of the number of conduits in the trench excavation:
 - a. It should be noted that due to the estimation required for Drawing preparation, the quantities of private utility crossings actually constructed may vary significantly from those given in the Bid Form.
 - b. The Engineer reserves the right to increase or decrease the conduit quantities with no change to the Contract Unit Price. No additional compensation will be considered or allowed for changes to the estimated quantities or for the deletion of any of these Bid Items in their entirety.
 - c. For most crossings, the 4 Inch Diameter PVC conduit is of adequate size for the private utility companies to place their facilities. If a 6 inch conduit is required, measurement shall be identical to that for the 4 inch diameter conduits with payment made under a separate Bid Item for 6 Inch Conduit.
2. Irrigation Conduit Crossing: Measurement and Payment shall be made based on the linear foot of pipe installed, including 4 inch ductile iron pipe (conduit), trench, excavation, backfill, and steel fence posts markers.
3. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 SEQUENCING AND SCHEDULING

- A. Install conduit (provided by contractor) after the public utilities are completed and after the street sub-grade and aggregate backfill work is complete and prior to the gravel base improvements.
- B. Bid Items are included in the Bid Form for crossings consisting of single or multiple conduits, based on estimates made at the time of Drawing preparation.
- C. At the pre-construction meeting, a final plan of proposed crossings will be presented to the Contractor based on the actual needs of each private utility company. Irrigation crossings will be provided by the Developer. The location of the City's conduit will also be identified on this final plan.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Conduit: 4 inch and 6 inch diameter PVC, Schedule 40 conforming to Section 33 31 14.
- B. Markers: Steel fence posts, 5 feet in length.
- C. Irrigation Conduit: 4 inch diameter ductile iron pipe conforming to Section 33 14 18.

PART 3 EXECUTION

3.01 GENERAL

- A. Excavation and Backfill to conform to Section 33 05 06.

3.02 INSTALLATION

- A. Conduit Trenching:
 - 1. In general, underground conduit shall be installed by trenching.
 - 2. The location of each crossing will be staked by the Engineer at the time of construction to assist the Contractor in proper placement of conduits both horizontal and vertical locations.
 - 3. Install conduit as shown on Standard Detail Plate STR-34. Mark ends of crossing locations with steel fence posts. One post required at each end of a crossing, regardless of number of conduits within that crossing.
 - 4. Trenches for the crossings shall be backfilled and compacted to the same standards as the water and sewer utility trenches.
 - 5. Excess excavated material shall be removed and disposed of off the Site.
 - 6. Irrigation conduits shall be 4 inch, ductile iron pipe, installed 4 feet below the design street grade, and shall extend 4 feet beyond the back of curb on both sides of the street, or as directed by Engineer.

3.03 FIELD QUALITY CONTROL

- A. The Engineer reserves the right to reject any material or workmanship not in accordance with the Specifications either before or after installation.

- B. After trenches are excavated and conduit is placed, the Engineer shall be notified so that an inspection may be made before backfilling.
- C. All trench backfill shall be compacted by mechanical means and by "Quality Compaction Method."

END OF SECTION

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SECTION 33 08 30

COMMISSIONING OF SANITARY SEWERAGE UTILITIES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Testing of sanitary sewer pipe, manholes, fittings, and miscellaneous appurtenances.

1.02 PRICE AND PAYMENT

- A. Measurement and Payment:
 - 1. Televis Sanitary Sewer: Measurement will be based upon units of linear feet of pipe televised, regardless of size and type. Pipe will be measured from centerline of structure to centerline of structure. Payment will be compensation for pipe preparation, televising, providing televising report, and all other associated costs.
 - 2. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. American Society of Testing and Materials (ASTM):
 - 1. D3034 - Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
 - 2. F679 - Standard Specification for Poly (Vinyl Chloride) (PVC) Large Diameter Plastic Gravity Sewer Pipe and Fittings.
 - 3. F1417 - Standard Test Method for Installation Acceptance of Plastic Gravity Sewer Lines using Low-Pressure Air.
- B. National Association of Sewer Service Companies (NASSCO):
 - 1. PACP - Pipeline Assessment Certification Program

1.04 SEQUENCING AND SCHEDULING

- A. Televis Sanitary Sewer:
 - 1. Notify Engineer 48 hours in advance of the televising of all pipes.
 - 2. Complete all required mandrel and air testing prior to televising.
 - 3. Start televising no sooner than 30 days, but no later than 60 days after all utility, excavation, and street subgrade work is completed as part of this contract.

1.05 SUBMITTALS

- A. Televising Report:
 - 1. Submit 1 copy of the Written Report and Video Report within 30 days of completion of televising.

2. Report Requirements:
 - a. Each run shall consist of a starting and ending structure number and a zero reading on the counter at center of the starting structure.
 - b. Examine each service wye by using the pan and tilt feature.
 - c. Show location and length, and identify sags within the flowline of the pipe of 10-percent or greater, example 0.06 feet for an 8 inch diameter pipe.
 - d. Location in change in pipe material to be noted.
 - e. The video camera operator shall type into the video the station (distance), wye location on either the left or right side of the pipe, and any problems they notice while televising the sewer lines.
 - f. Take a still photograph at any questionable joint or possible defect.
3. Provide a Written Report with a graphic cross section of the pipe showing the manholes, all wye connections, and defects. This report shall include PACP codes and descriptions
4. Submit a Video Report in a DVD format with audio, including a printable version of the Written Report and full video of all televised pipe runs.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Perform televising pipeline inspections in accordance with NASSCO Pipeline Assessment and Certification Program (PACP). When requested provide the require certification for personnel preforming the actual work.
- B. Commence test procedures only when pipe and structures are clean and free of dirt, water, or other foreign matter. Pipe cleaning shall be performed in accordance with NASSCO Jetter Code of Practice.

3.02 FIELD QUALITY CONTROL

- A. Engineer will observe all tests and visually inspect the Work for compliance.
- B. Provide all material, equipment, and labor required to test the sanitary sewer systems.
- C. Lamping: Engineer will verify installation for true line and grade, joints are home, no broken or deflective pipes exist, the installed pipe is structurally sound, and that the structures conform to the specified requirements.
- D. Gravity Pipe Leak Testing:
 1. General:
 - a. Test all systems (pipe and structures) for leakage before being put in service. Notify Engineer of the date and time for each test 1 day prior to actual testing.
 2. Low Pressure Air Test:
 - a. Diameter: Less than or equal to 24 inches.
 - b. Must meet criteria set forth in ASTM F1417.

- c. Pipe shall be cleaned but may be wetted. Pneumatic balls shall be used to plug the ends at manholes. Low-pressure air shall be introduced into plugged line until the internal air pressure reaches 4.0 psig greater than the average back pressure of any groundwater pressure that may submerge the pipe. At least 2 minutes shall be allowed for the pressure to stabilize before readings are taken and the timing started. During this time, check all plugs with soap solution to detect plug leakage. If any plugs are found to leak, air shall be bled off, the plugs shall be retightened, and the air shall be reintroduced into the line.
 - d. The sewer line under test will be accepted as having passed the air test if the pressure does not drop more than 0.6 psig in less time than 1/2 minute per inch in diameter of the pipe being tested. The minimum starting pressure is 3.6 psig.
 - e. Requirement may be waived for reconstruction projects where reconnection of active sewer services prevents testing with permission from Owner.
- E. Gravity Pipe Deflection Testing:
- 1. Required for all flexible pipe.
 - 2. Deflection Testing Methods:
 - a. Pipe Diameters Through 24 Inches: Pull mandrel through the pipe by hand (without aid of mechanical pulling devices).
 - b. Pipe Diameters Greater Than 24 Inches Through 36 Inches: Deflections shall be determined by use of a mandrel or a method submitted to and approved by the Engineer. If mandrel is used, it shall be pulled through the pipe by hand (without aid of mechanical pulling devices).
 - c. Pipe Diameters Greater Than 36 Inches: Deflection measurements shall be determined using a mandrel, rigid bar, a circular rigid template, or by a method approved by the Engineer. If mandrel is used, it shall be pulled through the pipe by hand (without aid of mechanical pulling devices).
 - 3. Deflection testing shall be conducted at least 30 days after the pipe has been backfilled to the desired finish grade on all direct bury flexible pipe and shall be done in the presence of the Engineer.
 - 4. 5-percent deflection allowance.
 - 5. Mandrel Diameter Requirements:
 - a. Diameter equal to 95 percent of the base inside diameter noted in Appendix XI of ASTM C3034 for PSM PVC pipe (SDR pipe) and calculated from Appendix X2 of ASTM F679 for PS 46 or 115 pipe.
 - b. Mandrel shall be constructed of rigid steel, be non-adjustable, and have an odd number of legs (9 legs minimum). Its effective length shall not be less than its nominal diameter.
 - 6. Deflection Template/Bar Requirements:
 - a. The circular template diameter (or rigid bar length) shall be equal to the mandrel diameter requirements as determined above.
 - b. Circular templates shall be constructed of rigid materials and be non-adjustable.
 - c. Rigid bars shall have a 1 inch diameter circular section, be constructed of steel, and be non-adjustable.

3.03 REQUIREMENTS FOR TEST FAILURES

- A. Leak Test Failure:
- 1. Repair piping as necessary to conform to product requirements.

2. All repair work shall be subject to approval by the Engineer.
3. Chemical type sealants added to the test water will not be permitted.
4. The Engineer may require removal and replacement of pipe in failed test sections.
5. Pay for the cost of replacement, repair, and re-testing of failed pipe sections.

B. Deflection Test Failure:

1. Owner reserves the right to measure the deflection of all flexible pipe at any time during the correction period. Deflections greater than 5 percent of the inside diameter of the pipe shall be considered failure. Re-excavate the trench, re-compact the backfill material, and restore the surface with no additional compensation for such work. Re-rounding of pipes that fail the deflection test will not be allowed.
2. Damaged pipe shall not be reinstalled, but shall be removed from the Site.

3.04 SANITARY SEWER CLOSED CIRCUIT TELEVISION INSPECTION

A. Pre-Televising:

1. Newly installed sanitary sewer segments must be in a clean and ready condition prior to the television inspection.
2. Immediately clean any lines found to be dirty prior to televising. Costs for all such cleaning shall be the responsibility of the Contractor.
3. Provide sufficient water to run through the new sanitary sewer system prior to televising lines to be able to distinguish any sags or alignment problems with the pipe.
4. Personnel completing televising must be PACP certified.
5. Final acceptance of the video report will require the pipe to be clean as a new pipe.

B. General:

1. Provide a camera that will be self-propelled and will have the ability to tilt up and down and pan left and right. The camera must provide color images.
2. Speed shall not exceed 30 feet per minute.

C. Defects:

1. Immediately correct any defects, faulty joints, cracked pipe, or other deficiency noted by the television inspection.
2. A plan for repair shall be presented to and approved by the Owner and Engineer prior to the repair occurring.
3. Re-televising all corrected pipe runs after correction.
4. Any costs associated with correction and re-televising of the sewer system will be paid by the Contractor.

END OF SECTION

SECTION 33 10 00

WATER UTILITIES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Water main pipe, hydrants, valves, fittings, and miscellaneous appurtenances.
- B. Related Sections:
 - 1. Section 01 33 00 - Submittal Procedures.
 - 2. Section 01 50 00 - Temporary Facilities and Controls.
 - 3. Section 33 05 06 - Trenching and Backfilling.
 - 4. Section 33 05 18 - Adjust Miscellaneous Structures.
 - 5. Section 33 14 18 - Water Utility Service Laterals.

1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Water Main Pipe: Measurement will be based upon units of linear feet for each size and type of pipe installed, as measured along the axis of pipe, without regard to intervening valves or fittings. Water main over depth shall not be measured. Payment at the Bid Unit Price shall include furnishing and installing pipe complete in place as specified:
 - a. All required poly encasement on water main system shall be considered part of the Bid Item for the installation of the various components of the system. No separate measurement or payment for poly encasement shall be made.
 - 2. Valve and Box: Measurement will be based on each size and type of Valve and Box installed. Payment at the Unit Price shall include furnishing and installing the Valve and Box, and valve adaptor complete in place as specified.
 - 3. Hydrant: Measurement will be based on units of each Hydrant installed. Payment at the Unit Price shall include furnishing and installing the Hydrant, including hydrant flag, as well as furnishing and delivering the extra flag and one "Out of Service" tag for each hydrant installed to the Owner:
 - a. A separate Bid Item will be provided for hydrants requiring vertical bends per Standard Detail Plate WAT-2. Payment will include cost of the hydrant described above and bend.
 - 4. DIP Fittings: Measurement shall be based on the total fitting weight installed, not including accessories, as shown in AWWA C153/A21.53, latest revision (provide weights from supplier for crosses). Payment at the Unit Price shall include all costs related to furnishing and installing the DIP fitting, all hardware and accessories, and required labor. Any provisions, such as corporations, rods, copper pipe, Megalugs, etc. installed on the plugs of the stub for testing purposes or for future irrigation or service connections, shall be considered incidental to the plug. No separate measurement or compensation shall be made for such provisions:
 - a. Fittings required for construction of future irrigation services will be paid under this Bid Item.
 - b. Removal of the copper after successful testing will be incidental to this Bid Item.

TEES, CROSSES, & REDUCERS									
RUN SIZE	BRANCH SIZE	MJ X MJ FITTING			RUN SIZE	BRANCH SIZE	MJ X MJ FITTING		
		TEE	CROSS	REDUCER			TEE	CROSS	REDUCER
4	4	32	40		18	18	439	520	
6	4	46	52	24	20	6	315		
6	6	56	68		20	8	349	364	
8	4	60	68	32	20	10	374		206
8	6	72	84	36	20	12	395	423	205
8	8	86	105		20	14	440		216
10	4	78	84	46	20	16	469		209
10	6	90	100	47	20	18	509	558	205
10	8	105	119	50	20	20	535	640	
10	10	114	133		24	6	423	434	
12	4	94	103	58	24	8	450	464	
12	6	110	121	58	24	10	480		
12	8	125	139	57	24	12	508	529	285
12	10	140	161	61	24	14	550		298
12	12	160	182		24	16	588	641	299
14	4	152			24	18	632		305
14	6	178	190	93	24	20	670	757	291
14	8	193	209	92	24	24	752	870	
14	10	211	255	92	30	6	685		
14	12	228	269	94	30	8	703		
14	14	262	313		30	10	760		
16	6	228	229	120	30	12	765	787	541
16	8	233	249	118	30	16	878		613
16	10	253	275	118	30	18	909		631
16	12	272	299	112	30	20	988		612
16	14	307		131	30	24	1077	1169	478
16	16	335	399		30	30	1271	1603	
18	6	275			36	6	927		
18	8	295		165	36	8	1018		
18	10	315		160	36	12	1072		731
18	12	335	360	152	36	14	1135		
18	14	372		168	36	16	1211		804
18	16	401		174	36	18	1252		930
18	18	439	520		36	20	1350		969
20	6	315			36	24	1421	1528	770
20	8	349	364		36	30	1674		811
20	10	374		206	36	36	1940	2229	
20	12	395	423	205					
20	14	440		216					

BENDS, CAPS, PLUGS, & SLEEVES							
SIZE	BENDS - MJ X MJ (DEGREES)				CAPS	PLUGS	SLEEVES
	90	45	22.5	11.25	MJ X MJ	MJ X MJ	MJ X MJ
3	19	16	15	14	8	8	17
4	25	22	18	16	9	10	20
6	39	32	31	30	15	16	29
8	57	46	46	42	22	26	45
10	89	70	64	58	32	36	61
12	108	86	80	67	42	46	76
14	210	160	136	93	66	75	128
16	264	202	172	148	92	95	159
18	335	250	255	205	114	121	200
20	400	305	310	245	125	135	236
24	565	405	412	315	166	175	306
30	930	780	665	600	345	355	634
36	1450	1135	960	820	628	688	889
NOTE: SLEEVE WEIGHTS BASED ON THE USE OF LONG SLEEVES							

5. Connect to Existing Water Main: Measurement will be based on each connection made, according to size. Payment of this Bid Item shall be considered complete compensation for all work associated with the connection to the existing water main, including removal and disposal of the existing plug.
6. Wet Tap: Measurement shall be based on each Wet Tap installed by size. Payment at the Bid Unit Price shall include stainless steel tapping sleeve and hardware, valve, and valve box.
7. Water Main Offset: Measurement shall be based on each offset made, according to size. Payment shall include all pipe, fittings, restraints, and materials to complete the offset per the Standard Detail Plate WAT-7.
8. Insulation: Measurement will be based on square yards of Insulation at the specified thickness. Payment shall be made at the Unit Price and will include furnishing and installation of the Insulation.
9. Cut In Valve: Measurement will be based on the number of valves installed, according to size. Payment shall include all water main cutting, removal, pumping, water main pipe, sleeves, fittings, and valve and box needed to complete the installation.
10. Irrigation Service: Measurement and Payment will be made under each Bid Item to construct in accordance with the Detail Drawing.
11. Hydrant Reconditioning and Painting: Measurement and payment will be based on units of each Hydrant that is reconditioned and painted and shall include sandblasting, primer coat, top coat, protection, materials, and all work associated with the reconditioning and painting:
 - a. Includes furnishing and installing a new hydrant flag, and salvaging and delivering the existing flag to the City of Cottage Grove Public Works Department.
12. Remove and Replace Valve and Box: Measurement will be per each of size and type specified and will include all costs related to removing the existing valve and valve box per Section 02 41 13 and furnishing and installing a new valve, fittings, and valve box.

13. Joint Restraint: No Bid Item has been provided. Joint restraint shall be considered incidental to water main installation with no direct payment made.
14. All required testing shall be considered incidental to the installation of the water main system. No direct or separate payment for testing will be made.
15. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. American Water Works Association (AWWA):
 1. C104 - American National Standard for Cement Mortar Lining for Ductile-Iron Pipe and Fittings for Water.
 2. C105 - American National Standard for Polyethylene Encasement for Ductile-Iron Pipe Systems.
 3. C111 - American National Standard for Rubber Gasket Joints for Ductile Iron Pressure Pipe and Fittings.
 4. C116 - American National Standard for Protective Fusion-Bonded Epoxy Coatings for the Interior and Exterior Surfaces of Ductile-Iron and Gray-Iron Fittings for Water Supply Service.
 5. C151 - American National Standard for Ductile-Iron Pipe, Centrifugally Cast, for Water.
 6. C153 - American National Standard for Ductile-Iron Compact Fittings for Water Service.
 7. C502 - AWWA Standard for Dry-Barrel Fire Hydrants.
 8. C504 - AWWA Standard for Rubber-Seated Butterfly Valves.
 9. C515 - AWWA Standard for Resilient-Seated Gate Valves for Water Supply Service.
 10. C550 - American National Standard for Protective Interior Coatings for Valves and Hydrants.
 11. C600 - AWWA Standard for Installation of Ductile-Iron Water Main and Their Appurtenances.
 12. C651 - AWWA Standard for Disinfecting Water Mains.
- B. American Society of Testing and Materials (ASTM):
 1. A48 - Gray Iron Castings.
 2. A126 - Gray Iron Castings for Valves, Flanges, and Pipe Fittings.
 3. A536 - Standard Specification for Ductile Iron Castings.
 4. A674 - Standard Practice for Polyethylene Encasement for Ductile Iron Pipe for Water or Other Liquids.
 5. C578 - Specification for Rigid, Cellular Polystyrene Thermal Insulation.

1.04 SUBMITTALS

- A. Submit Product Data for the following items consistent with Section 01 33 00:
 1. Pipe, fittings, valves, and hydrants.
 2. Joint restraint and corrosion resistant coatings.

1.05 SEQUENCING AND SCHEDULING

- A. Notify the Owner a minimum of 48 hours prior to performing Work. At this time, also notify the City Fire Department of the intended shutdown.
- B. Notify all customers connected to water system to be shut down 48 hours in advance of shut down.

- C. The Owner must open and close the existing valves for this part of the operation. The Owner is responsible for flushing the mains after the connection is completed; however, the Contractor shall assist the Owner as necessary.
- D. Successfully complete required test and inspections before restoration of surface.

1.06 USE OF CITY WATER SYSTEM

- A. Any water use for this project will need to be coordinated with the City of Cottage Grove Public Works and a water use permit will be required. Conform to Section 01 50 00.

PART 2 PRODUCTS

2.01 DUCTILE IRON PIPE (DIP) AND FITTINGS

- A. General Requirement: AWWA C151/A21.51.
- B. Cement-mortar lining conforming to AWWA C104/A21.4.
- C. Class: As shown on Drawings.
- D. Fittings: AWWA C153/A21.53, latest revision, Ductile Iron Compact Fittings, 250-psi working pressure, AWWA C111/A21.11 latest revision, mechanical joint or push-on:
 - 1. All fittings shall be fusion bonded epoxy coated per ANSI/AWWA C116/A21.
- E. Cor-Blue bolts required on all mechanical joint fittings.
- F. Wrap all pipe and fittings according to pipe encasement requirements.

2.02 HYDRANT

- A. General Requirements: AWWA Standard C502.
- B. Specified Hydrant: WB-67-250, or approved equal.
- C. Approved Manufacturer: Waterous Pacer, or approved equal.
- D. Two 2-1/2 inch hose connections, National Standard Thread.
- E. One 4-1/2 inch steamer, Nation Standard Thread.
- F. National standard operating nut.
- G. 5 inch valve opening.
- H. 6 inch mechanical joint pipe connection.
- I. Break-off flange with breakable rod coupling.
- J. 7 feet-6 inch cover.

- K. 16 inch high traffic section.
- L. Nozzle caps attached to hydrant with metal chains.
- M. Stainless steel hardware.
- N. Hydrant Flag: Senior Hydrant Marker w/Red and White Reflective LRSH-85000W: Marker by Vait Products or approved equal:
 - 1. Fiberglass rod, 5 red and 5 white reflective bands.
 - 2. Minimum 60 inches long, 3/8 inch diameter.
 - 3. Stainless steel spring and mounting bracket.
- O. Hydrant Tag: Rhino Markers “Out of Service” circular tag, or approved equal:
 - 1. Size, fit around the steamer nozzle
 - 2. Red color
 - 3. White Lettering “Fire Hydrant Out of Service”
- P. Hydrants placed where the ground water table is less than 8 feet below the ground surface shall have the drain holes plugged and shall be equipped with a tag stating the need for pumping after use.
- Q. High-pressure valve seat (referred to as the Colorado Kit).
- R. Color: Painted Waterous Enamel No. V1814-R at the place of manufacture.

2.03 GATE VALVE AND BOX

- A. General Requirement: AWWA C515.
- B. Ductile iron body valves, bronze mounted.
- C. Non-rising stem (NRS), opening by turning counter clockwise, 2 inches square operating nut.
- D. O-ring seals.
- E. Mechanical joint ends conforming to AWWA C111/A21.11.
- F. Stainless steel hardware.
- G. All internal and external surfaces of the valve body and bonnet shall have a fusion bonded epoxy coating complying with ANSI/AWWA C550 and C116/A21.16.
- H. Wrap gate valves with pipe encasement.
- I. Valve Boxes:
 - 1. 3-piece, ductile iron, screw-type.
 - 2. Adjustable for 7-1/2 foot depth of cover.
 - 3. Valve and box considered as integral units.
 - 4. 5-1/4 inch diameter shafts.
 - 5. “Stay put” type drop covers, “WATER” on top with extended skirts.

- 6. Valve Adaptor: Adaptor Inc., or approved equal.

2.04 BUTTERFLY VALVE AND BOX

- A. General Requirement: AWWA C504.
- B. Mechanical joint valve ends conforming to AWWA C111/A21.11.
- C. AWWA C504, Class 250B.
- D. O-ring seal.
- E. All stainless steel hardware required.
- F. Wrap butterfly valve with pipe encasement.
- G. Actuator:
 - 1. Manually operated.
 - 2. Traveling nut type sealed, gasketed, and lubricated for underground service.
 - 3. Open counter clockwise with mechanical stops in the open and closed positions.
- H. Valve Box:
 - 1. 3-piece, ductile iron, screw-type.
 - 2. Valves and boxes to be considered integral units.
 - 3. 5-1/4 inch diameter shafts.
 - 4. Round or oval bases.
 - 5. "Stay put" type drop covers, bearing the word "WATER" on top with extended skirts.
 - 6. Valve Adaptor: Adaptor Inc., or approved equal.

2.05 CONDUCTIVITY STRAP

- A. As specified by the pipe manufacturer.

2.06 WET TAP

- A. Stainless steel tapping sleeve.
- B. 3/4 inch gaskets.

2.07 JOINT RESTRAINT

- A. Tie Rods: Steel rods with "Star" brand tie bolts.
- B. Mechanical Joint Restraint:
 - 1. Ductile iron conforming to ASTM A536.
 - 2. Working Pressure: Minimum 250 psi.
 - 3. EBAA Iron, Inc. Mega-lug, Star Pipe Products Stargrip, Sigma OneLock, or approved equal.
 - 4. Casting body and wedge assemblies coating:
 - a. Fusion bonded epoxy per ANSI/AWWA C116/A2.
 - b. Bond coating per manufacturer's recommendations:

- 1) Mega-Bond, Star-Bond, or approved equal.

2.08 PIPE ENCASEMENT

- A. Material: Polyethylene film conforming to AWWA C105/A21.5 and ASTM A674, tube form.
- B. Color: Black.
- C. Film Marking Requirements: Conform to AWWA C105/A21.5 and ASTM A674, including AWWA/ASTM standard, corrosion protection warning and applicable range of nominal pipe diameter size(s) every 2 feet along its length.

2.09 INSULATION

- A. Polystyrene Insulation: Extruded type conforming to ASTM C578, Type VI, VII, or V.

2.10 CORPORATION STOP

- A. Conform to the requirements of Section 33 14 18.

2.11 COPPER SERVICE PIPE

- A. Conform to the requirements of Section 33 14 18.

2.12 HYDRANT RECONDITIONING AND PAINTING

- A. Materials shall conform to the following:
 1. Primer: Apply Devoe High Performance Coating, Devran 201H Epoxy Primer.
 2. Paint (hereinafter "Top Coat"): Apply Devoe High Performance Coating, Devthane 379 Polyurethane.
 - a. Color: Safety Red
 - b. Finish: Glossy Enamel
 3. Proposed paint material substitution for consideration as an approved equal shall be submitted in writing to the Engineer for review and consideration. Otherwise, furnish materials exactly as specified.

PART 3 EXECUTION

3.01 GENERAL

- A. Locating of public utilities within the project limits in accordance with section 01 31 00 Project Management and Coordination shall be incidental to the project and included in the Total Base Bid.

3.02 PREPARATION

- A. Conform to the requirements of Section 33 05 06.

3.03 INSTALLATION OF PIPE

- A. Install pipe and fittings in accordance with the manufacturer's instructions and with the details shown on the Drawings.
- B. Permanently support, remove, relocate, or reconstruct existing utility pipes, cables, structures, or other appurtenances when they obstruct the line, grade, or location of the pipe or appurtenance.
- C. At the time of the connection to the existing water main, the Contractor must notify the Engineer if they are experiencing any existing water main leakage.
- D. Remove foreign matter or dirt from the inside of pipe to insure each pipe is clean before it is installed.
- E. All jointing of mechanical joint pipe and push-on joint pipe in accordance to AWWA C600.
 - 1. Mechanical joint restraints and retainer glands are not allowed on existing cast iron pipe.
- F. Outside of the spigot and the inside of the bell, wire brush, wipe clean and dry. Keep pipe ends clean until joints are made.
- G. Lay and maintain pipe and appurtenances to the alignment, grade, and location shown on the Drawings. No deviation from the Drawing alignment, grade, or location is allowed, unless approved by the Engineer. No pipe shall be laid in water or when the trench conditions are unsuitable for such Work.
- H. Provide conductivity throughout the water system. Use of conductivity straps between pipe segments is required at all valve and fitting locations.
- I. Cap or plug end of each pipe until next pipe is ready to be laid to prevent debris or groundwater from entering the pipe.
- J. Installing Fittings:
 - 1. General Requirements: AWWA C600.
 - 2. Set and jointing to existing pipe and fittings as specified for cleaning, laying, and joining pipe.
- K. Dead End Lines:
 - 1. Install plug tapped with a 1 inch corporation at all stubs.
 - 2. Extend a temporary section of 1 inch copper to above grade for flushing and testing.
 - 3. Install a temporary curb stop on the 1 inch copper bleed off above ground.
 - 4. Mark with wood marker per Standard Detail Plate WAT-8.
- L. Wrap all ductile iron pipe and fittings with pipe encasement.
- M. Backfilling: Conform to Section 33 05 06.

3.04 INSTALLATION OF HYDRANT

- A. Location determined by Engineer. A grade stake and location stake will be provided by the Engineer before the hydrant may be set.

- B. Set on 8 inch concrete block, or approved equal concrete base.
- C. Brace according to Drawings.
- D. After each hydrant has been set, place around the base of the hydrant not less than 1 cubic yard of coarse filter aggregate (MnDOT Spec. 3149.2.H). Carefully place 2 layers of polyethylene, minimum 4 mm thickness each, over the rock to prevent backfill material from entering voids in the drain rock.
- E. Wrap the hydrant assembly with pipe encasement to the bottom of the break off flange.
- F. Maintain hydrants in a plumb position during the backfilling operation.
- G. Attach a hydrant marker to the hydrant using an existing flange bolt located at the back of the hydrant.
- H. Furnish 1 additional marker for each hydrant to the Owner.
- I. Furnish and install a Hydrant tag on all Hydrants until the lines have been tested and accepted. Once accepted, the Contractor shall deliver the hydrant tags to the City Public Works Department.

3.05 INSTALLATION OF VALVE

- A. Set and joint valves to new pipe in the manner as specified for cleaning, laying, and jointing pipe. Location to be determined by the Engineer.
- B. Valves and boxes shall be supported on an 8 inch concrete block, and encased with coarse filter aggregate (MnDOT Spec. 3149.2.H) as shown on the Drawings.
- C. Install valve adaptor.
- D. Maintain valve box centered and plumb over the operating nut of the valve.
- E. Set top of valve box flush with the existing surface to provide 12 inches of upward adjustment.
- F. Wrap valves with pipe encasement. Conform to AWWA C105.

3.06 ANCHORAGE

- A. Restrain all hydrant leads, lateral lines, bends, fittings, and valves using Megalug glands as per Drawings.
- B. Provide concrete thrust blocking for all bends, tees, hydrants, and plugs:
 - 1. Requirements per Drawings.
 - 2. Block tees, plugs, and hydrants to same requirements as 90 degree bend.
 - 3. Thrust blocking for 4 inch, 6 inch, and 8 inch fittings shall be precast concrete blocking.
 - 4. Thrust blocking must be poured-in-place concrete for fittings 12 inch and larger.
 - 5. Wrap plug in poly prior to pouring of thrust block in anticipation of future removal.

- C. Brace fittings and hydrants securely against undisturbed soil using precast concrete blocks. Rod all joints from main line tee to hydrant gate valve, then from hydrant gate valve to hydrant.
- D. Where lines terminate with plugs, restrain the plug and a minimum of the next 3 joints for 6 and 8 inch pipe with 3/4 inch tie rods in conjunction with blocking, as directed by the Engineer. The number of joints restrained for pipe larger than 8" shall be, as recommended by manufacturer. The number of rods required is as follows:

<u>Pipe Size</u>	<u>No. of 3/4 inch Rods</u>
6 inch	2
8 inch	2
12 inch	4
16 inch	6
18 inch	6
20 inch	8
24 inch	10

Joint restraints other than rods shall be as approved by the Engineer.

3.07 INSULATION

- A. Review insulation installation with Engineer:
 - 1. Place insulation between water pipe and sanitary pipe when water main or service is within 1 foot above or below the sanitary pipe.
 - 2. Place insulation between storm sewer pipe and water main or water service when pipes are separated by less than 2 feet.

3.08 INSTALLATION OF IRRIGATION SERVICE

- A. Install at locations shown on the Drawings and as directed by Engineer.
- B. Install per Standard Detail Plate SER-6.

3.09 PIPE CONFLICTS (WATER MAIN OFFSET)

- A. Install water main offset per Standard Detail Plate WAT-7 and as shown on Drawings.
- B. All offset piping shall be DIP.
- C. Megalug and Tie Rod type joint restraints.

3.10 HYDRANT RECONDITIONING AND PAINTING

- A. Project Coordination:
 - 1. Conduct pre-construction meeting with Engineer to review Work schedules for all stages of Work, review material application process and discuss any questions before work begins.
 - 2. Provide written documentation of primer and paint material used for Project.
- B. Preparation:
 - 1. Salvage flag and deliver to Cottage Grove Public Works Department.
 - 2. Sandblast the entire fire hydrant to base metal to ensure good adhesive bonding of the paint.

3. Produce smooth surface ready to receive primer material in accordance with manufacturer's recommendations.
 4. During painting and blasting operations, provide adequate protection and containment to prevent damage to adjacent structures and property. This includes protecting the area surrounding the hydrant from overspray through the use of a template or ground covering around the hydrant. The contractor is responsible for any and all damage resulting from painting and/or blasting operations. Remedy all damages within 48 hours of notification.
- C. Coatings:
1. Primer and Top Coat shall be applied to the hydrant by using a spray method application. The use of painting mitts is not allowed on any surface.
 2. Primer: Immediately after surface preparation, apply in accordance with manufacturer's instructions at a rate to provide a uniform dry film thickness of 2.0 to 3.0 mils. Care must be taken to ensure uniform application of material around bolt heads, underside of nozzles, and other surface irregularities. Paint films that show sags, blisters, etc. will not be accepted.
 3. Prior to Top Coat application, primed surface must be clean, dry, undamaged, and free of all contaminants including salt deposits.
 4. Top Coats: Apply to coat in accordance with manufacturer's instructions at a rate to provide a uniform dry film thickness of 2.0 to 3.0 mils. Maintain minimum coverage around bolt heads, underside of nozzles, and other surface irregularities.
 5. Produce glossy, smooth, and uniform surface finish.
 6. Follow product data/application instructions and manufacturer's recommendations in completing the work.
- D. Process: follow all requirements for working in public right-of-way, and maintain full compliance with specified traffic control and applicable OSHA Standards. Remove all Primer and Paint Top Coat material that is over-sprayed, dripped, spilled or deposited on sidewalks or other ground surfaces as directed by Engineer at the Contractor's expense.
- E. Furnish and install new flag after hydrant has been painted.

3.11 REMOVE AND REPLACE VALVE AND BOX

- A. Coordinate the necessary water main shut down with City Public Works and Resident notification.
- B. Excavate and remove existing valve.
- C. Install new valve include necessary sleeve.
- D. Backfill and compact trench per Section 33 05 06.

3.12 PROTECTION

- A. Existing valves and hydrants shall be operated in accordance with Section 01 50 00, Paragraph 3.02, unless under emergency situations.
- B. Securely plug all water main openings promptly before suspension of Work at any time to prevent earth or other substances from entering the water main.

- C. Mark valve boxes and structures susceptible to being hit by construction or vehicular traffic.
- D. All newly installed core blue nuts and bolts that are marred or scratch during installation, shall have an Asphalt Aerosol Spray applied to the surface.

3.13 FIELD QUALITY CONTROL

- A. Scope:
 - 1. Perform hydrostatic pressure, disinfection, and conductivity tests.
 - 2. The Engineer will observe and verify all tests and visually inspect final Work for compliance.
- B. Hydrostatic Pressure Test:
 - 1. Minimum Test Pressure: 150 psi.
 - 2. Test Duration: 2 hours.
 - 3. Criteria: No drop in pressure allowed.
 - 4. Testing Gauge: Liquid filled, 4-1/2 inches diameter, labeled in 1-psi increments, such as Ashcroft Model 1082, or approved equal.
 - 5. Test all lines, including hydrant leads, water services, and stubs.
 - 6. Any valved section of water system may be isolated for pressure testing.
 - 7. Sequence and sectioning of water system for pressure testing shall be proposed by Contractor and approved by the Engineer prior to testing.
 - 8. Notify the Engineer immediately if it is determined that the existing valve is not holding pressure during the hydrostatic pressure test.
 - 9. The Contractor may request the City to perform leak detection testing on existing valves if the Contractor has tried testing the line and the required testing pressure will not hold. If the valve is found not to be leaking, the Contractor will be responsible for the testing costs.
 - 10. If a faulty valve is suspected, a meeting with the Engineer and Owner will be necessary to attempt pressure testing prior to the Contractor continuing. No claims by the Contractor for extra work related to pressure testing will be processed if this meeting has not occurred.
- C. Disinfection:
 - 1. General Requirement: AWWA C651 – Disinfecting Water Mains (Tablet Method).
 - 2. Place hypochlorite tablets in each section of pipe and all appurtenances:
 - a. Attach tablets to top of pipe with a food grade adhesive, such as denture grip.
 - b. The estimated number of tablets required per 20 foot length of pipe based on 3-1/4 grain available chlorine per tablet is as follows:

	<u>Diameter</u>	<u>No. of Tablets</u>
1)	4 Inches	1
2)	6 Inches	2
3)	8 Inches	3
4)	10 Inches	4
5)	12 Inches	5
6)	16 Inches	9
7)	18 Inches	12
8)	20 Inches	14
9)	24 Inches	20
10)	30 Inches	28

- c. Use specified number of tablets to disinfect water main for 24 hours with at least 50 ppm available chlorine, with a residual of at least 10 ppm throughout the length of the main at the end of the 24 hour period.
 3. Fill main with water at a velocity of less than 1 foot per second if tablet method is used.
 4. Begin flushing after the chlorinated water has been allowed to disinfect the new pipe for 24 hours.
 5. 1 bacteria test location is required for every 1,200 feet of water main installed, with a minimum of 2 sample locations per Project. Locations shall be identified by the Engineer. Two bacteria test samples will be taken at each location with a minimum 24 hour separation of the sampling. The first test shall occur no sooner than 24 hours after flushing has been completed.
 6. Coordinate all bacteria testing with Engineer. Assist with the sampling process by operating valves if necessary at the time of testing. Engineer will coordinate with a City approved and certified independent testing firm to complete the sampling and testing. Results will be provided to contractor as soon as available.
 7. The owner will be responsible for costs associated with bacteria testing of samples obtained. Contractor is responsible for costs associated with bacteria testing of any failing tests.
 8. Water mains needing reflushing or to be rechlorinated, must be done to meet Department of Health and AWWA requirements. Perform re-flushing or re-chlorination within 48 hours of notification of failing tests.
- D. Conductivity (DIP):
1. Conductivity to be provided throughout the water system by use of copper straps or approved conductive gaskets with copper inserts.
 2. Test Current: 350 amps at approximately 30 volts for 4 minutes, then 400 amps for 1 minute without fluctuation.
 3. Fill lines with water prior to test.
 4. Test all lines, including hydrant leads, water services, and stubs.
- E. Trench Backfill – Compaction: The Owner shall have an independent testing laboratory perform, as a minimum, the following tests. The location of the tests will be determined by the Engineer:
1. 1 density test for every 300 feet of trench at varying depths.
- F. Adjust valve boxes per Section 33 05 18. Thorough tamping of the material around the valve box is required. All valve boxes shall be clean, straight, plumb, and keyable, allowing a 4 inch schedule 40 PVC pipe to be placed and centered over the valves operating nut from the street surface. This alignment check will be performed on all valves after the final adjustment of the valve box and prior to placement of the bituminous wearing course. Supply the alignment tool (4 Inch Schedule 40 PVC Pipe) and perform this test with the Owner's representative.

END OF SECTION

SECTION 33 14 18

WATER UTILITY SERVICE LATERALS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Construction of water service pipe, corporation stops, curb stops and boxes, and all appurtenances.
- B. Related Sections:
 - 1. Section 01 31 00 - Project Management and Coordination.
 - 2. Section 01 33 00 - Submittal Procedures.
 - 3. Section 33 05 06 - Trenching and Backfilling.
 - 4. Section 33 10 00 - Water Utilities.

1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Water Service Line: Measurement by linear foot of each size and type of pipe measured along the axis of the pipe, from centerline of the water main to termination as shown on the Drawings with no regard to intervening fittings. Payment at the Bid Unit Price per foot shall include cost of all pipe, laying, excavation, poly encasement for ductile iron pipe, backfilling, and testing:
 - a. Placement and compaction of the aggregate material around the corporation stop and gooseneck is incidental to the service line.
 - b. Supplying and installing required markers is incidental to the service line.
 - c. Ductile iron fittings will be paid per Section 33 10 00.
 - d. Any provisions, such as corporations, rods, copper pipe, etc. installed on the plugs of a stub for testing purposes or for future service connections, shall be considered incidental to the plug.
 - 2. Corporation Stop: By physical count of each type installed, according to size:
 - a. Placement and compaction of the required support is incidental.
 - 3. Curb Stop: By physical count of each type installed, according to size:
 - a. Required support is incidental.
 - 4. Gate Valve and Box will be paid per Section 33 10 00.
 - 5. Material, placement, compaction, and removal of excess trench material to be included in the Bid Unit Price for Water Service Line.
 - 6. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. American Society of Testing and Materials (ASTM):
 - 1. B88 - Class K Copper Water Service Pipe.

1.04 SUBMITTALS

- A. Submit the Product Data for the following items consistent with Section 01 33 00:
 - 1. Pipe and fittings.
 - 2. Corporation stop and curb boxes.

1.05 SEQUENCING AND SCHEDULING

- A. Install sanitary sewer, water main, and all pipe deeper than the services prior to the installation of the services.
- B. Install water service in same trench as the sanitary sewer service, wherever possible.
- C. Perform testing of new water main prior to reconnecting existing services.

PART 2 PRODUCTS

2.01 SERVICE PIPE

- A. Copper Water Tube: 1 inch through 1-1/2 inches for buried service shall be seamless, Type K water tube conforming to ASTM B88:
 - 1. Fittings shall be designed for working pressures up to 150 psi. Fittings used in service lines shall be designed for connection to the service line by threads, brazing, and/or flaring (compression fittings not allowed).
 - 2. 4 Inch diameter (minimum) DIP shall be used for services larger than 1-1/2 inches Ductile Iron Pipe (DIP): Conform to Section 33 10 00.

2.02 CORPORATION STOP

- A. Approved Manufacturers: Mueller Minneapolis Pattern H-15000, Ford Type 600, Hayes No. 5200, or McDonald No. 74701.
- B. Threaded on outlet for flared connection with copper service pipe.
- C. Threaded on inlet end with standard tapered corporation cock thread.

2.03 CURB STOP

- A. Approved Manufacturers:
 - 1. Curb Stops - 1 Inch: Mueller Oriseal, Minneapolis Pattern H-15151, Ford No. B22, Hayes No. 5155 or McDonald No. 76104.
 - 2. Curb Stops - 1-1/2 Inches: Mueller Oriseal H-15154, Minneapolis pattern, Ford No. B22 Series ball valves, Hayes Nuseal No. 4008 or McDonald No. 76104 ball valves.
- B. Same size and connection type for inlet and outlet.
- C. Full opening through the valve body with no smaller restriction allowed.

2.04 CURB BOX

- A. Approved Manufacturers:
 - 1. Mueller H-10300.
 - 2. McDonald 5614 or 5615
- B. Adjustable in height from seven feet to eight feet.
- C. Stationary rods.
- D. 1-1/4 inch upper section.
- E. Mueller, Minneapolis pattern base.

2.05 SADDLE

- A. Smith Blair stainless steel strap 317 or approved equal.
- B. Saddles are to be used at locations shown on the drawings unless otherwise approved by the Engineer.

2.06 GATE VALVE AND BOX

- A. Conform to the requirements of Section 33 10 00.

2.07 DIP FITTINGS

- A. Conform to the requirements of Section 33 10 00.

PART 3 EXECUTION

3.01 GENERAL

- A. Locating of public utilities within the project limits in accordance with section 01 31 00 Project Management and Coordination shall be incidental to the project and included in the Total Base Bid.

3.02 INSTALLATION

- A. Install in accordance with Standard Detail Plate SER-1 shown on Drawings.
- B. Governing Code: Minnesota Plumbing Code and any local ordinances that may apply.
- C. Preparation: Conform to Section 33 05 06.
- D. Locations of services to be staked by Engineer during construction.
- E. Copper Water Service Line:
 - 1. Parallel and upstream, 3 to 5 feet, of the sewer service line in the same trench.

2. Minimum 7.5 feet of cover from finished grade.

F. Corporation Stop:

1. Tap into main only when water main is under pressure.
2. Use 2 layers of pipe tread sealant tape on corporations as a thread lubricant and sealant, or product approved by Owner.
3. Provide support for corporation and gooseneck per Standard Detail Plate SER-1.
4. Install saddle per the manufacture's recommendations.
5. Operation must be with open wrench.

G. Curb Stop:

1. Support on full size pre-cast segmental manhole block.
2. Provide support for curb stop per Standard Detail Plate SER-1.
3. Grade stakes will be furnished to establish elevations.
4. Operation must be with open wrench.

H. DIP Water Service Line:

1. Minimum 7.5 feet of cover from finished grade.
2. Use mega-lugs and Tie Rods from tee at main to end of service.
3. Place a plug, tapped with 2 inch corporation stop, at the end of the water service. Attach copper to the corporation and extend to the surface to bleed off air and to perform pressure tests, conductivity tests, and other items. Review such provisions with the Engineer prior to construction.

- I. All trenches shall be backfilled and compacted in accordance to Section 33 05 06.

3.03 FIELD QUALITY CONTROL

- A. Do not backfill trench until the service has been inspected and approved by the Engineer.
- B. Pressure Testing: All water services will be pressure tested in conjunction with the water main, conforming to Section 33 10 00.
- C. The Owner shall have an independent testing laboratory perform, as a minimum, the following tests. The location of the tests shall be determined by the Engineer:
1. 1 density test for every 4 services installed at varying depths.
- D. Required documentation shall include completing the "Sewer and Water Service Data Plan Sheet" per detail Drawings, at the time of installation:
1. Measure and record the longitudinal distance from sanitary sewer wye to the water service line (perpendicular to the water service line) or from the sanitary sewer service line to the corporation stop/tee (perpendicular to the water service line).
 2. Measure and record the longitudinal distance between the sanitary sewer plug and the water curb stop or plug (perpendicular to water line).
 3. Measure and record the length of water line material for each service pipe installed.

3.04 PROTECTION

- A. Mark each curb stop and plug with:

1. Solid 4 inches by 4 inches by 8 feet wood post extending 4 feet above and 4 feet below grade.

END OF SECTION

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SECTION 33 31 00

SANITARY SEWERAGE PIPING

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Sanitary sewer gravity pipe, fittings, and miscellaneous appurtenances.

B. Related Sections:

1. Section 01 31 00 - Project Management and Coordination.
2. Section 01 33 00 - Submittal Procedures.
3. Section 01 57 13 - Temporary Erosion and Sediment Control.
4. Section 02 41 13 - Selective Site Demolition.
5. Section 33 05 06 - Trenching and Backfilling.
6. Section 33 08 30 - Commissioning of Sanitary Sewerage Utilities.
7. Section 33 31 14 - Sanitary Sewerage Services.
8. Section 33 39 00 - Sanitary Sewerage Structures.

1.02 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. Sanitary Sewer Pipe: Measurement will be based upon units of linear feet for each size, type, and class, furnished and installed complete in place as specified, regardless of depth. Including excavation, backfilling, and compaction. Pipe will be measured from centerline to centerline of manholes, or to the connection point of the existing pipe:
 - a. PVC pipe bedding will be paid in accordance with Section 33 05 06.
 - b. Improved pipe foundation material, if necessary, shall be per Section 33 05 06.
 - c. Plugs on dead end lines will be considered incidental to the pipe.
2. Connect to Existing Manhole: Measurement shall be on the basis of each and shall be considered to include all excavation, labor, materials, and equipment necessary to make the required connection, including reconstructing bench/invert.
3. Connect to Existing Manhole (Core Drill): Measurement will be per each, regardless of the pipe size required. Payment will be compensation for excavating, core drilling the manhole and reconstructing bench/invert.
4. Connect to Existing Pipe: Measurement shall be on the basis of each, according to size, and shall be considered to include all excavation, labor, materials, and equipment necessary to make the required connection, including removal/salvaging of existing plug.
5. Wyes: Measurement will be per each, according to size and type. Payment at the Unit Price will be considered compensation in full for all work and costs to furnish and install the wye as specified:
 - a. Cut-In Wye: Measurement shall be on the basis of each, according to size and type. Payment shall be considered compensation in full for all work, including excavation, backfilling, labor, materials, concrete encasement (or PVC saddle if approved), and equipment necessary to cut in the wye as specified.
6. Furnishing and installing plugs shall be considered incidental to the installation of the pipe.

7. Insulation: Measurement will be based on square yards of Insulation at the specified thickness. Payment will include furnishing and installation of the Insulation.
8. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

A. American Society of Testing and Materials (ASTM):

1. C76 - Specification for Reinforced Concrete Culvert, Drain, and Sewer Pipe.
2. C361 - Specification for Reinforced Concrete Low Head Pressure Pipe.
3. C443 - Specification for Joints for Circular Concrete Sewer and Pipe, Using Rubber Gaskets.
4. C578 - Specification for Rigid, Cellular Polystyrene Thermal Insulation.
5. C1619 - Standard Specification for Elastomeric Seals for Joining Concrete Structures.
6. D1784 - Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (PVC) Compounds.
7. D3034 - Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
8. D3212 - Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals.
9. F477 - Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
10. F679 - Specification for Poly (Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings.

B. American Water Works Association (AWWA):

1. C105 - American National Standard for Polyethylene Encasement for Ductile-Iron Pipe Systems.
2. C111 - American National Standard for Rubber Gasket Joints for Ductile Iron Pressure Pipe and Fittings.
3. C116 - American National Standard for Protective Fusion-Bonded Epoxy Coatings for the Interior and Exterior Surfaces of Ductile-Iron and Gray-Iron Fittings for Water Supply Service.
4. C151 - American National Standard for Ductile-Iron Pipe, Centrifugally Cast, for Water.
5. C153 - American National Standard for Ductile-Iron Compact Fittings for Water Service.
6. C900 - Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4 Inches Through 12 Inches, For Water Distribution.
7. C905 - Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 14 Inches Through 48 Inches, For Water Transmission and Distribution.

1.04 SITE CONDITIONS

- #### A.
- Sanitary sewer lines are shown on the Drawings in a general way. Anticipate minor variations in both horizontal and vertical directions in locating existing system.

1.05 SUBMITTALS

A. Submit Product Data for the following items consistent with Section 01 33 00:

1. Pipe and fittings.
2. Transition couplings.

1.06 SEQUENCING AND SCHEDULING

- A. Do not pursue Work causing shut off of utility services (gas, water, electric, telephone, TV, etc.) to consumers until the utility owner is contacted and all consumers are notified of the shut-off schedule.
- B. Verify vertical and horizontal location of sanitary sewers sufficiently in advance of installing new pipe to determine the extent of conflict, if any.
- C. Successfully complete required inspections and testing before restoration of surface.

PART 2 PRODUCTS

2.01 SOLID WALL PVC PIPE

- A. PSM Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings (4 Inch Through 15 Inch Diameter):
 - 1. General: Pipe and fittings shall be made of compounds conforming to ASTM D1784 in accordance with the material requirements of ASTM D3034.
 - 2. Design: Integral bell gasketed joint and a minimum wall thickness conforming to SDR 26 or 35 as shown on the Drawings.
 - 3. Joints: Push-on type only with the bell-end grooved to receive a gasket.
 - 4. Elastomeric Seal (Gasket): A basic polymer of synthetic rubber conforming to ASTM F477. Natural rubber gaskets will not be accepted.
 - 5. Marking: Each pipe shall be identified with the name of the manufacturer, or trademark and code, nominal pipe size in inches, the PVC cell classification, and "Specification D3034."
- B. Polyvinyl Chloride (PVC) Pipe and Fittings (18 Inch Through 48 Inch Diameter):
 - 1. General: Pipe and fittings shall be made of compounds conforming to ASTM D1784 in accordance with the material requirements of ASTM F679.
 - 2. Design: Integral bell gasketed joint with a minimum wall thickness conforming to PS 46 or PS 115 as shown on the Drawings.
 - 3. Joints: Elastomeric gasket joints providing a water-tight seal conforming to ASTM F477.
 - 4. Marking: Conform to ASTM F679.
- C. Polyvinyl Chloride (PVC) Pressure Pipe and Fittings:
 - 1. General: Pipe shall be made of compounds conforming to ASTM D1784 in accordance with the material requirements of AWWA C900 (4 inch to 12 inch diameter pipe) or AWWA C905 (14 inch to 48 inch diameter pipe).
 - 2. Design: Cast-iron-pipe-equivalent outside diameter with a minimum pressure class (PC) or dimension ratio (DR) as shown on the Drawings.
 - 3. Joints: Integral bell with elastomeric gasket joints providing a water-tight seal conforming to ASTM D3212 or ASTM F477.
 - 4. Fittings: Conform to Ductile Iron Pipe (DIP) and Fittings under this Section.
 - 5. Marking: Conform to AWWA C900 and C905 respectively.

2.02 DUCTILE IRON PIPE (DIP) AND FITTINGS

- A. General Requirement: Pipe to conform to AWWA C151/A21.51.

- B. Pipe Class: As shown on Drawings.
- C. Fittings: AWWA C153/A21.53, Ductile Iron, 250-psi working pressure, AWWA C111/A21.11 latest revision, mechanical joint or push-on.
 - 1. All fittings shall be fusion bonded epoxy coated per ANSI/AWWA C116/A21.
- D. Pipe and Fitting Lining: Protecto 401® Ceramic Epoxy (Ceramic Quartz Filled Amine Cured Novalac Epoxy), PVC Lined Ductile Iron or approved equal.
- E. Marking: Conform to AWWA C151/A21.51.

2.03 REINFORCED CONCRETE PIPE (RCP)

- A. General Requirement:
 - 1. Reinforced concrete pipe conforming to ASTM C76, Wall B with gasketed joint forming a water-tight seal conforming to ASTM C443.
- B. Pipe Class: As shown on the Drawings.
- C. Materials: Conform to the requirements of ASTM C76 Wall B with circular reinforcing. Profile gaskets shall be synthetic rubber, circular in cross-section, and conform to ASTM C1619 Class C.
- D. Pipe Joints: Bell and spigot conforming to MnDOT Plate 3006.
- E. Marking: Each pipe shall be identified with the name of the manufacturer identification of plant, date of manufacture, the pipe class, and specification design.

2.04 PIPE BEDDING

- A. Conform to Section 33 05 06.

2.05 INSULATION

- A. Polystyrene Insulation: Extruded type conforming to ASTM C578, Type VI, VII, or V.

2.06 DIP ENCASEMENT

- A. Material: Polyethylene film conforming to AWWA C105/A21.5 and ASTM A674, tube form.
- B. AWWA/ASTM standard, corrosion protection warning and applicable range of nominal pipe diameter size(s) every 2 feet along its length.

2.07 TRANSITION COUPLING

- A. Coupling consisting of an elastomeric sleeve with incorporating stainless steel tension bands, tightening mechanism, and less than 0.01 inch thick shear ring conforming to ASTM C1173, Type A.
- B. Separate bushings are not allowed without approval from the Engineer.

PART 3 EXECUTION

3.01 GENERAL

- A. Locating of public utilities within the project limits in accordance with section 01 31 00 Project Management and Coordination shall be incidental to the project and included in the Total Base Bid.

3.02 PREPARATION

- A. Excavation and Preparation of Trench: Conform to Section 33 05 06.
- B. By-Pass Pumping: Contractor is responsible for all items required to maintain sewer flows during construction of the new sanitary sewer line. All Work and costs for this are considered incidental to the Project, unless otherwise specified.
- C. Erosion control and dewatering in conformance with Section 01 57 13.

3.03 PIPE INSTALLATION

- A. Trench Excavation and Backfill: Conform to Section 33 05 06.
- B. Lay and maintain pipe appurtenances to the alignment, grade, and location shown on the Drawings and/or staked in the field. No deviation from the Drawing and/or staked alignment, grade, or location is allowed, unless approved by Engineer. Deviation from grade in excess of 0.02 percent (with no intermediate high points, level sections, or reverse invert slope) may be cause for removal and relaying pipe at the Contractor's expense.
- C. Maintain reference line and grade with laser equipment or other equipment approved by the Engineer. Periodically check equipment for adjustment and accuracy. Correct deficiencies in equipment, reference line, and reference grade. Take precautions to prevent deflections in reference line and grade.
- D. Non-Conforming Pipe Installation: Remove and reinstall.
- E. Inspect pipe for defects and cracks while suspended immediately prior to installation.
- F. Install pipe from lower to higher invert elevation with uniform and smooth invert line.
- G. Install pipe length spigot ends pointing in the direction of flow.
- H. No pipe is to be laid in water or when trench conditions are unsuitable for such Work.
- I. Jointing:
 - 1. In conformance with recommendations of manufacturers of pipe and joint material.
 - 2. All joints must be watertight.
 - 3. Hand fill and compact all bell depressions with granular bedding materials to prevent joints from sagging or movement.

J. Cleaning and Protection:

1. Protection of the existing downstream system/pipe will be required. A temporary plug (approved by the Engineer) shall be installed and maintained until acceptance of the new pipe lines. Once accepted the contractor shall be responsible for the removal of the plug. This work shall be considered incidental to the pipe installation.
2. Remove all dirt and debris from the interior of each pipe length as the Work progresses.
3. Protect the exposed end of the pipe with temporary covers or plugs.
4. Protect in place pipe from damage and dislocation.

K. Flexible Pipe Installation: Conform to ASTM D2321.

L. Sanitary Sewer Service Connections:

1. Wye:
 - a. Wye to be at 45-degree angle from horizontal.
 - b. Plugs installed with Atlastic 77, Sonolastic Sealant, or approved equal, or specifically designed for the opening to be plugged.
2. Risers: Conform to Section 33 31 14.

M. Installation of Insulation:

1. Place insulation over pipe in locations as shown on the Drawings.
2. Insulation is to be placed wherever sanitary sewer line comes within 3 feet of any storm structure or line, or within 5 feet of the ground surface.

N. Sanitary Sewer Stub:

1. Mark each plug location with 4 inch by 4 inch timber to above existing grade.
2. End all sanitary sewer pipe stubs with bell end of pipe and push-on type plug.

3.04 CONNECT TO EXISTING SYSTEM

A. Connect to Existing Structure:

1. Connect to existing structure at location shown on the Drawings.
2. If rubber boot exists at manhole opening, connect new pipe to the boot and secure.
3. If manhole opening does not contain rubber boot or the existing boot is damaged, core drill opening in the structure, and install a rubber boot in manhole opening prior to connection of pipe.
4. Make repairs to the structure required due to the Work performed, including installation of doghouse.
5. If necessary, the invert shall be reconstructed to accommodate new flow location. Reconstruction of invert will also be necessary if pipe sizes increase.

B. Connect to Existing PVC Pipe (Stub):

1. Locate and expose end of existing stub.
2. Remove existing plug and connect to pipe.

C. Cut-in Wye:

1. Cut-in Wye at location shown on Drawings. Type and size shown on Drawings.
2. Remove existing mainline pipe as necessary to make connection per Section 02 41 13.
3. Connect wye to existing mainline pipe with transition coupling. Pour concrete encasement around coupling.

4. In lieu of cutting in a wye, PVC saddles will be accepted following Engineer review and acceptance of shop drawings provided by Contractor.
5. Perform excavation and backfilling of trench per Section 33 05 06.

3.05 MANHOLE INSTALLATION

- A. Conform to the requirements of Section 33 39 00.

3.06 PROTECTION

- A. Plug all entrances and openings to the system promptly and before suspension of operations at the end of working day.
- B. At connections to existing system, temporarily plug the existing pipe with acceptable device until newly installed sewer lines have been accepted.

3.07 FIELD QUALITY CONTROL

- A. Trench Backfill – Compaction: The Owner shall have an independent testing laboratory perform, as a minimum, the following tests. The location of the tests will be determined by the Engineer:
 1. 1 density test for every 300 feet of trench at varying depths (per 10 foot depth increments).
 2. 1 gradation test per Project for pipe bedding.
 3. 1 gradation test per Project for improved pipe foundation material.
- B. Testing in conformance with requirements of Section 33 08 30.
- C. Re-test after corrective measures are completed.
- D. Cleanup:
 1. Cleaning Pipe and Structures:
 - a. If newly installed mains and structures are kept clean during construction, cleaning will not be required.
 - b. If newly installed mains and/or structures become dirty due to negligence of the Contractor, cleaning will be performed at the sole expense of the Contractor.
 2. The bailing or flushing method of cleaning pipe is acceptable only if adequate provisions, acceptable to the Engineer, for keeping dirt and debris out of the existing sewer system. Jetting may be required.
 3. Complete prior to final inspection for acceptance.
 4. Notify Engineer when all pipes and structures are clean, which will allow the Owner to schedule the televising of the sewer mains.

END OF SECTION

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SECTION 33 31 14

SANITARY SEWERAGE SERVICES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Sanitary sewer service pipe and all appurtenances.
- B. Related Sections:
 - 1. Section 01 31 00 - Project Management and Coordination.
 - 2. Section 01 33 00 - Submittal Procedures.
 - 3. Section 33 05 06 - Trenching and Backfilling.
 - 4. Section 33 05 18 - Adjust Miscellaneous Structures.
 - 5. Section 33 08 30 - Commissioning of Sanitary Sewerage Utilities.
 - 6. Section 33 31 00 - Sanitary Sewerage Piping.

1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Service Pipe: Measurement will be by linear foot for each size and type of pipe installed (including 3 foot end piece) as measured along the axis of the pipe with no regard to intervening fittings. Payment at the Bid Unit Price shall be compensation in full for all Work and costs, including excavation, pipe, fittings, 6 inch PE sleeve (as specified), backfill, and trench compaction.
 - 2. Pipe Bedding for the PVC Sanitary Sewer Service Pipe: Measurement and payment shall be as per Section 33 05 06.
 - 3. Improved Pipe Foundation Material: Measurement and Payment shall be as per Section 33 05 06.
 - 4. No Bid Items have been included for service plugs or marking service ends. Payment for these items shall be included in the linear foot price for Service Pipe.
 - 5. Service Riser Pipe: Measurement will be based on units of linear feet, according to size, measured laterally along the laying length from the wye to the top of the last riser section, with no regard to intervening fitting. Payment at the Unit Price will be considered payment in full for all work and costs associated with this Bid Item, including concrete reinforcement of the riser, wye, and main sewer.
 - 6. Expose and Connect to Existing Wye: Measurement will be per each, according to size and type. Payment will include all costs related to excavating, exposing, and connecting to an existing wye that was installed by others, including removal of existing plug.
 - 7. Required measurements of service installations shall be considered incidental to the service installation.
 - 8. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. American Society of Testing Materials (ASTM):
 - 1. D1784 - Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (PVC) Compounds.
 - 2. D1785 - Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120.
 - 3. D2564 - Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems.
 - 4. D2665 - Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent (DWV) Pipe and Fittings.
 - 5. D2672 - Specification for Joints for IPS PVC Pipe Using Solvent Cement.
 - 6. D2855 - Standard Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings.

1.04 SYSTEM DESCRIPTION

- A. This Work shall consist of the construction of sanitary sewer services in accordance with the requirements of the Contract.
- B. It is the intent of these Specifications to require the same quality of Work be received on the house services in the way of grade and alignment as is required on the main lines and laterals.

1.05 SUBMITTALS

- A. Submit the following items consistent with Section 01 33 00:
 - 1. Product data for the following items:
 - a. Pipe and fittings.
 - 2. Provide and record information on the "Sewer and Water Service Data Sheet" (Contractor Responsibility), in accordance with 3.02.D. The Data Sheet for recording required measurements will be provided by Engineer.

1.06 SITE CONDITIONS

- A. All Work must be confined to within the limits of construction easements or public right-of-way.

1.07 SEQUENCING AND SCHEDULING

- A. Install sanitary sewer, water main, and all pipe deeper than the services prior to the installation of the services.
- B. Install sanitary sewer service in same trench as the water service or as directed by the Engineer.

PART 2 PRODUCTS

2.01 MANUFACTURED UNITS

- A. Poly (Vinyl Chloride) (PVC) Schedule 40 Plastic Pipe and Fittings:
 - 1. General: Pipe and fittings shall be made of compounds conforming to ASTM D1784 in accordance with the material requirements of D1785 and ASTM D2665. PVC fittings shall

conform to ASTM D2665. Belled end pipe shall have tapered sockets conforming to ASTM D2672.

2. Design: Integral belled pipe with a minimum wall thickness conforming to Schedule 40.
3. Solvent Cement Joints: The solvent cement used to join pipe and fittings shall meet the requirements of ASTM D2564.
4. Risers: conform to same requirements as service pipe.

2.02 BEDDING MATERIAL

- A. See Section 33 05 06.

PART 3 EXECUTION

3.01 GENERAL

- A. Locating of public utilities within the project limits in accordance with section 01 31 00 Project Management and Coordination shall be incidental to the project and included in the Total Base Bid.

3.02 INSTALLATION

- A. Installation to be in accordance with the Detail Plate shown on Drawings.
- B. Governing Code: Minnesota Plumbing Code and any local ordinances that may apply.
- C. Locations of services to be staked by Engineer during construction.
- D. PVC Risers:
 1. Pour concrete casement around connection per Standard Detail Plate SER-9.
 2. Support pipe on undisturbed trench slope for entire riser length.
 3. Slip joint connection of 4 inch PVC riser to wye.
- E. Minimum 1/4 inch per foot (2-percent) grade, unless otherwise directed by the Engineer.
- F. Installation and fittings: Similar to main line sanitary sewer pipe installation, conforming to the requirements of Section 33 31 00.
- G. Install pipe bedding for PVC sanitary sewer services per Section 33 05 06.
- H. The installation of solvent cemented joints shall be in accordance with ASTM D2855.
- I. Place glue-on plug at end of service, and a 3 foot long, 6 inch diameter perforated flexible polyethylene sleeve over the end of the vertical riser pipe.
- J. All proposed service line locations are shown on the Drawings.
- K. Provide and record information on the "Sewer and Water Service Data Sheet" (Contractor Responsibility), in accordance with 3.02.D.

3.03 FIELD QUALITY CONTROL

- A. Do not backfill trench until the service has been inspected and approved by the Engineer.
- B. Low pressure air and infiltration testing shall conform to Section 33 08 30.
- C. The Owner shall have an independent testing laboratory perform, as a minimum, the following tests. The location of the tests shall be determined by the Engineer:
 - 1. 1 density test for every 3 services installed, at varying depths.
- D. Required documentation at the time of installation:
 - 1. Field measurement of length of each sanitary sewer and water service installed.
 - 2. Field measure the depth from the surveyed grade stake provided by the Owner to the invert of the 45 degree bend adjacent to the curb stop.
 - 3. Field measurements as identified on Standard Detail Plate SER-5.
 - 4. Field measurements for Riser/45 degree bend closest to the main.
 - a. Field measure the depth from the surveyed grade stake provided by the Owner to the invert of the 45 degree bend.
 - b. Horizontal distance from 45 degree bend to center of main pipe
 - c. Length of vertical riser pipe
 - 5. Provide Engineer with record of measurements on a weekly basis.

3.04 PROTECTION

- A. Mark end of new service as shown on Standard Detail Plate SER-1.

END OF SECTION

SECTION 33 39 00

SANITARY SEWERAGE STRUCTURES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Sanitary sewer manholes and miscellaneous appurtenances.
- B. Related Sections:
 - 1. Section 01 33 00 - Submittal Procedures.
 - 2. Section 33 05 18 - Adjust Miscellaneous Structures.
 - 3. Section 33 05 06 - Trenching and Backfilling.
 - 4. Section 33 31 00 - Sanitary Sewerage Piping.

1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Refer to Section 33 31 00 for gravity sewer pipe pay items.
 - 2. Sanitary Sewer Manhole: Measurement will be per linear foot of depth from final rim elevation to lowest invert elevation based on the diameter of the manhole. Payment will include the manhole, manhole frame, and casting as specified on the Drawings:
 - a. Separate payment shall be made in accordance with Section 33 05 18 for placement of frame, casting, and adjustment rings.
 - b. 70-percent partial payment will be made upon installation of the structure and 30-percent payment will be made upon final completion of doghouses and inverts and submittal of Manhole/Catch Basin Elevation Report.
 - 3. Construct Manhole Over Existing Pipe: Measurement will be per linear foot of depth from final rim elevation to lowest invert elevation based on the diameter of the manhole. Payment will include the manhole, manhole frame, and casting as specified in the Drawings, connection to the existing pipe, and any necessary modifications to existing pipe and manhole to complete the connection.
 - 4. A Bid Item has been provided for Sanitary Manhole, Spray Liner. Measurement will be per linear foot of depth of the precast concrete and based on the diameter of the manhole. Payment will include all preparation work and material application per the manufacture's recommendations, as specified on the Drawings:
 - 5. Inside Drop Inlet Pipe: Drop inlets will be measured by length from the lowest invert of the manhole to the invert of the pipe being served by the drop inlet. Payment shall be considered compensation in full for all work, including PVC C900 drop pipe, PVC C900 Tee (modified), PVC C900 90 degree bend, pipe brackets and poured in place invert & benches.
 - 6. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. American Society of Testing and Materials (ASTM):
 - 1. C150 - Specification for Portland Cement.

2. C443 - Specification for Joints for concrete Pipe and Manholes, Using Rubber Gaskets.
3. C478 - Specification for Precast Reinforced Concrete Manhole Sections.

1.04 SITE CONDITIONS

- A. Manhole locations are shown on the Drawings in a general way. Anticipate minor variations in both horizontal and vertical directions in locating existing system.

1.05 SUBMITTALS

- A. Submit Product Data for the following items consistent with Section 01 33 00:
 1. Gaskets.
 2. Joint sealants.
 3. Manufacturers recommended installation procedures for jointing.
 4. Manhole spray lining materials.
- B. Submit shop drawings for the following items consistent with Section 01 33 00:
 1. Manholes, including reinforcing, joints, pipe connections, and castings.
 2. Shop drawings shall indicate complete information for fabrication and installation of units. Include the following:
 - a. Plans and elevations locating and defining all material furnished by manufacturers.
 - b. Sections and details showing connections, cast-in items, field installed lifting devices, capacities, all openings, and their relation to the structure.
- C. Submit Manufacturer's Certificate of Compliance for the following items consistent with Section 01 33 00:
 1. Castings.
 2. Precast manhole sections and steps.
- D. Manhole/Catch Basin Elevation Report:
 1. Complete the report attached to the end of this Section for each structure as it is constructed. The completed report shall be submitted each week to the Engineer or the Engineer's designated representative at some mutually agreeable time.
- E. Inside Drop Inlet Pipe per Standard Detail Plate SAN-4.

1.06 QUALITY ASSURANCE

- A. The quality of all materials, the process of manufacture, and the finished sections shall be subject to inspection and approval by the Engineer or other representative of the Owner. Such inspection may be made at the place of manufacture or on the Work after delivery, or at both places and the materials shall be subject to rejection at any time on account of failure to meet any of the requirements specified herein. Material rejected after delivery to the Site shall be marked for identification and shall be removed from the Site at once. All materials which have been damaged after delivery will be rejected and if already installed shall be removed and replaced entirely at the Contractor's expense.
- B. At the time of inspection, the materials will be carefully examined for compliance with the appropriate ASTM Standard and this Section and with the approved manufacturer's drawings. All

precast manhole sections shall be inspected for general appearance, dimension, "scratch-strength," blisters, cracks, roughness, soundness, etc. The surface shall be dense and close-textured.

C. Manhole Design:

1. Have the manhole sections and top and bottom slabs designed and the detailed drawings prepared by a Professional Engineer, experienced in precast concrete manhole design, who is registered in the Project's state.

PART 2 PRODUCTS

2.01 COMPONENTS

A. Manholes:

1. Precast concrete sections conforming to ASTM C478 and this Section. No lift holes permitted. No structures constructed either partially or completely from segmental block will be accepted:
 - a. All sections shall be cured by an approved method and shall not be shipped nor subjected to loading until the concrete compressive strength has attained 4,000 psi and not before 2 days after fabrication and/or repair, whichever is longer.
 - b. The date of manufacture and the name and trademark of the manufacture shall be clearly marked on the inside of each precast section.
 - c. Precast inverts to match pipe size and pipe grade through manhole (with flat grades, manhole inverts will not be allowed to have a 0.10 foot drop).
 - d. No structures with any cracks will be accepted.
2. Height of the precast eccentric cone section shall be either 36 inch, 42 inch, or 48 inch in height.
3. Joints: Rubber gasketed joint forming a watertight seal conforming to ASTM C443.
4. Size: Inside diameter as indicated on the Drawings.
5. Water Tight Pipe Connections:
 - a. All manholes shall be fabricated with pipe openings consisting of a rubber boot and stainless steel band in accordance with ASTM C923 to seal off the joint from allowing dirt, ground water, or other objectionable material from entering. These materials shall be installed with the fabrication on all new manholes.
6. Inside Drop Manhole:
 - a. Drop pipe mounting brackets shall be Reliner Stainless Adjustable Pipe Brackets or approved equal, minimum 2 inch width.
 - b. Stainless steel hardware.
 - c. Mortar is allowed for upper doghouse in place of rubber boot when booted connections are not available due to outside diameter of pipe fitting used for drop pipe connection.
 - d. Drop pipe per section 33 31 00 2.01.C.
 - e. Drop Tee shall be PVC C905 non-pressure tee. GPK non-stock, 8 inch Tee extension x G x G, or approved equal.
 - f. 90 Degree Base Bend shall be PVC C905 non-pressure bend. GPK Y24-008 90 EL S x G, or approved equal.
 - g. Inverts and benches are to be poured in the field and include the 90 degree bend.
7. Transitions sections: when required the maximum depth from the rim elevation to the top of the reducing cone is 10 feet.

- B. Steps: Reinforced polypropylene plastic steps with No. 2 deformed grade steel rod.
- C. Structure Bases:
 - 1. Pre-cast integral with bottom section of manhole for all structures 8 foot inside diameter and smaller. All structures supplied smaller than 8 foot inside diameter shall also have pre-cast inverts installed.
 - 2. For structures with inside diameters greater than 8 feet, the structure base slab and manhole sections may be separate pre-cast units. A field constructed invert will be required when base slab and bottom manhole section are not integral.
- D. Castings: See Section 33 05 18.

2.02 ACCESSORIES

- A. Concrete Materials:
 - 1. Standard Portland Cement Type I, II, or IL, clean washed sand, crushed rock, and gravel free from deleterious materials for monolithic concrete manholes and all manhole bases.
 - 2. Portland Cement: Comply with the requirements of ASTM C150 or C595.
 - 3. Design Mix: Subject to the approval of the Engineer. Use proper water-cement ratio to obtain 4,000 psi in 28 days.
- B. Mortar: Pre-mix bag intended for underground use conforming to ASTM C270 Type M, minimum compressive strength of 2,500 psi.
- C. Joint Sealants:
 - 1. Ramnek, or approved equal.
 - 2. Open cell polyurethane foam sealant, DOW 999, or approved equal.
- D. Adjusting Rings: Conform to Section 33 05 18.

2.03 SPRAY LINER

- A. Hydrogen sulfide and corrosion resistant liner such as Zebron or approved equal.
- B. Polyurethane Coatings: High Performance, 2-part, 100 percent solids polyurethane coating, Zebron series, No.386.
 - 1. Physical Properties:
 - a. Color: Cream
 - b. Specific Gravity (ASTM D792): 1.3 (10.84 lbs per gal)
 - c. Tensile Strength (ASTM D638): 2500 psi at 77 degrees F (25 degrees C)
 - d. Elongation (ASTM D638): Recoverable; 67 percent at 77 degrees F (25 degrees C)
 - e. Flexibility (ASTM D792): No effect bending 0.5 mm plate coated with 20 mils over 8 mm diameter mandrel.
 - f. Compressibility (ASTM G95): 4200 psi
 - g. Surface Hardness: 60 to 70, Shore "D"
 - h. Abrasion Resistance (ASTM D4060): 2.12 oz. (60 mg)
 - i. Thermal Conductivity (ASTM C177): 0.000723 cal. Per sec. cm² per degree C per cm at 20 degrees C (0.175 btu per hr. ft. degree F per ft. at 77 degrees F)
 - j. Permeability (ASTM E96): 0.262 gms per m² per 24-hrs; 0.0358 U.S. perms.

PART 3 EXECUTION

3.01 TRANSPORTATION

- A. Transport precast units by rail or truck in a manner to avoid excessive stress or strain on units.
- B. Support units during hauling and stockpiling with sufficient hardwood shores to prevent cracking and spalling. Secure units in place to prevent shifting or undesired movements. Location of temporary supports shall be as directed by precast manufacturer.

3.02 MANHOLE INSTALLATION

- A. Excavation and Preparation of Trench: Conform to Section 33 05 06.
- B. Furnish and install structures in accordance with Standard Detail Plates as shown on the Drawings.
- C. Place pre-cast integral base section on compacted subgrade and bedding for structures 6 feet diameter and smaller.
- D. Set pre-cast concrete sections plumb with a 1/2 inch (per 4 foot precast section) maximum out of plumb tolerance allowed.
 - 1. Initial base section shall be set plumb with a 1/4 inch (per 4 foot precast section) maximum out of plumb tolerance allowed.
- E. Install short precast section (maximum 12 - 24 inch height) immediately below the eccentric cone or precast top slab.
- F. Position vertical wall of the eccentric cone on the downstream side.
- G. Casting Adjustment:
 - 1. Conform to Section 33 05 18.
 - 2. Seal joint at the casting frame seat with 2 rows of joint sealer.
- H. Steps:
 - 1. Set the centerline of each step within each manhole to be within 2 inches of the vertical centerline for the group of steps.
 - 2. Locate over downstream pipe, except for pipe 24 inches in diameter or greater. Then place where most appropriate to provide the most suitable access.
 - 3. Offset step centerline from drop openings.
 - 4. Install top step at a maximum of 20 inches below top of casting.
 - 5. Secure and neatly mortar in place 12 - 16 inches on center spacing.
- I. Prevent entrance of dirt and debris from all new and existing manholes.
- J. Pipe Connections:
 - 1. All pipes entering the manhole must be cut with a power saw to provide a clean, smooth pipe surface. The pipe shall be cut to be 2 inches inside the manhole at the pipe's midpoint.
 - 2. Annular space between the outside of the pipe and opening in the structure shall be filled with mortar on the interior and exterior of the structure. Construct an interior

collar/doghouse around the pipe from the wall of the structure to the end of the pipe with mortar.

- K. Inside Drop manhole inlets shall be constructed in accordance with Standard Detail Plate SAN-4 shown on the Drawings.
- L. Construct Manhole Over Existing Pipe:
 - 1. Construct manhole over existing pipe at locations shown on the Drawings.
 - 2. Saw cut existing pipe to fit flush with inside wall of new structure.
 - 3. Seal any openings in manhole.
- M. When identified on the drawings, apply Zebron lining material per manufacturer's recommendations and specifications found at the following link:

3.03 FIELD QUALITY CONTROL

- A. Failure of any mortar work within a structure (i.e. invert, doghouse, etc.) that occurs during the correction period will be repaired in a manner acceptable to the Owner at the Contractor's expense.
- B. Any leak of a precast manhole section joint shall be repaired by chemical injection or other approved material to the satisfaction of the Engineer.

3.04 PROTECTION

- A. Secure manholes and structures immediately after completion or before suspension of operations at the end of working day with casting or suitable alternative device.
- B. Mark structure susceptible to being hit by construction or vehicular traffic.

3.05 CLEANING

- A. All new manholes shall be thoroughly cleaned of all silt, debris, and foreign matter of any kind prior to final inspection.

END OF SECTION

Manhole/Catch Basin Field Elevation Report

Project Name:	Date:
Owner:	Owner Project No:
Bolton & Menk Project Rep:	Bolton & Menk Project No:
Contractor:	Contractor's Rep:

Contractor is required to complete this form before payment of structure is approved.

Structure Location				Structure Type (circle one)	Design Invert (from Plan)	As-Constructed Invert Elevation *	Difference (+ / -)	Comments / Quality Assurance
Structure No.	Structure Station	Direction of invert/flow	Street Name or Easement Location					
				MH CB Apron				
				MH CB Apron				
				MH CB Apron				
				MH CB Apron				
				MH CB Apron				
				MH CB Apron				
				MH CB Apron				
				MH CB Apron				
				MH CB Apron				

*** - As-Constructed Invert Elevation provided by Contractor from measurements taken in the field to nearest 0.01'.**

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SECTION 33 40 00
STORMWATER UTILITIES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Storm sewer pipe, manholes, catch basins, fittings, and miscellaneous appurtenances.
- B. Related Sections:
 - 1. Section 01 31 00 - Project Management and Coordination.
 - 2. Section 01 33 00 - Submittal Procedures.
 - 3. Section 01 57 13 - Temporary Erosion and Sediment Control.
 - 4. Section 32 11 23 - Aggregate Base Courses.
 - 5. Section 32 16 13 - Concrete Curbs and Gutters.
 - 6. Section 33 05 06 - Trenching and Backfilling.
 - 7. Section 33 05 18 - Adjust Miscellaneous Structures.

1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Storm Sewer Pipe: Measurement based upon units of linear feet for each size, type, and class, furnished and installed complete in place as specified, regardless of depth. Including excavation, backfilling, and compaction. Pipe will be measured from centerline of structure to centerline of structure and will not include end sections:
 - a. Pipe bedding will be paid in accordance with Section 33 05 06.
 - b. Improved pipe foundation material, if necessary, shall be per Section 33 05 06.
 - 2. Catch Basin, Catch Basin Manhole, Skimmer, and Manhole Structure: Measurement per linear foot of depth from final rim elevation to lowest pipe invert elevation or bottom of sump according to type and size for furnishing and installing structures complete in place as specified, including casting frame and cover, mortar invert (if required) and concrete stool grate frame (if required per detail).
 - a. 70-percent partial payment will be made upon installation and 30-percent payment will be made upon final completion of doghouses and inverts and submittal of Manhole/Catch Basin Elevation Report.
 - 3. Flared Ends with trash guard: Measurement based upon units of each size installed, according to type, at locations indicated in the Drawings complete in place as specified, including excavation, backfilling, compaction and trash guard:
 - a. Where a sewer line is terminated with a flared end section, tying the last 3 joints per Standard Detail Plate STO-11 is considered incidental to the installation of the pipe.
 - 4. Random Riprap: Measurement based upon units of cubic yards of Ripap placed, according to class. Payment of the Bid Item shall include geotextile fabric as required per Standard Detail Plate STO-12.
 - 5. Grouted Riprap: Measurement based upon units of cubic yards of riprap placed, according to class. Payment of the Bid Item shall include geotextile fabric and 6 inch concrete layer as required per Standard Detail Plate STO-13.

6. Connect to Existing Pipe: Measurement per each connection made, according to size and type of existing pipe, and regardless of type of existing bulkhead or plug, or type of connection made. Payment will include all costs related to making the connection, including removal and disposal of the existing bulkhead or plug, and construction of concrete collar if necessary.
7. Connect Existing Pipe to New Structure: Measurement per each pipe connected to the new structure, regardless of size of existing pipe. Payment will include all costs related to making the connection, including removal and replacement of existing pipe as directed by Engineer.
8. Connect to Existing Structure: Measurement shall be per each connection made, regardless of size of opening, type of existing bulkhead, or type of existing structure. Saw cutting of the pipe installed in the opening if necessary shall be considered incidental. Core cutting the connection and reconstruction of existing structure invert if necessary shall also be considered incidental to the connection.
9. RC LR Bend: Measurement per each, according to size and class. Payment will include all costs related to furnishing and installing the bend, including excavation, backfilling, and compaction.
10. Bulkhead Storm Sewer Pipe: Measurement per each bulkhead installed according to size. Payment will include all costs related to bulkheading or plugging the pipe as described in this Section.
11. Poured-In-Place Concrete Seepage Collar: Measurement per each collar constructed according to size of pipe it is constructed around. Payment at the Unit Price shall include all costs related to constructing the collar in accordance with Standard Detail Plate STO-21, including excavation, forms, and material.
12. Construct Manhole Over Existing Pipe: Measurement per linear foot of depth from final rim elevation to lowest invert elevation according to size. Payment will include the cost of the manhole and installation over the existing line, casting frame and cover, and adjusting rings in place as specified.
13. Outlet Structure: Measurement per each according to size and type. Payment will include all costs related to furnishing and installing the structure complete in place as specified, including casting frame and cover and grate.
14. Overflow Structure: Measurement per each according to size and type. Payment will include all costs related to furnishing and installing structures complete in place as specified, including casting frame and cover and grate.
15. Patch Structure: Measurement per each storm sewer or sanitary sewer structure patched, regardless of the size of structure or areas patched. Payment will include all cost associated to patching the structure as specified.
16. Clean Sump: Measurement per each. Payment will include all costs to remove any water and dirt within the structure. This Bid Item is intended for vacuum cleaning of sump manholes to allow inspection by the Owner or Engineer.
17. Televising Storm Sewer: Measurement based upon units of linear feet of pipe televised, regardless of size or type. Pipe will be measured from centerline of structure to centerline of structure. Payment will be compensation for pipe preparation, televising, providing televising report, and all other associated costs.
18. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. American Society of Testing and Materials (ASTM):
 - 1. A153 - Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
 - 2. C76 - Specification for Reinforced Concrete Culvert, Drain, and Sewer Pipe.
 - 3. C139 - Specification for Concrete Masonry Units for Construction of Catch Basins and Manholes.
 - 4. C150 - Specification for Portland Cement.
 - 5. C206 - Specification for Finishing Hydrated Lime.
 - 6. C361 - Specification for Reinforced Concrete Low Head Pressure Pipe.
 - 7. C443 - Specification for Joints for Circular Concrete Sewer and Pipe, Using Rubber Gaskets.
 - 8. C478 - Specification for Precast Reinforced Concrete Manhole Sections.
 - 9. C595 - Specification for Type 1L Cement.
 - 10. C1479 - Standard Practice for the Installation of Precast Concrete Sewer, Storm Drain, and Culvert Pipe Using Standard Installations.
 - 11. C1619 - Standard Specification for Elastomeric Seals for Joining Concrete Structures.
- B. Minnesota Department of Transportation "Standard Specifications for Construction", 2020 (MnDOT Spec.):
 - 1. 2461 - Structural Concrete.
 - 2. 2511 - Riprap.
 - 3. 3601 - Riprap Material.
 - 4. 3733 - Geosynthetic Materials.
- C. National Association of Sewer Service Companies (NASSCO):
 - 1. PACP – Pipeline Assessment Certification Program

1.04 SEQUENCING AND SCHEDULING

- A. Maintain existing storm sewer flows during construction. This may require a temporary pipe connection during periods of time when construction is not occurring.
- B. Set up traffic control prior to removals. Maintain traffic during storm sewer improvements unless otherwise approved by Owner.
- C. Do not pursue work-causing shut off of utility service (gas, water, electric, telephone, TV, etc.) to consumers until the utility owner is contacted and all consumers are notified of the shut-off schedule.
- D. Successfully complete required inspections and tests before commencement of Section 32 11 23 and Section 32 16 13.
- E. Coordinate inspection of completed sump structures with City prior to acceptance. May require pumping water and vacuuming dirt out of structure prior to inspection.
- F. Televising Storm Sewer:
 - 1. Notify Engineer 48 hours in advance of the televising of all pipes.
 - 2. Complete all required mandrel and air testing prior to televising.
 - 3. All private utilities shall be installed by others prior to televising storm sewer.

4. Start televising no sooner than 30 days, but no later than 60 days after all utility, excavation, and street subgrade work is completed as part of this contract.

1.05 SUBMITTALS

- A. Submit Shop Drawings for storm sewer structures consistent with Section 01 33 00.
- B. Shop drawings shall indicate complete information for fabrication and installation of units. Include the following:
 1. Plans and elevations locating and defining all material furnished by manufacturers.
 2. Sections and details showing connections, cast-in items, and field installed lifting devices, capacities, all openings, and their relation to the structure.
- C. Submit Manufacturer's Certificate of Compliance for the following items:
 1. Gray iron castings.
 2. Precast manhole sections.
 3. Rip rap.
 4. Pipe.
- D. Manhole/Catch Basin Elevation Report:
 1. Complete the report attached to the end of this Section for each structure as it is constructed. Submit complete report each week to the Engineer or the Engineer's designated representative at some mutually agreeable time.
- E. Televising Report:
 1. Submit 1 copy of the Written Report and Video Report within 30 days of completion of televising.
 2. Report Requirements:
 - a. Each run shall consist of a starting and ending structure number and a zero reading on the counter at center of the starting structure.
 - b. Examine each service wye by using the pan and tilt feature.
 - c. Location, length and identify sags within the flowline of the pipe of 10% or greater, example 0.06 foot for an 8 inch diameter pipe.
 - d. Location in change in pipe material to be noted.
 - e. The video camera operator shall type into the video the station (distance), wye location on either the left or right side of the pipe, and any problems they notice while televising the sewer lines.
 - f. Take a still photograph at any questionable joint or possible defect.
 3. Provide a Written Report with a graphic cross section of the pipe showing the manholes, all wye connections, and defects. This report shall include PACP codes and descriptions.
 4. Submit a Video Report in a DVD format with audio, including a printable version of the Written Report and full video of all televised pipe runs.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Ready Mix Mortar Materials:
 1. Sand Mix, 4,000 PSI

- B. Mortar: Pre-mix bag intended for underground use conforming to ASTM C270 Type M, minimum compressive strength of 2,500 psi.

2.02 STORM MANHOLE AND CATCH BASIN FRAMES AND COVERS

- A. Conform to Section 33 05 18.

2.03 STORM MANHOLES AND CATCH BASINS

- A. Precast Concrete Sections conforming to ASTM C478 and this section.
 - 1. No structure or any portion thereof will be allowed to be constructed of segmental block.
 - a. Shallow structures that cannot be constructed in the standard manner shall be fabricated in a precast design similar to Standard Detail Plate STO-10.
 - 2. Preformed inverts are not allowed.
 - 3. No structures with any cracks will be accepted
 - 4. All sections shall be cured by an approved method and shall not be shipped nor subjected to loading until the concrete compressive strength has attained 4,000 psi and not before 2 days after fabrication and/or repair, whichever is longer
 - 5. The date of the manufacture and the name and trademark of the manufacture shall be clearly marked on the inside of each precast section.
- B. Diameter and special requirements are shown on the Drawings.
- C. Manhole Joints: Rubber gasketed joint forming a watertight seal conforming to ASTM C443.
- D. Manhole Steps: Reinforced polypropylene plastic steps with No. 2 deformed grade steel rod.
- E. Design:
 - 1. Have the manhole sections and top and bottom slabs designed and the detailed drawings prepared by a Professional Engineer, experienced in precast concrete manhole design, who is registered in the Project's state.

2.04 PIPE MATERIALS

- A. Reinforced Concrete Pipe (RCP) and Fittings:
 - 1. General Requirement: ASTM C76.
 - 2. Materials: Conform to the requirements of ASTM C76. Profile gaskets shall be synthetic rubber and shall conform to MnDOT Plate 3006.
 - 3. Pipe Joints: Bell shall conform to MnDOT Plate 3006.
 - 4. Pipe Class: As shown on the Drawings.
 - 5. Marking: Each pipe shall be identified with the name of the manufacturer trade name or trademark and code, identification of plant, date of manufacture, and the pipe class and specification design.

2.05 TRASH GUARDS

- A. General Requirement: ASTM A153.
- B. Materials: Galvanized steel rods meeting the requirements in ASTM A153.

C. Bar size and configuration as shown on the Drawings.

D. Securely attached to end section.

2.06 PIPE TIE RODS

A. HAALA Industries, Inc, or approved equal.

1. Washington County Tie Rod.
2. Standoff Culvert Tie.
3. Hot Dip Galvanized.

2.07 RIPRAP

A. General Requirement: Conform to MnDOT Spec. 2511:

1. Riprap Material: Conform to MnDOT Spec. 3601.2.
2. Granular Filter: Conform to MnDOT Spec. 3601.2.D and 3601.2.E.
3. Geotextiles: Conform to MnDOT Spec. 3733, Type 4.
4. Concrete: Conform to MnDOT Spec. 2461.

2.08 CONCRETE STOOL GRATE FRAME FOR OFF STREET CATCH BASIN

A. General Requirement: Conform to Standard Detail Plate STO-9.

PART 3 EXECUTION

3.01 GENERAL

A. Locating of public utilities within the project limits in accordance with section 01 31 00 Project Management and Coordination shall be incidental to the project and included in the Total Base Bid.

3.02 PREPARATION

A. Trench Excavation and Backfill shall conform to Section 33 05 06.

3.03 EXAMINATION

A. Perform televising pipeline inspections in accordance with NASSCO Pipeline Assessment and Certification Program (PACP). When requested provide the require certification for personnel preforming the actual work.

B. Commence test procedures only when pipe and structures are clean and free of dirt, water, or other foreign matter. Pipe cleaning shall be performed in accordance with NASSCO Jetter Code of Practice.

3.04 INSTALLATION

A. Connect to Existing Structure:

1. Connect to existing structure at location shown on the Drawings.

2. Core the hole in the structure and saw cut the pipe 2 inches inside the manhole at the pipe's midpoint.
 3. Bulkhead void between outside wall of pipe and edge of opening with mortar and block/brick.
 4. Reconstruct manhole bench/invert.
- B. Connect Existing Pipe to New Structure:
1. Where an existing structure is removed and replaced with a new structure, connect all existing pipes to the new structure.
 2. Remove pipe segments that are damaged during the structure replacement with new pipes of the same size and type, or as directed by Engineer.
 3. Saw cut existing or new pipes 2 inches inside the manhole wall at the pipe's springline.
 4. Bulkhead void between outside wall of pipe and edge of opening with mortar and block/brick.
- C. Connect to End of Existing Pipe:
1. Connect to existing pipe at locations shown on the Drawings.
 2. Locate and expose end of existing pipe.
 3. Remove existing bulkhead or plug and dispose of off Site:
 - a. Take care not to damage existing pipe.
 - b. Any segment of pipe damaged by Contractor shall be replaced with new materials at no expense to the Project.
 4. Utilize standard bell and spigot joint with rubber profile gasket if possible.
 5. If butt connection must be made to existing pipe, construct concrete collar around joint. Collar shall be minimum 12 inches thick in all locations and shall extend a minimum of 12 inches each way of the joint.
- D. Pipe Installation:
1. Lay and maintain pipe appurtenances to the alignment, grade, and location shown on the Drawings and/or staked in the field. No deviation from the Drawing and/or staked alignment, grade, or location is allowed, unless approved by Engineer. Deviation from grade in excess of 0.05 percent (with no intermediate high points, level sections, or reverse invert slope) may be cause for removal and relaying pipe at the Contractor's expense.
 2. General Pipe Installation Procedures:
 - a. Wipe joints clean; apply the manufacturer's recommended lubricant compound over the entire joint surface; center spigot in bell and push spigot home; take care to prevent dirt from entering the joint space; bring pipe to proper line and grade, and secure pipe in place by properly bedding.
 3. Lay pipe upgrade with spigot ends pointing in the direction of flow.
 4. All joints must have a watertight seal conforming to ASTM C443.
 5. Remove all foreign matter or dirt from inside the pipe. Keep the bell and spigot clean during and after installation. Take care to prevent dirt from entering the joint space. Remove any superfluous material from inside the pipe after pipe installation by means of an approved follower or scraper.
 6. Where cut-ins make it impossible to construct bell and spigot joints or when dissimilar pipe materials are joined, a reinforced concrete collar shall be placed completely surrounding the joint or the connection shall be made by using an approved adapter.
 7. Any pipe which has been disturbed after being laid must be taken up, the joint cleaned and properly re-laid as directed by the Engineer.
 8. Trash guards required on upstream and downstream pipes, regardless of pipe size.

9. Where a sewer line outlets to grade or where the line is terminated with a flared end section:
 - a. Fasten the last 3 joints together using 2 bolt fasteners (tie rods) per joint approved and installed on outside of the pipe, regardless of pipe size.
 - b. Tie rods shall be Washington County Tie Rod.
- E. Structures and Appurtenances Installation:
 1. Furnish and install structures in accordance with the Drawings.
 2. Excavate to depth and size as shown in the Drawings.
 3. Structure inverts:
 - a. Construct inverts of manholes and catch basins using a Ready Mix mortar material.
 - b. Construct inverts shaped to the half section of equivalent size pipe conforming to the inlet and outlet pipe so as to allow for a free, uninterrupted flow with all surfaces sloping to the flow line.
 4. Concrete pipes entering manholes:
 - a. End of pipes must be cut with a concrete saw.
 - b. Annular space between the outside of the pipe and opening in the structure shall be filled with mortar on the interior and exterior of the structure. Construct an interior collar/doghouse around the pipe from the wall of the structure to the end of the pipe with mortar.
 5. Steps:
 - a. Locate on the downstream side, except for pipe 24 inches in diameter or greater. Install in the most appropriate place, to provide suitable access.
 - b. Secure and neatly mortar in place 12 - 16 inches on center spacing.
 6. Position vertical wall of the eccentric cone on the downstream side.
 7. On structures with a build that contains more than 1 barrel section, the section immediately below the precast top slab shall be maximum 16 inch height.
 8. Lift holes shall be neatly mortared up.
 9. Remove all debris from Structures, invert and benches prior to final inspection and acceptance.
 10. Remove all water and debris from Sump Manhole Structures, to allow for final inspection and acceptance.
 11. Install Adjustment Rings and Adjust Casting: Conforming to Section 33 05 18.
- F. Construct Manhole Over Existing Pipe:
 1. Construct manhole over existing pipe at locations shown on the Drawings.
 2. Saw cut existing pipe to fit flush with inside wall of new structure.
 3. Seal any openings in manhole.
- G. Riprap:
 1. General: Conform to MnDOT Spec. 2511.
 2. Install Riprap per Standard Detail Plates STO-12 and STO-13 prior to placement of flared end section.
 3. Place 6 inch thick layer of concrete at the midpoint of the Riprap per Detail Plate STO-13.
- H. Bulkhead Pipe:
 1. Bulkhead pipe at locations shown on Drawings with brick, mortar, or concrete block masonry 8 inches thick.

2. Precast concrete plugs may be used in lieu of bulkhead. Plug must fit snugly into pipe opening and be watertight.
- I. Seepage Collar:
 1. Construct at location indicated on Drawings.
 2. Construct per Standard Detail Plate STO-21.
- J. Patch Structure Walls, Doghouse, Invert, or Rings:
 1. Clean areas to be patched by removing debris, loose concrete, and any other foreign materials.
 2. Patch area with mortar to provide smooth patch that seals the structure.
- K. Concrete Stool Grate Frame:
 1. Construct on off street catch basins as shown on the plans or as directed by Engineer.
 2. Construct per Standard Detail Plate STO-9.
- L. Storm Structure Location Marker:
 1. Off street structures shall be marked permanently with the specified sign and sign post as indicated on the plans.
 2. Install sign in accordance with Section 34 41 05.

3.05 FIELD QUALITY CONTROL

- A. Scope:
 1. All pipeline testing is considered incidental to the Bid cost of the pipe.
 2. Engineer to observe and verify that all tests and visual inspections have been completed prior to final acceptance.
- B. Cleaning:
 1. Consists of Cleaning the Pipe and Structures:
 - a. If newly installed mains and structures are kept clean during construction, cleaning will not be required.
 - b. If newly installed mains and/or structures become dirty due to negligence of the Contractor, cleaning will be performed at the sole expense of the Contractor.
 2. The bailing or flushing method of cleaning pipe is acceptable only if adequate provisions acceptable to the Engineer for keeping dirt and debris out of the existing sewer system or ponds are employed. Jetting may be required.
 3. Complete prior to final inspection for acceptance.
- C. Required Tests and Inspections:
 1. Infiltration:
 - a. To determine the amount of ground water infiltration into the sewers.
 - b. Test waived if no visible infiltration is observed during the televising inspection.
 - c. Measurement made by means of 90 degree v-notch weirs placed in the lines as directed by the Engineer.
 - d. Measurements taken at the points where in the Engineer's opinion the flow of water in the sewer is greater than the maximum allowable leakage.
 - e. Maximum Allowable Rate of Leakage: Not more than 100 gallons per mile per inch diameter per day.

- f. Tests may be taken between individual manholes and the infiltration in any given line must not exceed the specified maximum allowable rate.
 - g. Method of Measurement: Measurement of time for a predetermined volume of flow to occur.
- 2. Lamping will be performed by Engineer to:
 - a. Verify installation is to true line and grade.
 - b. Verify installed pipe is structurally sound.
 - c. Verify there are no broken or deflective pipes.
 - d. Verify that joints are all home.
 - e. Verify structures conform to specified requirements.
- 3. Trench Backfill Compaction:
 - a. The Owner shall have an independent testing laboratory perform, as minimum, the following tests. The location of the tests shall be determined by the Engineer:
 - 1) 1 density test for every 300 feet of trench at varying depths (per each 10 foot depth increment).
- 4. Alignment:
 - a. Horizontal deviation in excess of 3 inches from back of curb to back of structure opening (for casting and rings) is not allowed. Deviation in excess of 3 inches will be cause for reinstallation of structure at the Contractor's expense.
 - b. The vertical and horizontal alignment of the casting adjustment shall be approved by the Engineer prior to constructing the 10 foot concrete curb and gutter transition on either side of the casting.

3.06 STORM SEWER CLOSED CIRCUIT TELEVISION INSPECTION

- A. Televising:
 - 1. Newly installed storm sewer segments must be in a clean and ready condition prior to the television inspection.
 - 2. Immediately clean any lines found to be dirty prior to televising. Costs for all such cleaning shall be the responsibility of the Contractor.
 - 3. Provide sufficient water to run through the new storm sewer system prior to televising lines to be able to distinguish any sags or alignment problems with the pipe.
 - 4. Personnel completing televising must be PACP certified.
 - 5. Final acceptance of the video report will require the pipe to be clean as a new pipe.
 - 6. Provide video and report to Owner.
- B. General:
 - 1. Provide a camera that will be self-propelled and will have the ability to tilt up and down and pan left and right. The camera must provide color images.
 - 2. Speed shall not exceed 30 feet per minute.
- C. Defects:
 - 1. Immediately correct any defects, faulty joints, cracked pipe, or other deficiency noted by the television inspection.
 - 2. A plan for repair shall be presented to and approved by the Owner and Engineer prior to the repair occurring.
 - 3. Re-televising all corrected pipe runs after correction.

4. Any costs associated with correction and re-televising of the sewer system will be paid by the Contractor.

3.07 PROTECTION

- A. Plug all entrances and openings to the system promptly and before suspension of operations at the end of working day.
- B. Secure manholes and structures immediately after completion or before suspension of operations at the end of working day with castings or suitable alternative device.
- C. Mark all structures to avoid being hit by construction or vehicular traffic.
- D. Mark each plug location with 4 inches by 4 inches timbers to above grade to aid in marking the future connection.
- E. Establish erosion control measures as per Section 01 57 13.

END OF SECTION

Manhole/Catch Basin Field Elevation Report

Project Name:	Date:
Owner:	Owner Project No:
Bolton & Menk Project Rep:	Bolton & Menk Project No:
Contractor:	Contractor's Rep:

Contractor is required to complete this form before payment of structure is approved.

Structure Location				Structure Type (circle one)	Design Invert (from Plan)	As-Constructed Invert Elevation *	Difference (+ / -)	Comments / Quality Assurance
Structure No.	Structure Station	Direction of invert/flow	Street Name or Easement Location					
				MH CB Apron				
				MH CB Apron				
				MH CB Apron				
				MH CB Apron				
				MH CB Apron				
				MH CB Apron				
				MH CB Apron				
				MH CB Apron				
				MH CB Apron				

*** - As-Constructed Invert Elevation provided by Contractor from measurements taken in the field to nearest 0.01'**

SECTION 33 41 00

SUBDRAINAGE

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Storm sewer service and drain tile.
- B. Related Sections:
 - 1. Section 33 05 06 - Trenching and Backfilling.
 - 2. Section 33 31 14 - Sanitary Sewerage Services.

1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Perforated PVC Drain Tile, SDR 26: This Bid Item shall be used for installation of Drain Tile for subgrade drainage within street areas. Measurement will be by linear feet of pipe along its axis, according to size, and with no regard to intervening fittings. Payment shall include all costs related to furnishing and installing the drain tile pipe per Standard Detail Plate STO-14, including geotextile, aggregate and fittings:
 - a. It should be noted that due to the estimation required for Drawing preparation, the quantity of drain tile actually constructed may vary significantly from those given in the Bid Form.
 - b. The Engineer reserves the right to increase or decrease the Drain Tile quantity, and associated Connect Drain Tile to Structure quantity, with no change to the Contract Unit Price. No additional compensation will be considered or allowed for changes to the estimated quantities or for the deletion of any of these Bid Items in their entirety.
 - 2. Connect Drain Tile to Existing Structure: Measurement will be per each. Payment will include all costs related to core drilling a hole in the storm sewer structure, making the connection, and patching as specified.
 - 3. Storm Sewer Service: Measurement will be by linear feet of pipe actually installed, according to size and type, as measured along the axis of the pipe with no regard to intervening fittings. Payment at the Unit Price shall be compensation in full for all work and costs, including excavation, pipe, fittings, backfill, and trench compaction:
 - a. Connecting to an existing hole in a precast structure will be considered incidental to the installation of the service pipe.
 - b. PVC plug for the end of the service is considered incidental.
 - 4. Pipe Bedding for the PVC Storm Sewer Service Pipe: Measurement and payment shall be as per Section 33 05 05.
 - 5. Supplying and installing required markers at service ends shall be considered incidental to the service installation.
 - 6. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. American Society of Testing and Materials (ASTM):
 - 1. D1784 - Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (PVC) Compounds.
 - 2. D3034 - Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
 - 3. D3212 - Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals.
 - 4. F477 - Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
- B. Minnesota Department of Transportation "Standard Specifications for Construction" 2020 Edition (MnDOT Spec.):
 - 1. 3149 - Granular Material.
 - 2. 3733 - Geosynthetic Materials.

1.04 SEQUENCING AND SCHEDULING

- A. Install sanitary sewer, water main, storm sewer, and all pipe deeper than the services prior to the installation of the services.
- B. Install draintile after completion of aggregate backfill and prior to gravel base placement.

PART 2 PRODUCTS

2.01 PIPE AND FITTINGS

- A. Drain Tile: PSM Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings:
 - 1. General: Pipe and fittings shall be made of compounds conforming to ASTM D1784 in accordance with the material requirements of ASTM D3034.
 - 2. Design: Integral bell gasketed joint and a minimum wall thickness conforming to SDR 26.
 - 3. Joints: Elastomeric gasket joints providing a water-tight seal conforming to ASTM D3212 or ASTM F477.
 - 4. Perforations: Circular on 3-1/4 inches by 6-1/4 inches centers.
 - a. Hole size: maximum of 3/8 inch and a minimum of 3/16 inch, arranged in 4 rows along the full length of the pipe.
- B. Storm Sewer Service: Poly (Vinyl Chloride) (PVC) Schedule 40 Plastic Pipe conforming to Section 33 31 14.

2.02 BEDDING MATERIAL FOR STORM SEWER SERVICE

- A. Granular Material meeting MnDOT Spec. 3149.2.B.1, as modified herein:
 - 1. 100-percent passing, by weight, the 1 inch sieve.

2.03 DRAIN TILE AGGREGATE

- A. Coarse Filter Aggregate conforming to MnDOT Spec. 3149.2.H, as modified herein:
 - 1. Excluding crushed carbonated quarry rock, crushed concrete, and salvaged bituminous.

2.04 GEOSTNTHETIC MATERIALS

- A. Geotextile wrap shall conform to MnDOT Spec. 3733, Type 1.

PART 3 EXECUTION

3.01 GENERAL

- A. The location and alignment of the subsurface drains and outlets will be determined in the field by the Engineer, based on subsurface conditions.

3.02 DRAIN TILE INSTALLATION

- A. Conform to details on Drawings.
- B. Construct at locations and elevations determined by Engineer or as shown on the Drawings.
- C. Pipe Bedding: drain tile aggregate.
- D. Grade: Unless otherwise specified or shown on the Drawings, the grade of pipes shall not be flatter than 0.50-percent grade or match the street grade.
- E. Plug upstream end of the drain pipe.
- F. Sections of the drain pipe shall be firmly joined.
- G. Place pipe so that the perforations are in the position indicated on the Drawings or designated by the Engineer.
- H. Connections: Connect to hole provided in precast structure. Seal joint with mortar. Core drill connection to structure where precast hole is not provided.
- I. Compaction: Conform to Section 33 05 06.
- J. Flushing: After installation has been completed, pipes shall be flushed with sufficient water to remove material that has entered the pipes during construction.

3.03 STORM SEWER SERVICE INSTALLATION

- A. Construct at locations and elevations determined by Engineer or as shown on the Drawings.
- B. Pipe Bedding: Bedding material.
- C. Plug upstream end of pipe.
- D. Sections of the pipe shall be firmly joined.
- E. Connections: Connect to hole provided in precast structure. Seal joint with mortar. Core drill connection to structure where precast hole is not provided.

F. Compaction: Conform to Section 33 05 06.

3.04 FIELD QUALITY CONTROL

A. Do not backfill trench until the pipe has been inspected and approved by the Engineer.

B. Compact all trench backfill with mechanical means by "Quality Compaction Method."

3.05 PROTECTION

A. Mark each storm sewer service plug location with 4 inch by 4 inch timbers to above grade to aid in marking the future connection.

END OF SECTION

SECTION 34 41 05
TRAFFIC SIGNS AND DEVICES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Signs, signposts, and hardware.
 - 2. Double wooden barricades.
- B. Related Sections:
 - 1. Section 02 41 13 - Selective Site Demolition.

1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
 - 1. Sign Panel: Measurement will be per square foot by type. Payment shall include sign panel and sheeting. Signs are considered rectangular for the purpose of measurement except measurement for triangular shaped sign panels shall be the actual area of the triangle.
 - 2. Install Sign Panel: Measurement will be per each. Payment shall include all hardware, posts, stringers, equipment, and labor necessary to install each sign panel at the identified location in place as specified:
 - a. There will be no extra compensation for posts, regardless of length or required configuration.
 - b. There shall be no extra compensation for post installations in bituminous or concrete surfaces.
 - 3. Sign Post Flange Channel: Measurement will be per Each. Payment shall include the post and installation at locations as identified.
 - 4. Sign Post for Street Name Blades: Measurement will be per Each. Payment shall include post and installation at locations as identified. City will provide and install name blades on supplied post.
 - 5. Permanent Barricade: Measurement will be per each. Payment will include all costs related to furnishing and installing the barricade per the Standard Detail Plate STR-32.
 - a. The future road extension sign, if required, will be paid separately as a new sign under the appropriate Bid Item.
 - 6. City Monument Post: Measurement will be per each. Payment will include pick-up and installing the open space marker per the Standard Detail Plate STR-40.
 - 7. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 REFERENCES

- A. Minnesota Department of Transportation "Standard Specifications for Construction", 2020 Edition (MnDOT Spec.):
 - 1. 2564 - Traffic Signs and Devices.
 - 2. 3352 - Signs.

- B. Minnesota Manual on Uniform Traffic Control Devices (MMUTCD).
- C. Minnesota Department of Transportation Standard Signs Manual.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Upon delivery to the Site, store the materials at least 10 feet away from any construction or traveled roadways areas. Vehicles and equipment shall not be stored, even temporarily, in the buffer zone of the work area or where it would be so close to moving traffic that it is in the judgment of the Engineer a potential hazard to motorists.

1.05 SEQUENCING AND SCHEDULING

- A. Notify the Engineer at least 48 hours prior to commencing the work under this Section of the Contract for required construction staking.
- B. Schedule an onsite pre-signing meeting with the Owner, Engineer, and Signing Subcontractor (if appropriate) a minimum of 24 hours prior to the installation of any signing.
- C. Schedule private utility locates through Gopher State One. Call program prior to sign post installation.
- D. Contact Washington County for all signs within the County right-of-way that will require temporary or permanent removal.
- E. Install signs within 7 calendar days after placement of the pavement adjacent to the sign locations.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Sign Material:
 - 1. Sign Panel Base Material: Sheet aluminum conforming to the material requirements of MnDOT Spec. 3352.2.A.1.
 - 2. Sign Face Material:
 - a. Traffic Sign Panels: Reflective sheeting conforming to the requirements of MnDOT Spec. 3352.2.A.3. Diamond Grade DG3, Electro cut or silk screen only, no digital printing.
 - b. Street Name Blade Signs: reflective sheeting, Diamond Grade DG3, Electro cut or silk screen only, no digital printing.
 - 3. Sign Legend Material for Signs: "Direct Applied" conforming to the requirements of MnDOT Spec. 3352.2.A.6.
- B. Sign Panels:
 - 1. Sign panels shall be fabricated and hole punched in accordance with the standard drawings in the MnDOT Standard Signs Manual.
 - 2. Public street name blade signs shall be provided by and installed by the City of Cottage Grove.
 - 3. Private street name blade signs shall be blue with white lettering.

- C. Sign Post for Name Blades:
1. 12 feet long.
 2. Round tubular aluminum or hot dipped galvanized steel.
 3. Outside diameter 2-3/8 inches
 4. Wall thickness 0.109 inches.
- D. Sign Posts Flange Channel:
1. Traffic Signs:
 - a. Boulevard Installation:
 - 1) All sign posts shall conform to MnDOT Spec. 3401 and to MNDOT Standard Plan "Type C&D Sign Structural Details". Posts to be 2 sections with the following weight:
 - a) Bottom Section: 3.0 lbs./ft.
 - b) Top Section: at least 2.5 lbs./ft. and not greater the weight of the bottom post.
 - 2) The appropriate length of the upper post shall be determined by the Contractor to meet the construction requirements of the above ground stated references at each specific location.
 - b. Concrete Median Installation:
 - 1) Telespar square tube system
 - 2) 2 inches square
 - 3) 12 gauge galvanized steel
 - 4) Length: 9 feet, or as determined by Contractor as necessary to meet the construction requirements of the references and this section at each specific sign location:
 - a) Telespar Post Part No. 16125 (9 foot)
 2. Anchor System:
 - a. Concrete Median Location – Kleen Break Anchor:
 - 1) Kleen Break Surface Mount Anchor (Model No. 425), with receiving coupler, shear bolt and locking wedge.
 - 2) Mount to surface using Galvanized Simpson Strongtie Titan HD Concrete anchor bolt 1/2 inch x 4 inch (1/2 inch bolt shank):
 - a) 3D Specialties (Part No. 55820).
 - b) Minimum embedded depth of 3-5/8 inches.
 - c) Allowable tension load shall be 2,270 lbs. when installed in 3000 psi concrete.
 - d) Allowable shim of up to 1/2 inch.
 - e) Longer bolt is acceptable to maintain the 3-5/8 inch minimum embedment depth when shimming.
 - 3) Use 2 inch square X 9 foot, 12 gauge Telespar posts (Part No. 16125) with a 1-3/4 inch square X 3 foot, 12 gauge Telespar post (Part No. 15520) insert in the bottom (to cover bumper strike area).
 - 4) Follow Kleen Break Model 425, Drawing No. XKBSM425-20-CI, for installation instructions.
 - b. Hardware:
 - a. Sign Panel: No rivets:
 - 1) 5/16 – 18 by 2-1/2 inch galvanized carriage bolts.
 - 2) 7/8 inch OD Nylon washer, 1/32 inch thick.
 - 3) 3/8 inch stainless steel washer.
 - 4) 5/16 – 18 galvanized hex nuts.
 - b. Anchor System: Boulevard Location:

- 1) 5/16 inch diameter medium corner bolt with nut. Galvanized. (Telespar Part No. 56202).

E. Permanent Barricade:

1. Per Standard Detail Plate STR-32.

F. City Monument Post:

1. Monument posts shall be purchased from the City of Cottage Grove directly and picked up from Cottage Grove Public Works facility at 8635 West Point Douglas Road, Cottage Grove MN 55016.

2.02 SOURCE QUALITY CONTROL

- A. All material certification shall conform to MnDOT Spec 2564.

PART 3 EXECUTION

3.01 GENERAL

- A. Unless otherwise noted or modified herein, all sections of MnDOT Spec. 2564, all sections of MnDOT's Standard Signs Manual, and Chapter 6 of MMUTCD shall apply.
- B. The fabrication of all signs and devices shall conform to MnDOT Spec. 2564 and the latest edition of the MMUTCD and the MnDOT Standard Signs Manual.
- C. The sign number designation indicated on the Drawings shall comply with applicable requirements of MMUTCD and MnDOT Standard Signs Manual.

3.02 CONSTRUCTION

- A. Sign locations shown on the Drawings are only approximate. The final locations shall be determined in the field by the Engineer. Have all underground utilities located prior to installing all signposts. Provide Engineer 48 hour notice prior to sign installations to allow for adequate staking time:
1. Standard location for traffic sign posts shall be a 6 feet behind the back of curb or edge of traveled road.
 2. The lowest point of any traffic sign panel installed shall be 7 feet above finish grade at the point of installation. The lowest point of any street name sign installed shall be 10 feet above finish grade at the point of installation.
- B. Fabricate, hole punch, and mount sign panels in accordance with the standard drawings in the MnDOT Standard Signs Manual. Date the back of each newly installed sign panel with a theft warning sticker stating the month and year using inventory/I.D. stickers approved by the Owner.
- C. Install nylon washers between the bolt and the sign face (sheeting) to protect face. Do not over tighten bolts to the point where the sign sheeting separates from the sign backing, which would be cause for rejection and replacement at no additional cost to the Contract. There shall also be a stainless steel washer between the nylon washer and the bolt head.

- D. Post Anchorage:
 - 1. Within concrete median: Install Surface Mount Anchor and bolts as shown on Standard Detail Plate STR-36.
- E. Permanent Barricade:
 - 1. Install at locations shown on Drawings and per Standard Detail Plate STR-32.
 - 2. Barricades to span entire roadway.
 - 3. If shown on Drawings or required by Engineer, attach "Future Road Extension Sign" per Standard Detail Plate STR-31.
 - 4. If shown on Drawings or required by the Engineer, attach "end of road marker", 9 button OM4-2 red on black sign.
- F. Provide traffic control to safely install signs and to safely guide traffic through the work area during installation.
- G. Sign Post Flange Channel:
 - 1. The bottom section of each sign post shall be mounted into the ground to a minimum depth of 3-1/2 feet.
 - 2. The lower section of the post shall be at least 30 inches above ground to allow for a 12 inch splice and a minimum clearance of 18 inches from the ground to the bottom of the top section of the post.
 - 3. The splice of the upper and lower section posts shall be made with 2 – 5/16 inch stainless steel bolts with nylon insert lock nuts placed in the top and bottom holes of the overlap splice.
 - 4. Where 2 or more single post signs are mounted side by side, they shall be reinforced laterally by at least 2 post sections, bolted at each post, and located approximately at the quarter points.
- H. Sign Post for name blades shall be driven 4 feet into the ground with 8 feet exposed above grade.

3.03 FIELD QUALITY CONTROL

- A. All work shall conform to MnDOT Spec. 2564.

3.04 CLEANING

- A. Clean any sign after installation if requested by the Engineer.

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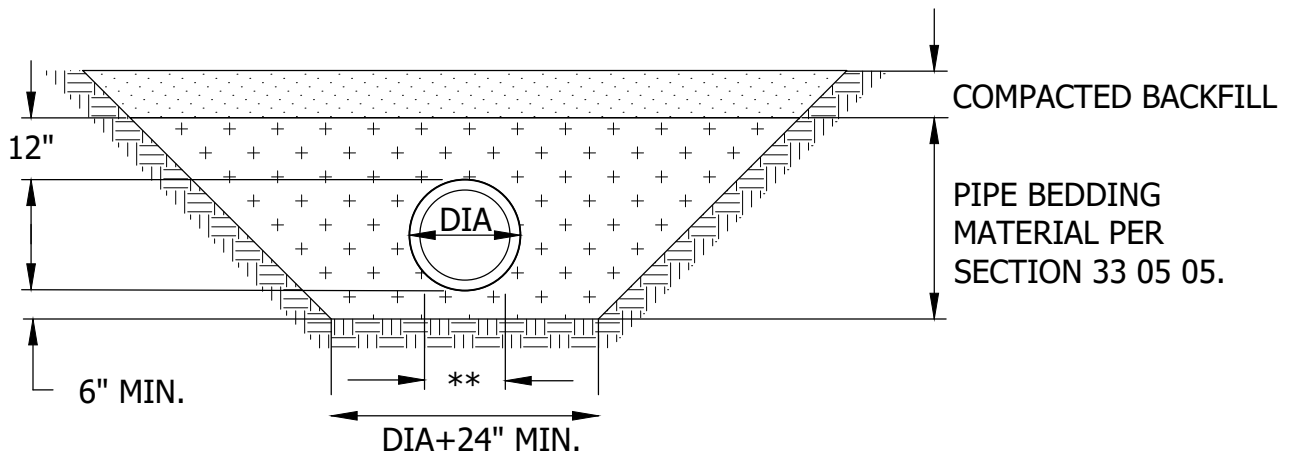
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DIA = OUTSIDE DIAMETER OF PIPE

** = BEDDING DIA/3 WIDE.
LOOSELY PLACED /
UNCOMPACTED MATERIAL.

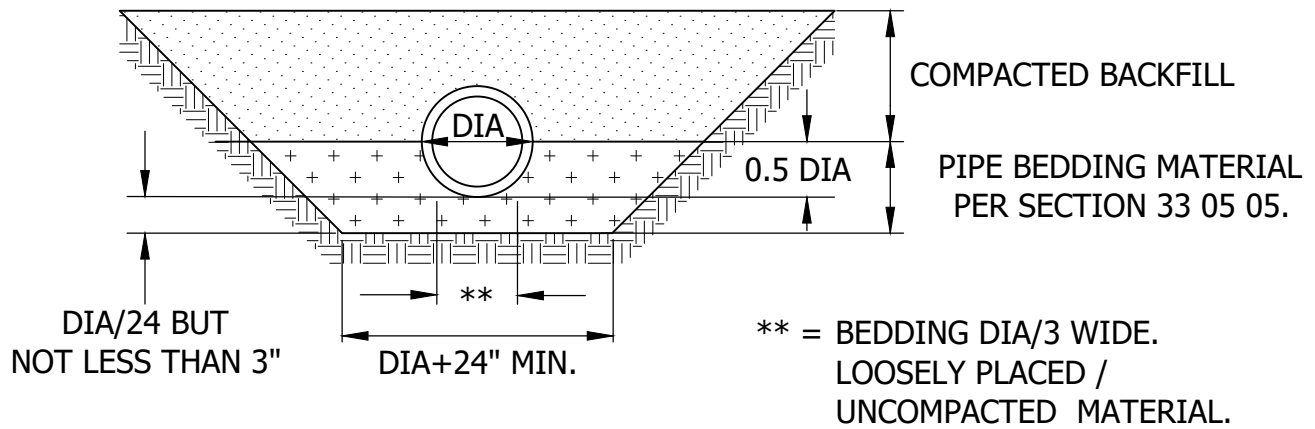
PVC PIPE FOUNDATION & BEDDING IN GOOD SOILS



STANDARD DETAILS PIPE FOUNDATION & BEDDING METHOD FOR PVC COTTAGE GROVE, MINNESOTA

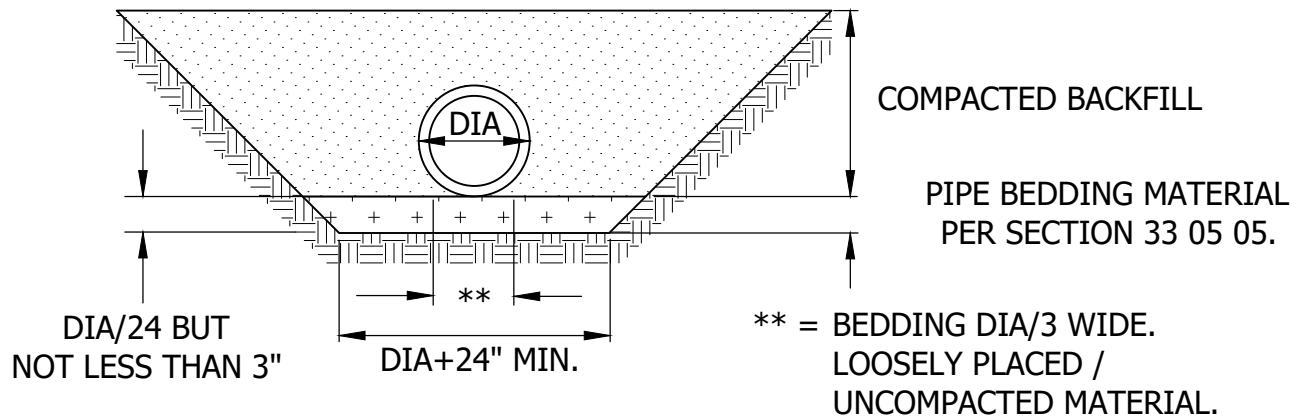
JANUARY 2024

PLATE NO.
BED-1



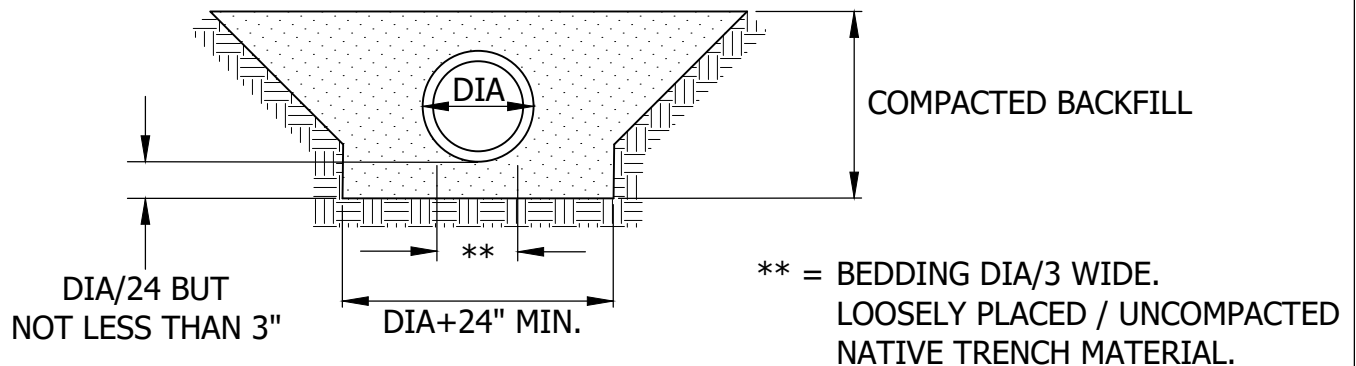
INSTALLATION TYPE 1

DIA = OUTSIDE DIAMETER OF PIPE



INSTALLATION TYPE 2

DIA = OUTSIDE DIAMETER OF PIPE



INSTALLATION TYPE 3

DIA = OUTSIDE DIAMETER OF PIPE



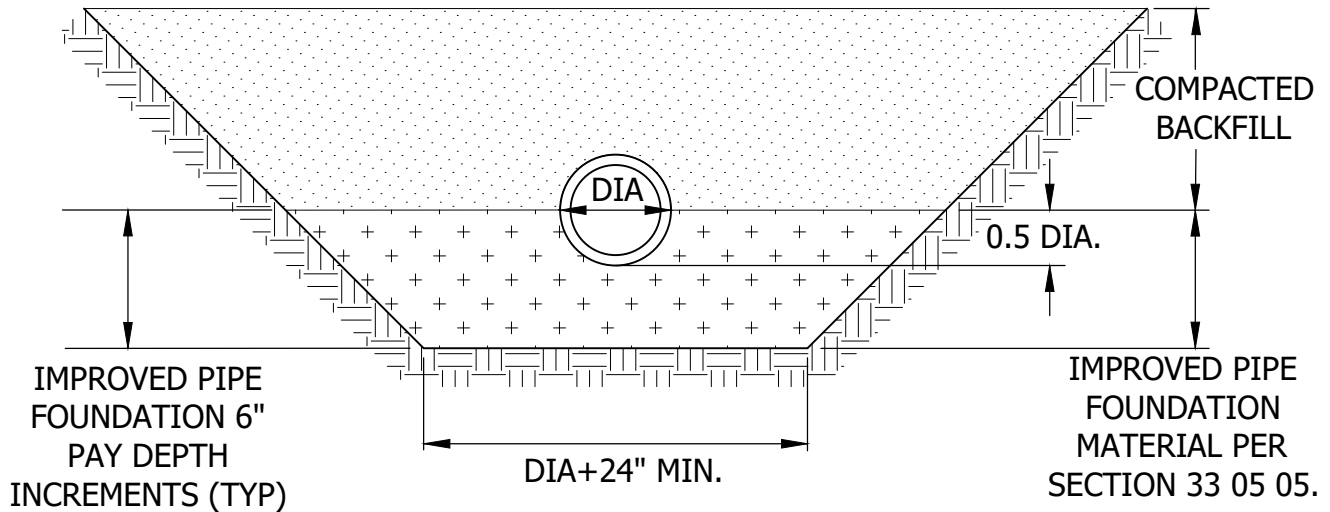
STANDARD DETAILS

PIPE FOUNDATION & BEDDING
METHODS FOR RCP & DIP

COTTAGE GROVE, MINNESOTA

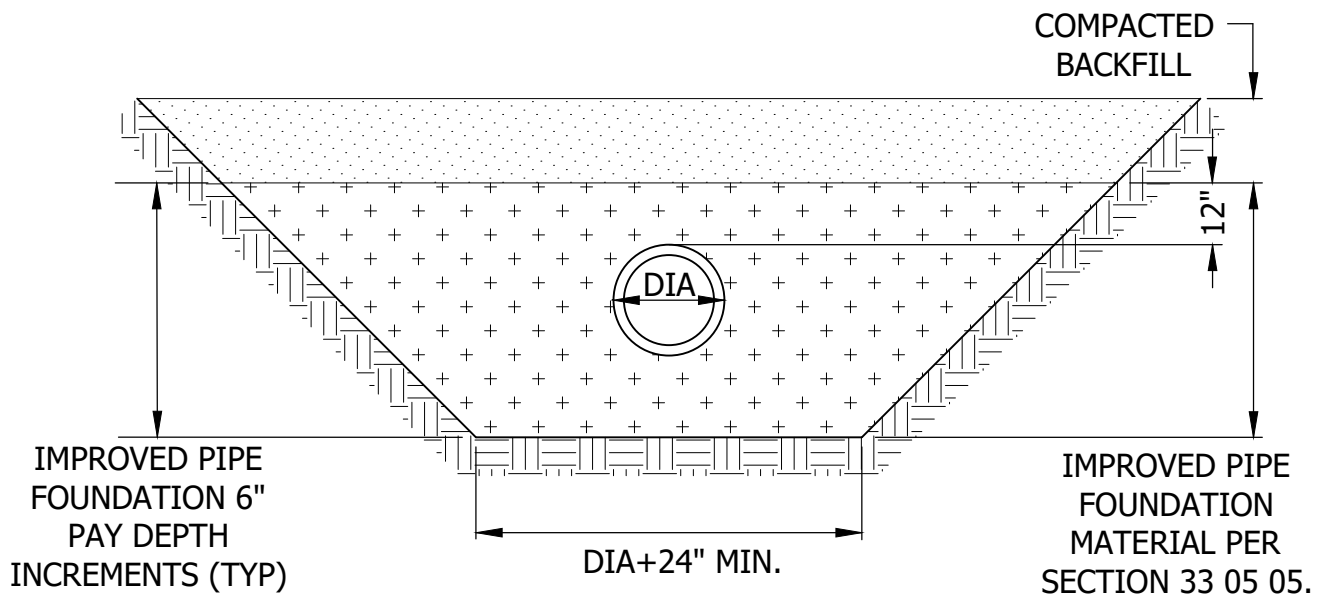
JANUARY 2024

PLATE NO.
BED-2



DIA = OUTSIDE DIAMETER OF PIPE

RCP & DIP PIPE



DIA = OUTSIDE DIAMETER OF PIPE

PVC PIPE



STANDARD DETAILS

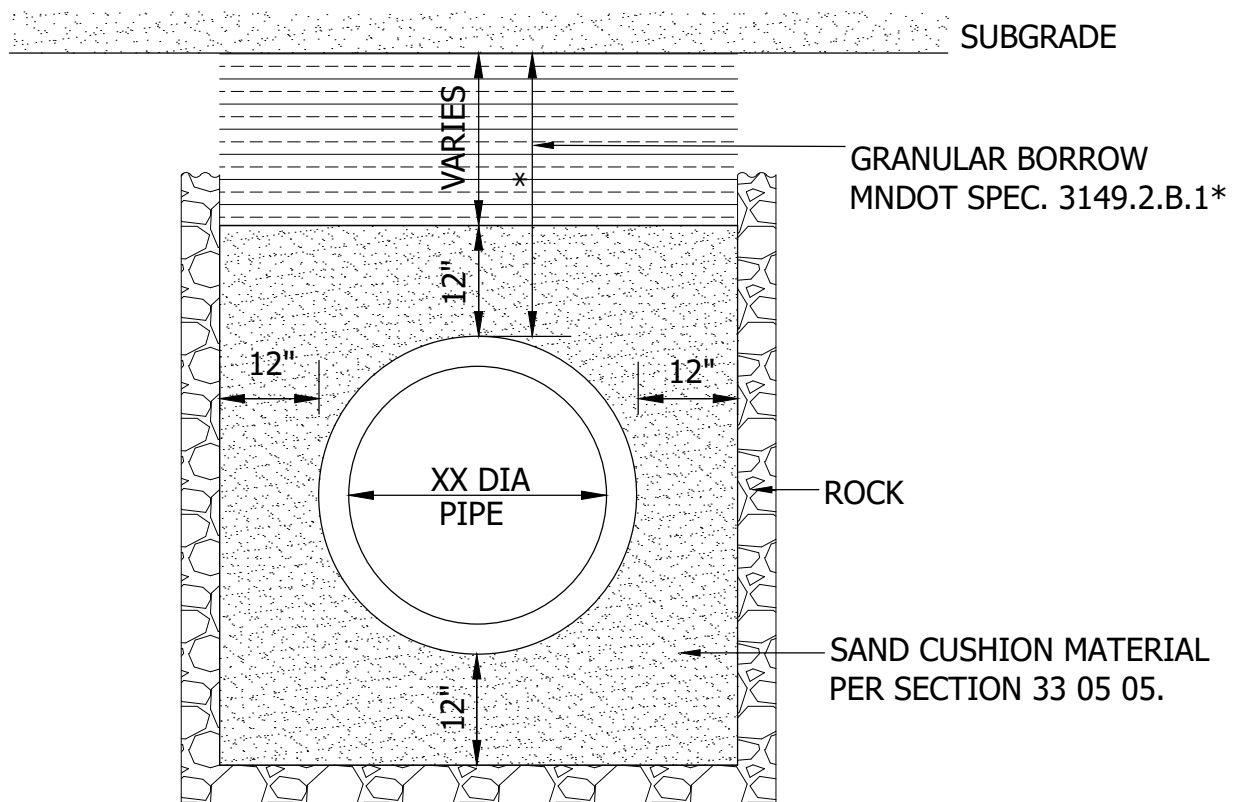
IMPROVED FOUNDATION FOR
RCP, DIP, PVC PIPE TRENCH

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
BED-3

* USE GRANULAR BORROW WHEN TOP OF PIPE IS WITHIN 3 FEET OF SUBGRADE. IF GREATER THAN 3 FEET, USE SUITABLE EXISTING ONSITE BACKFILL.



STEEL FENCE POST (T-POST),
MINIMUM 5' LONG,
6' MAXIMUM SPACING.

ATTACH FABRIC TO POSTS
WITH MINIMUM 4
FASTENERS PER POST IN
TOP 8" OF FABRIC.

GEOTEXTILE FABRIC

POST NOTCHES
TO FACE AWAY
FROM FABRIC.

MACHINE SLICE
8"-12" DEPTH (PLUS 6" FLAP)
TRENCH MUST BE COMPACTED BY
LIGHT EQUIPMENT PRIOR TO
PLACEMENT OF STEEL POSTS.

DIRECTION OF SURFACE FLOW

24" MINIMUM
POST EMBEDMENT

NOTE:
HEAVY-DUTY SILT FENCE INSTALLATION METHODS SHOULD BE USED
WHEN DIRECTED BY THE CITY.



STANDARD DETAILS
MACHINE SLICED SILT FENCE

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
ERO-1



STEEL FENCE POST (T-POST),
MINIMUM 5' LONG,
6' MAXIMUM SPACING.

POST NOTCHES
TO FACE AWAY
FROM FABRIC.

ATTACH FABRIC TO
POST WITH MINIMUM
3 FASTENERS PER
POST IN TOP 8" OF
FABRIC.

DIRECTION OF
SURFACE FLOW

EXTEND WIRE MESH
INTO TRENCH

WIRE MESH REINFORCEMENT,
STD. FIELD FENCE, MIN 30" HIGH,
MAX MESH SPACING 6" AND
MIN 14.5 GAUGE WIRE.

GEOTEXTILE FABRIC - OVERLAP
TOP 6" OF FABRIC AND FASTEN TO
WIRE MESH AT 2' INTERVALS
WITH RINGS OR WIRE TIES.

ATTACH WIRE MESH TO
POSTS WITH MINIMUM 3
U-SHAPED WIRE
FASTENERS PER POST.

LAY FABRIC/WIRE MESH IN
THE TRENCH, BACKFILL WITH
NATURAL SOIL, AND COMPACT
PRIOR TO PLACEMENT OF THE
POSTS.

24" MINIMUM
POST EMBEDMENT

NOTE: MACHINE SLICED HEAVY DUTY SILT FENCE
SHOULD BE USED WHEN DIRECTED BY THE CITY.



STANDARD DETAILS
HEAVY DUTY SILT FENCE

COTTAGE GROVE, MINNESOTA

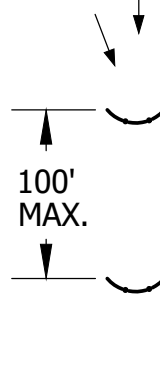
JANUARY 2024

PLATE NO.
ERO-3

PLAN VIEW

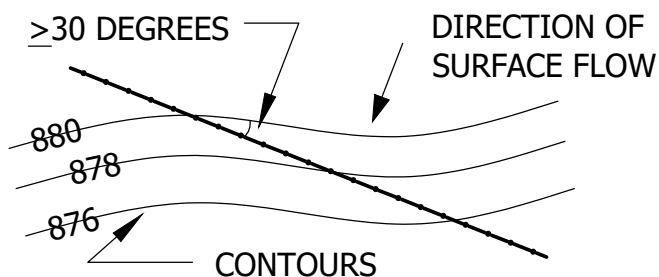
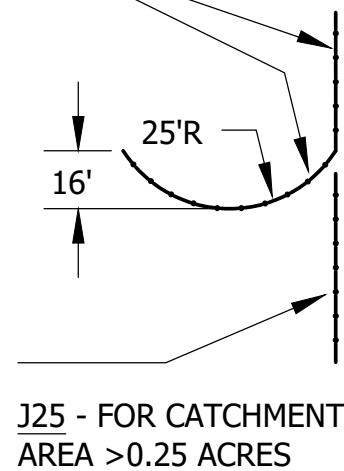
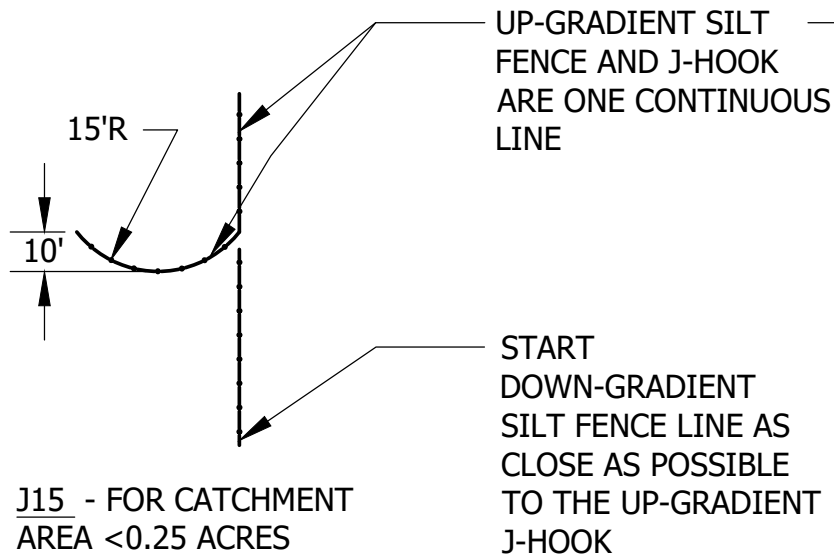
I. SPACING REQUIREMENTS

DIRECTION OF
SURFACE FLOW



NOTE: SPACING DISTANCES
WILL VARY, BUT ARE NOT
TO EXCEED 100 FEET PER
0.25 ACRE OF DRAINAGE.

II. SIZING REQUIREMENTS: J15, J25



NOTE: J-HOOKS SHALL BE
USED WHEN THE SILT
FENCE IS INSTALLED AT AN
ANGLE OF 30 DEGREES OR
GREATER FROM PARALLEL
TO THE CONTOURS.



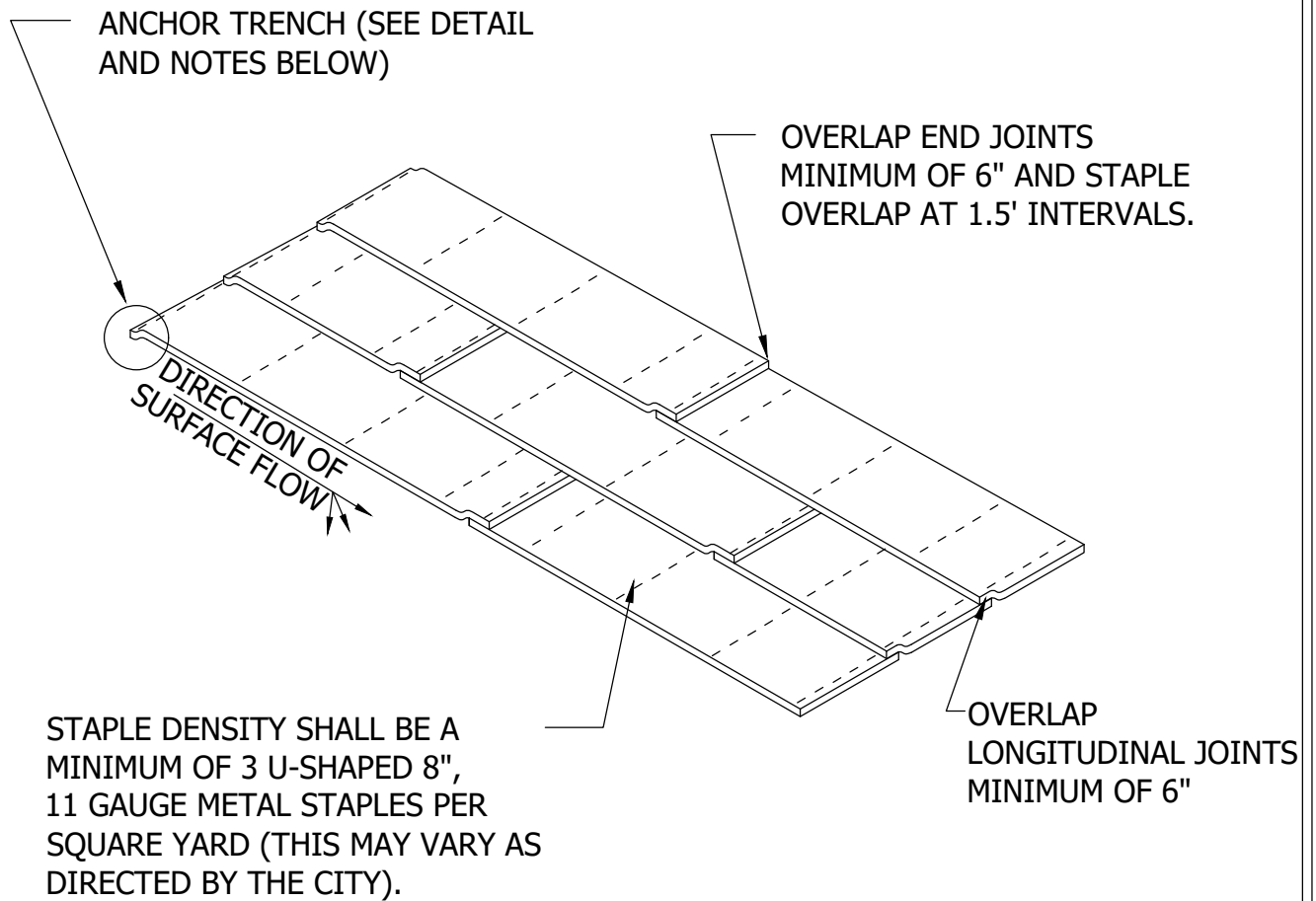
STANDARD DETAILS

J-HOOK SILT FENCE

COTTAGE GROVE, MINNESOTA

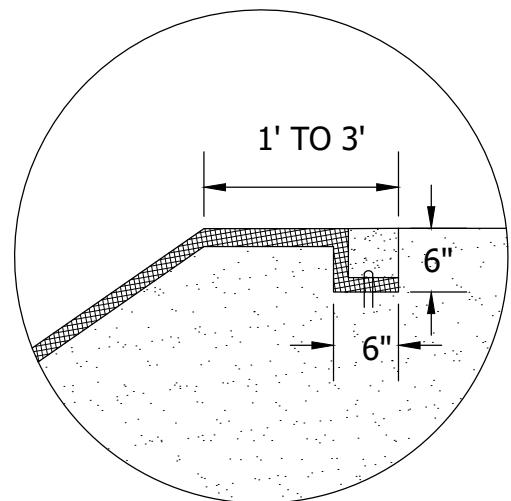
JANUARY 2024

PLATE NO.
ERO-4



ANCHOR TRENCH

1. DIG 6" X 6" TRENCH
2. LAY BLANKET IN TRENCH
3. STAPLE AT 1.5' INTERVALS
4. BACKFILL WITH NATURAL SOIL AND COMPACT
5. BLANKET LENGTH SHALL NOT EXCEED 100' WITHOUT AN ANCHOR TRENCH



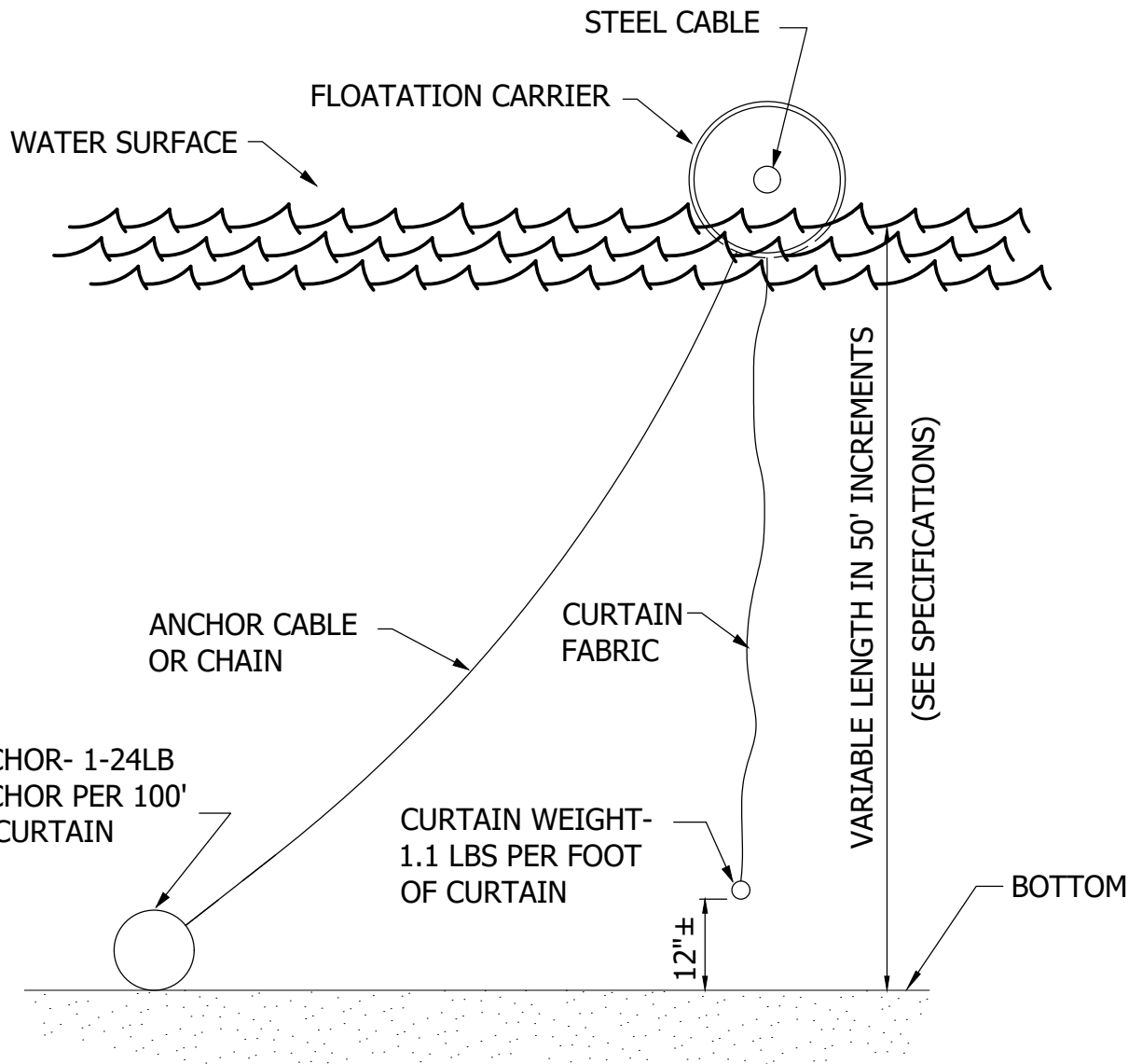
STANDARD DETAILS

ROLLED EROSION PREVENTION
PRODUCTS INSTALLATION

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
ERO-5



NOTE: DOUBLE SILT CURTAINS SHOULD BE SPACED 10' APART.



STANDARD DETAILS
FLOATING SILT CURTAIN

COTTAGE GROVE, MINNESOTA

JANUARY 2024

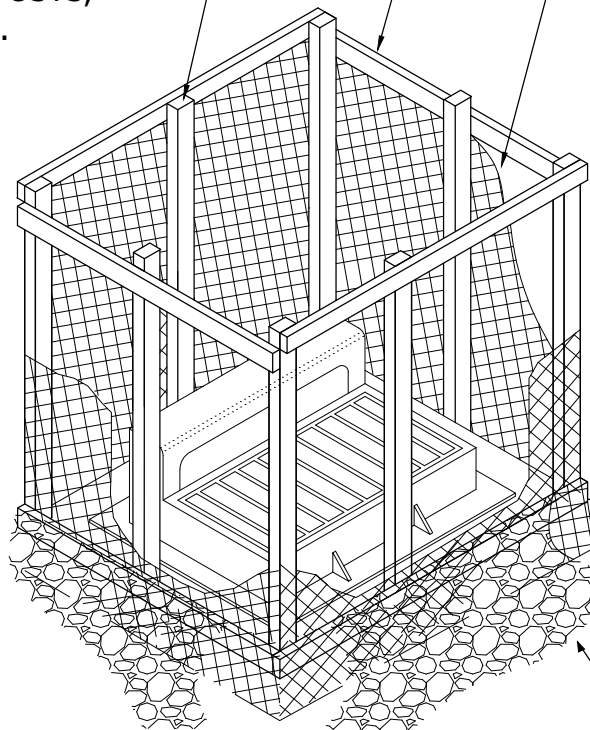
PLATE NO.
ERO-6

WOODEN LATH SHALL BE
NAILED SECURELY TO THE
POST MEMBER TO SECURE
FILTER FABRIC.

2" X 4" X 2.5' LONG
WOOD POSTS,
8 REQ'D.

2" X 4" HORIZONTAL
MEMBERS CONTINUOUS
AROUND TOP AND BOTTOM.
FASTENED TO EACH POST
USING 2-20D COMMON NAILS

GEOTEXTILE FABRIC



2'-6"

8-10" FABRIC FLAP EXTENDING
BEYOND BOTTOM 2X4 -
BURY UNDER ROCK TO
PREVENT UNDERWASHING

1 1/2" WASHED ROCK
1' DEEP X 1' WIDE

NOTES:

CONTRACTOR SHALL CONSTRUCT SILT BOX TO FIT
AROUND THE INLET STRUCTURE WITH 6" MINIMUM
CLEARANCE TO EDGES OF STRUCTURE. SILT BOX
TO BE PLACED ON AN EVEN SURFACE 6" BELOW
STRUCTURE OPENING. TOP OF SILT BOX TO
EXTEND 18" MINIMUM ABOVE EXISTING GRADE.



STANDARD DETAILS

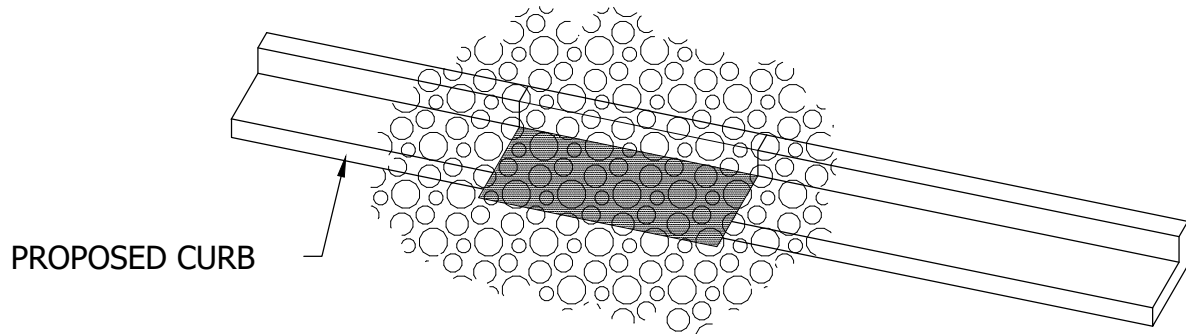
INLET PROTECTION SILT BOX
FOR CATCH BASIN

COTTAGE GROVE, MINNESOTA

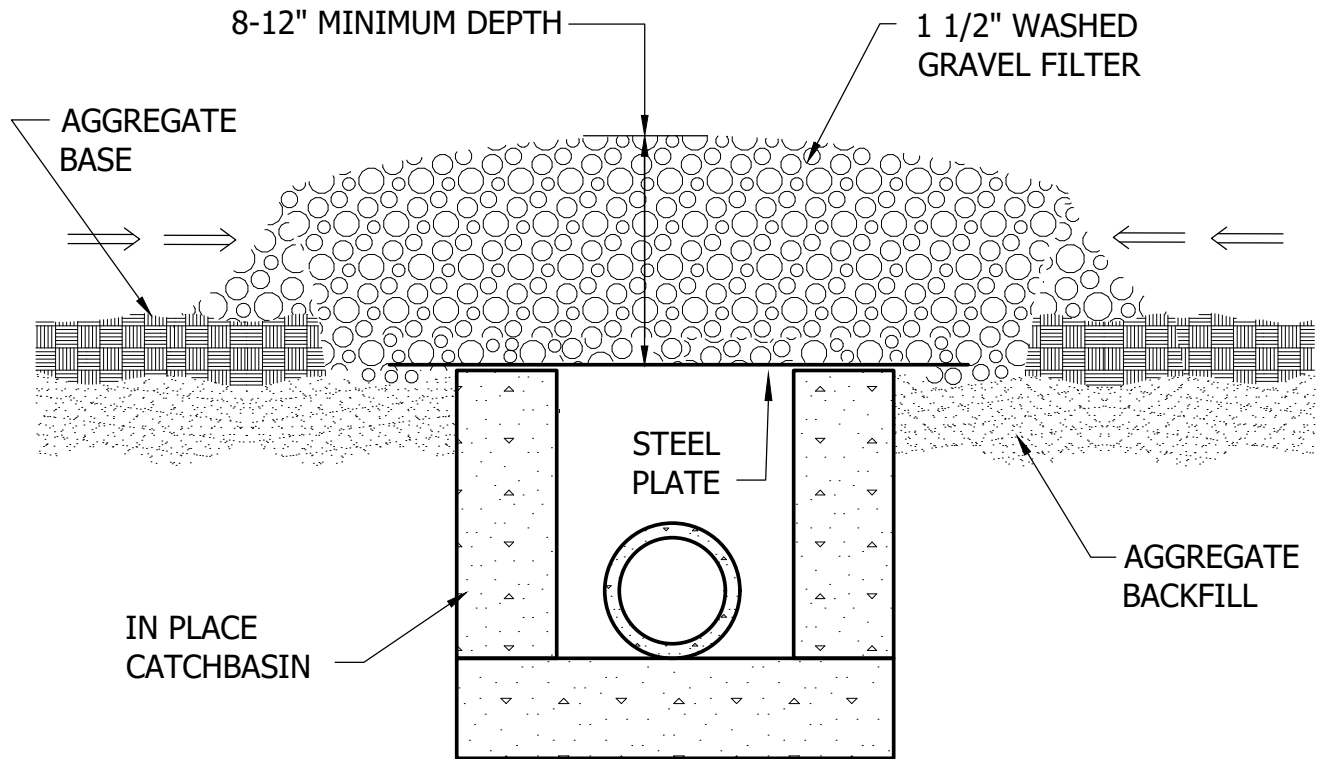
JANUARY 2024

PLATE NO.
ERO-7

PLAN



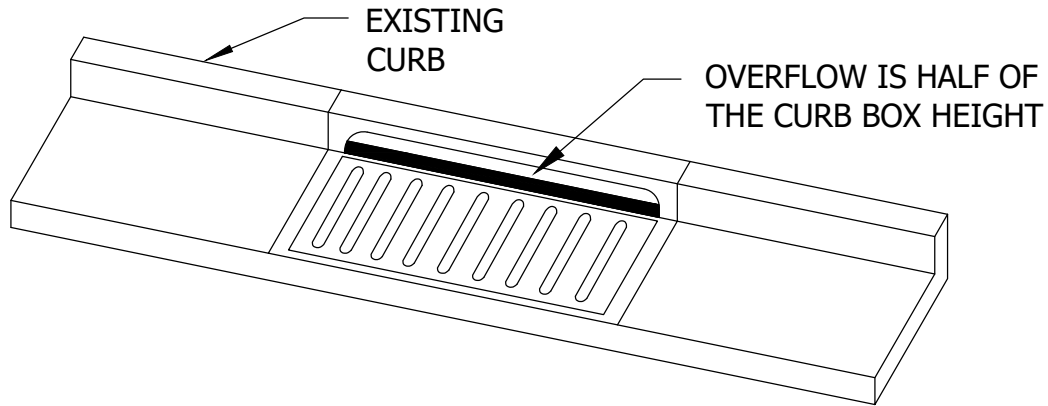
← ← = DIRECTION OF SURFACE FLOW



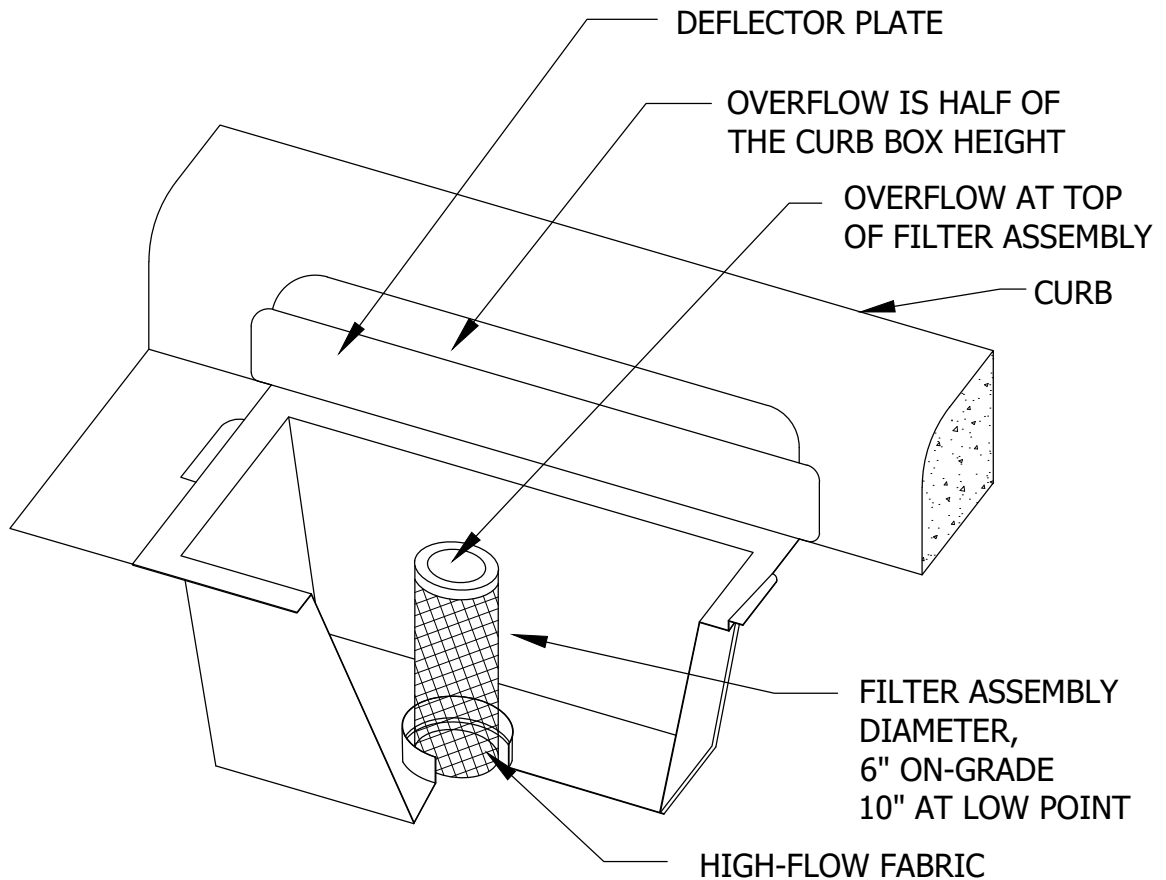
STANDARD DETAILS
INLET PROTECTION ROCK
FILTER FOR CATCH BASIN
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
ERO-8



NOTE: USE WIMCO ROAD DRAIN CG-23 OR CG-3290-VB (DEPENDING ON CASTING TYPE) HIGH FLOW INLET PROTECTION CURB AND GUTTER MODELS, OR CITY APPROVED EQUAL.



STANDARD DETAILS
INLET PROTECTION CATCH
BASIN INSERT
COTTAGE GROVE, MINNESOTA

JANUARY 2024

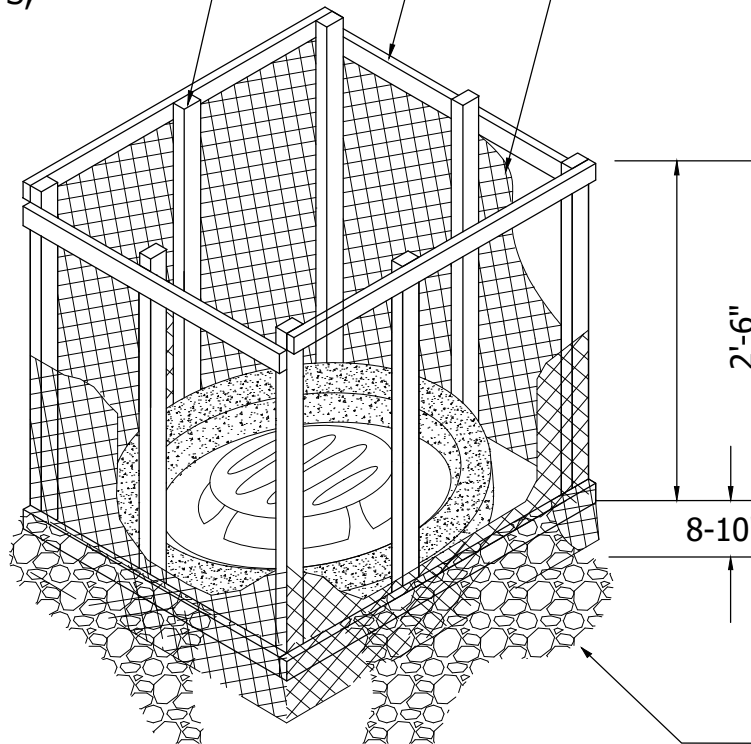
PLATE NO.
ERO-9

WOODEN LATH SHALL BE
NAILED SECURELY TO THE
POST MEMBER TO SECURE
FILTER FABRIC.

2" X 4" X 2.5' LONG
WOOD POSTS,
8 REQ'D.

2" X 4" HORIZONTAL
MEMBERS CONTINUOUS
AROUND TOP AND BOTTOM.
FASTENED TO EACH POST
USING 2-20D COMMON NAILS

GEOTEXTILE FABRIC



8-10" FABRIC FLAP EXTENDING
BEYOND BOTTOM 2X4 -
BURY UNDER ROCK TO
PREVENT UNDERWASHING

1 1/2" WASHED ROCK
1' DEEP X 1' WIDE

NOTES:

CONTRACTOR SHALL CONSTRUCT SILT BOX TO FIT
AROUND THE INLET STRUCTURE WITH 6" MINIMUM
CLEARANCE TO EDGES OF STRUCTURE. SILT BOX
TO BE PLACED ON AN EVEN SURFACE 6" BELOW
STRUCTURE OPENING. TOP OF SILT BOX TO
EXTEND 18" MINIMUM ABOVE EXISTING GRADE.



STANDARD DETAILS

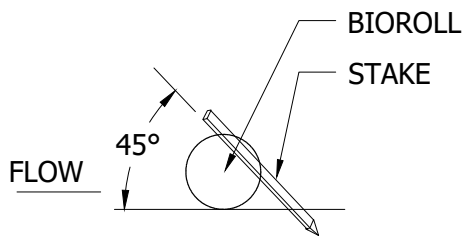
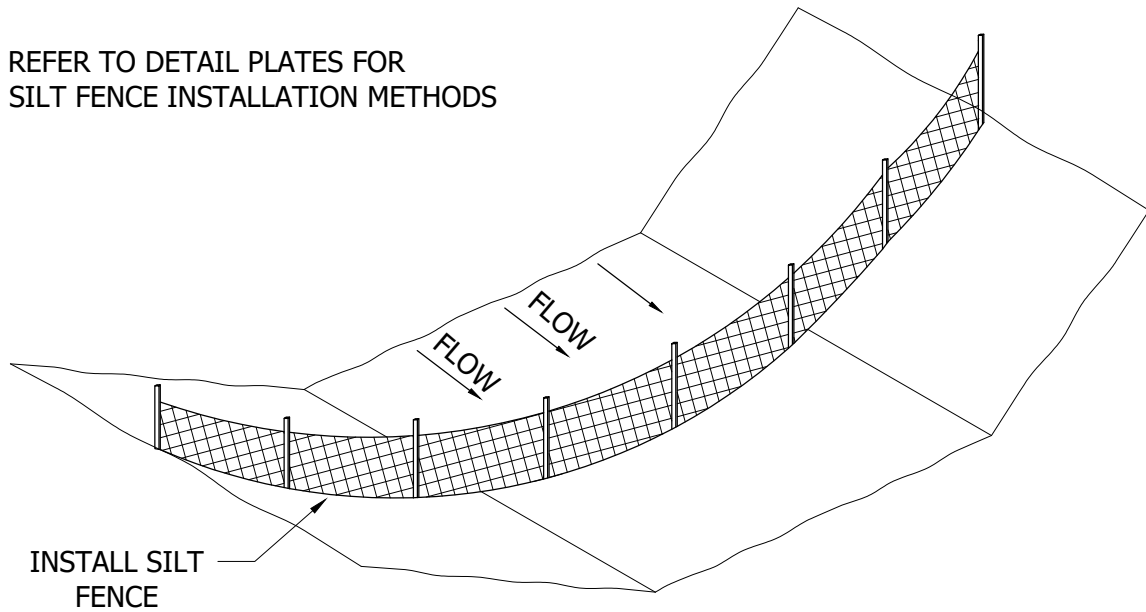
INLET PROTECTION SILT BOX
FOR BEEHIVE CASTING

COTTAGE GROVE, MINNESOTA

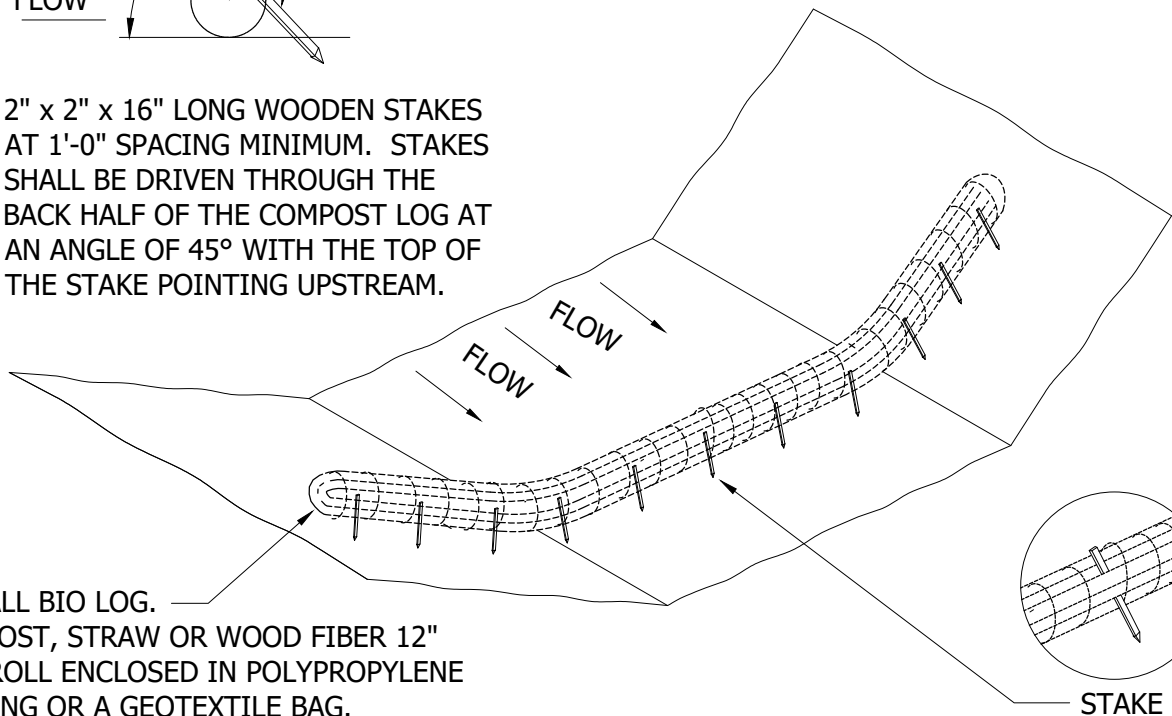
JANUARY 2024

PLATE NO.
ERO-10

REFER TO DETAIL PLATES FOR
SILT FENCE INSTALLATION METHODS



2" x 2" x 16" LONG WOODEN STAKES
AT 1'-0" SPACING MINIMUM. STAKES
SHALL BE DRIVEN THROUGH THE
BACK HALF OF THE COMPOST LOG AT
AN ANGLE OF 45° WITH THE TOP OF
THE STAKE POINTING UPSTREAM.



INSTALL BIO LOG.
COMPOST, STRAW OR WOOD FIBER 12"
DIA. ROLL ENCLOSED IN POLYPROPYLENE
NETTING OR A GEOTEXTILE BAG.

STAKE



STANDARD DETAILS

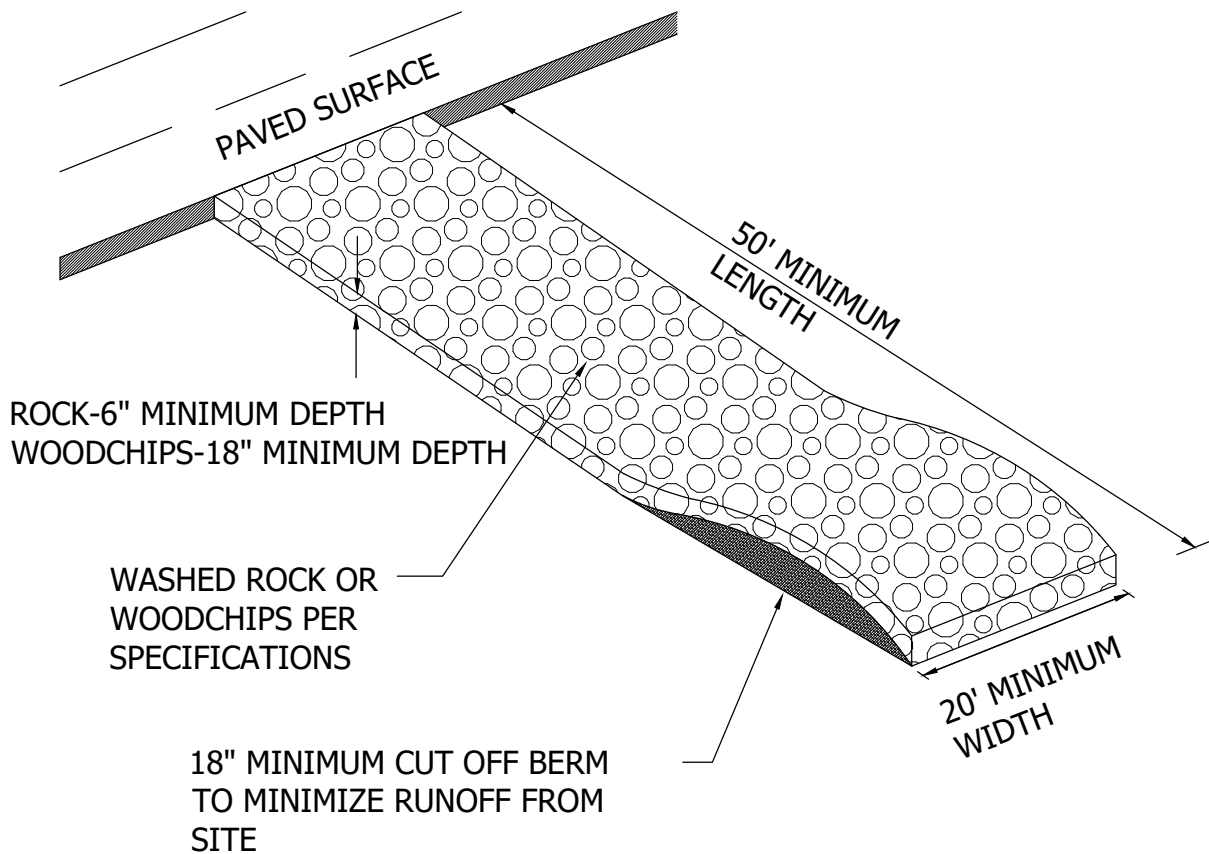
FILTER BERMS

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.

ERO-11



NOTES:

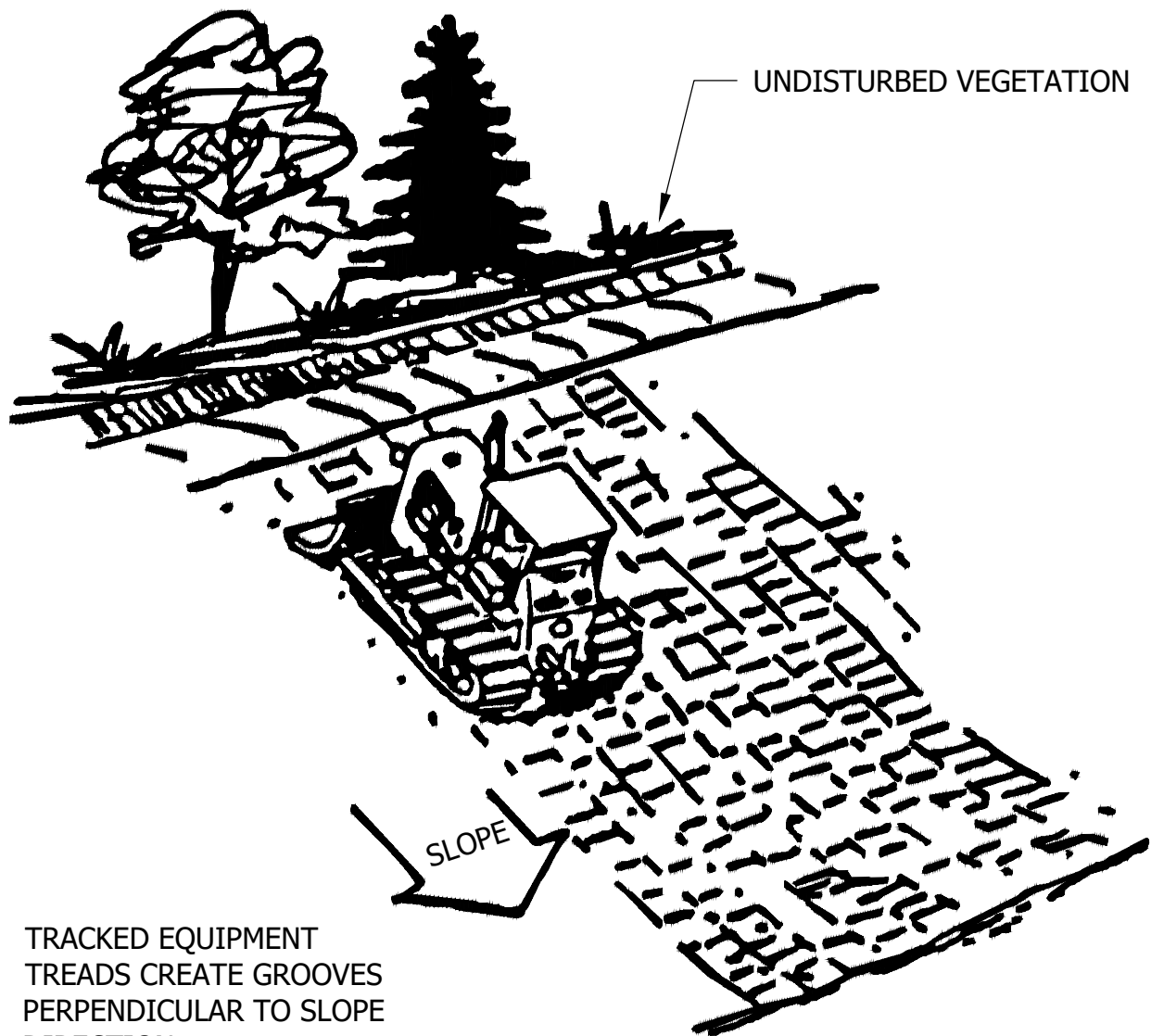
1. FILTER FABRIC SHALL BE PLACED UNDER ROCK OR WOODCHIPS TO STOP MUD MIGRATION THROUGH ROCK.
2. ENTRANCE MUST BE MAINTAINED REGULARLY TO PREVENT SEDIMENTATION TRACKING.



STANDARD DETAILS
CONSTRUCTION ENTRANCE
ROCK AND WOODCHIP
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
ERO-12



TRACKED EQUIPMENT
TREADS CREATE GROOVES
PERPENDICULAR TO SLOPE
DIRECTION.

NOTE:

ALL SLOPES WITH A GRADE EQUAL TO OR STEEPER THAN 3:1
REQUIRE SLOPE TRACKING. SLOPES WITH A GRADE MORE
GRADUAL THAN 3:1 REQUIRE SLOPE TRACKING IF THE
STABILIZATION METHOD IS EROSION CONTROL BLANKET OR
HYDROMULCH.



STANDARD DETAILS

SLOPE TRACKING

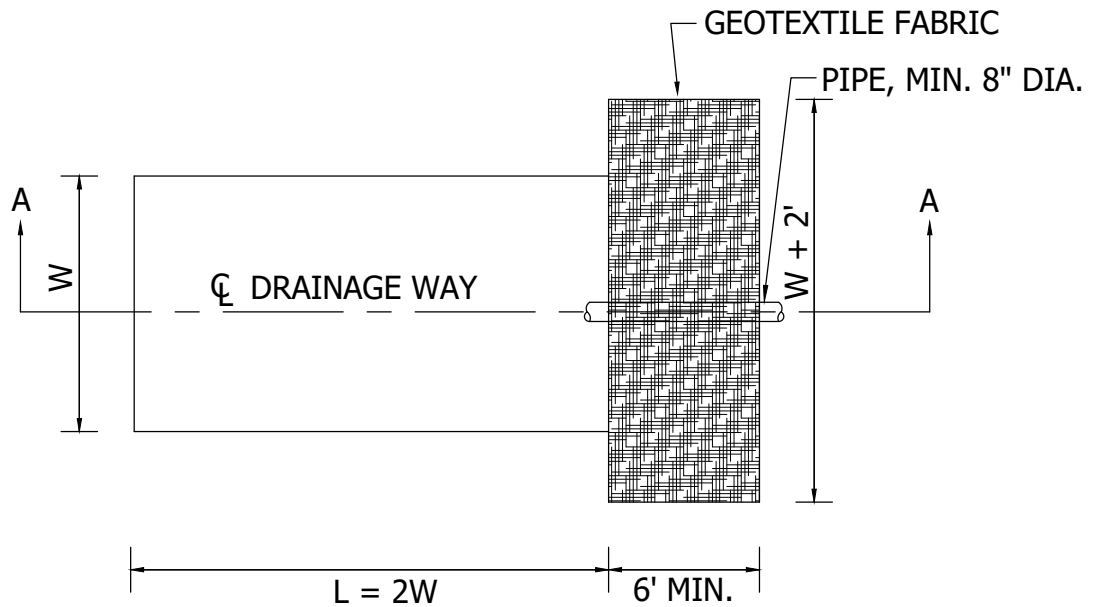
COTTAGE GROVE, MINNESOTA

JANUARY 2024

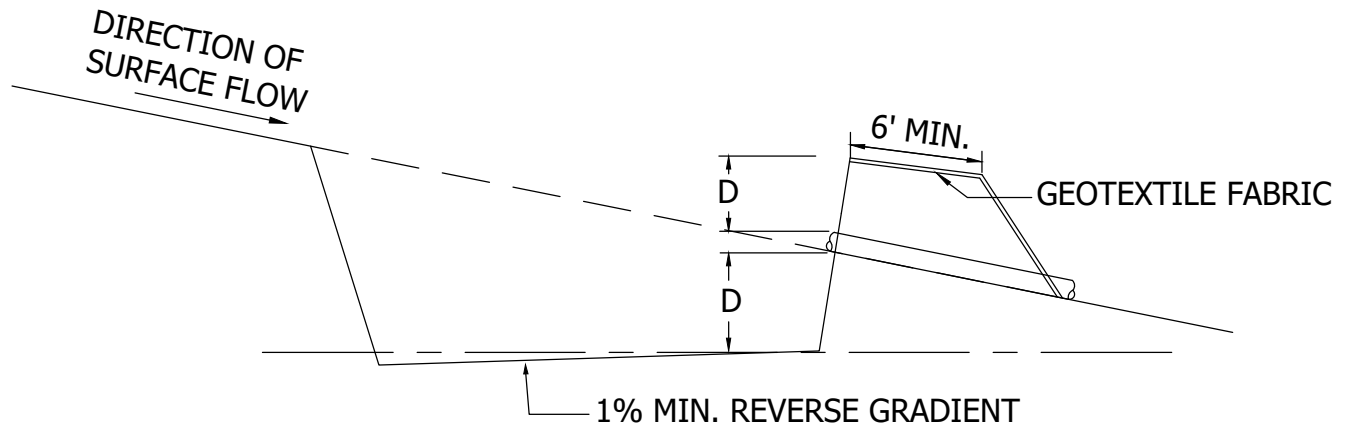
PLATE NO.

ERO-13

I. PLAN VIEW



II. SECTION A-A



NOTE:

D=2' MIN, 4' MAX

W=10' MIN, 25' MAX

W(FT.)= 10 X DRAINAGE AREA (AC.)



STANDARD DETAILS
TEMPORARY SEDIMENT
TRAP/BASIN
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
ERO-14

TEMPORARY SEDIMENT TRAP/BASIN
(30'x30'x2' BELOW OUTLET PIPE)

TYPE III BARRICADES

8" PVC PIPE,
2' ABOVE BOTTOM

FLOW →

10' FROM END OF
STREET CONSTRUCTION

EXISTING CURB
AND PAVEMENT

PLAN VIEW

TYPE III BARRICADES

EXISTING STORM
SEWER STRUCTURE
OR PIPE BULKHEAD

FLOW →

FUTURE STREET SUBGRADE

STREET PAVEMENT

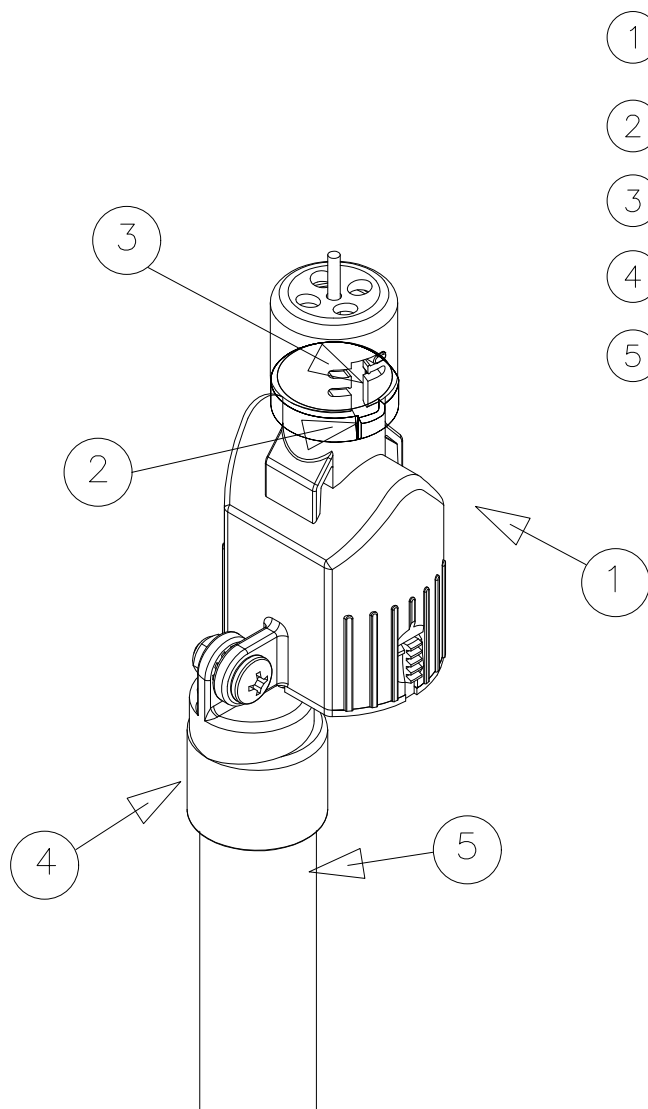
PROFILE VIEW



STANDARD DETAILS
TEMPORARY SEDIMENT TRAP/BASIN
ON FUTURE STREET SUBGRADE
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
ERO-15



- ① RAIN SENSOR, REFER TO PLAN FOR SENSOR LOCATION
- ② VENT/DRY-OUT ADJUSTMENT
- ③ RAINFALL ADJUSTMENT
- ④ CONDUIT ADAPTER
- ⑤ 1/2" PVC WIRE CONDUIT; SEE NOTE 3

NOTES:

- 1. ALL ELECTRICAL WORK MUST CONFORM TO LOCAL CODES. REFER TO PRODUCT LITERATURE FOR ADDITIONAL INSTALLATION REQUIREMENTS.
- 2. MOUNT RAIN SENSOR TO LIGHT POLE, COORDINATE INSTALLATION WITH ELECTRICAL.
- 3. FOR CONDUIT AND WIRING, SEE SPECIFICATIONS



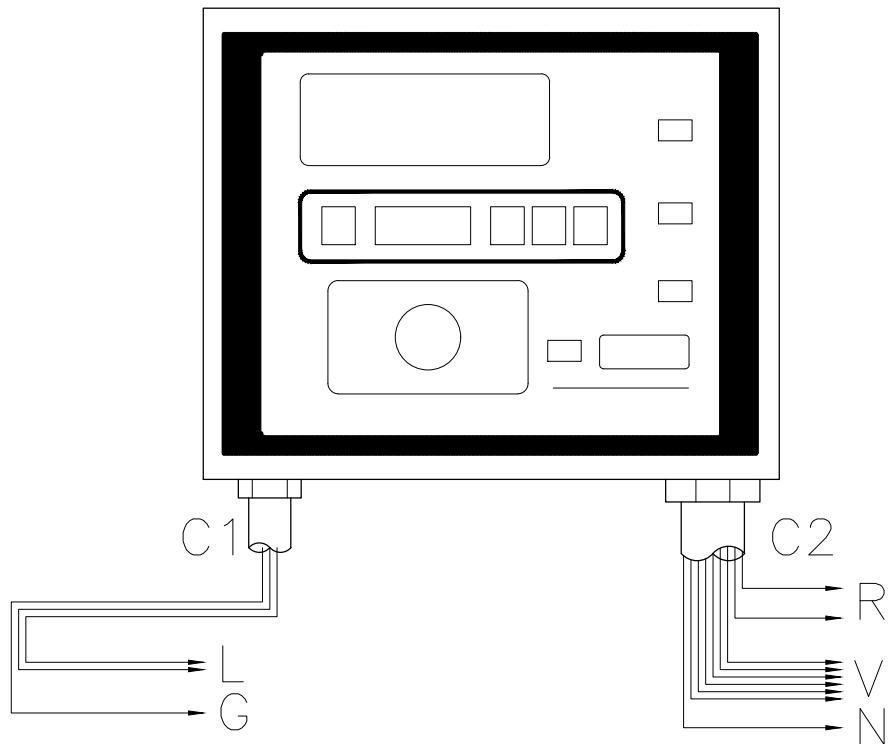
STANDARD DETAILS

RAIN SENSOR

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
IRR-1



- C1 CONDUIT.
- C2 CONDUIT.
- G GROUND WIRE (SEE SPECIFICATIONS).
- L POWER SUPPLY WIRES (SEE SPECIFICATIONS).
- N COMMON NEUTRAL WIRE.
- R RAIN SENSOR WIRES.
- V VALVE CONTROL WIRES: ONE PER VALVE,
WITH EXTRAS TO MAIN LINE STUBS.



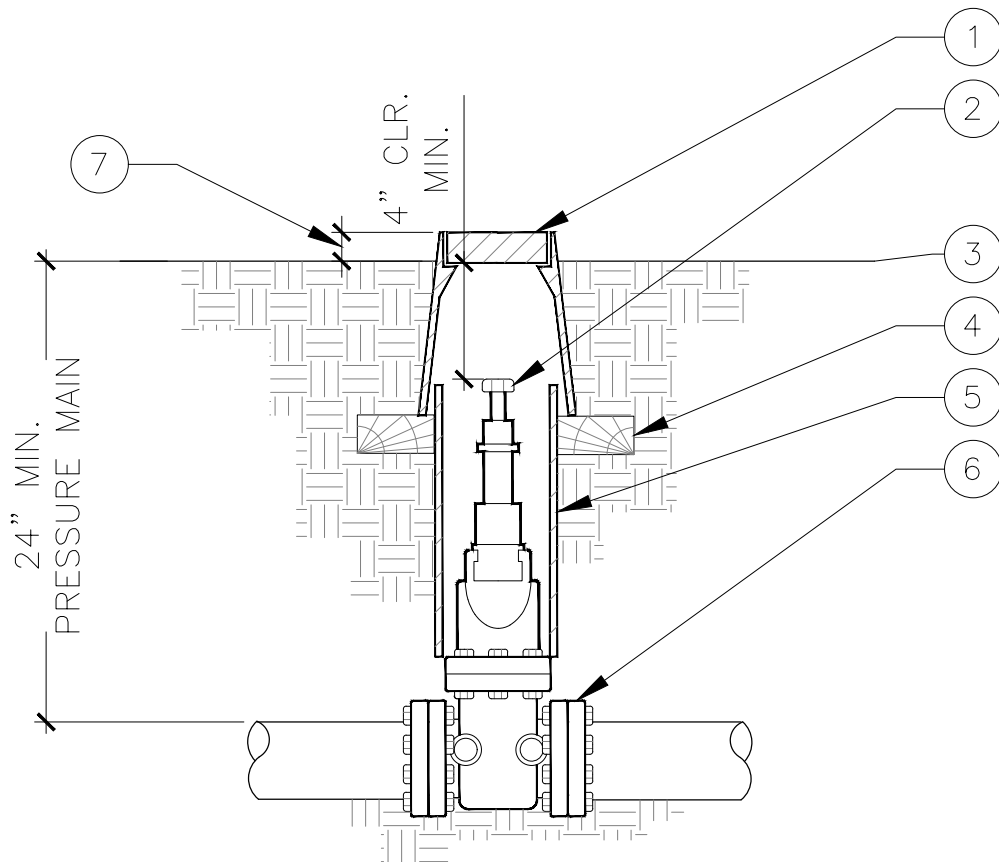
STANDARD DETAILS

EXTERIOR CONTROLLER

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
IRR-2



1. PLASTIC VALVE BOX AND LOCKING COVER W/ BOX EXTENSIONS AS REQUIRED. REFER TO SPECS. HEAT BRAND 'GV' ON LID.
2. GATE VALVE W/ OPERATING NUT, SEE IRRIGATION LEGEND FOR MANUFACTURER AND MODEL NUMBER.
3. FINISH GRADE BEFORE PLANTING.
4. STD. BRICK, TYP. 2 PLACES.
5. 6" PVC SLEEVE.
6. SCH. 80 PVC FLANGES, TYP. 2 PLACES.
7. KEEP FINISH GRADE BELOW VALVE BOX LID:
1½" IN SOD.
3" IN PLANTER BED.
8. INSTALL GATE VALVES A MIN. OF 24" FROM STRUCTURES OR HARDSCAPING.
9. INSTALL GATE VALVES IN PLANTING BEDS WHEREVER POSSIBLE.
10. INSTALL VALVE BOX SO THAT TOP OF VALVE BOX IS FLUSH W/ ADJACENT HARDSCAPING.
11. REFER TO SPECS. AND PLAN SHEETS FOR MORE INFORMATION.



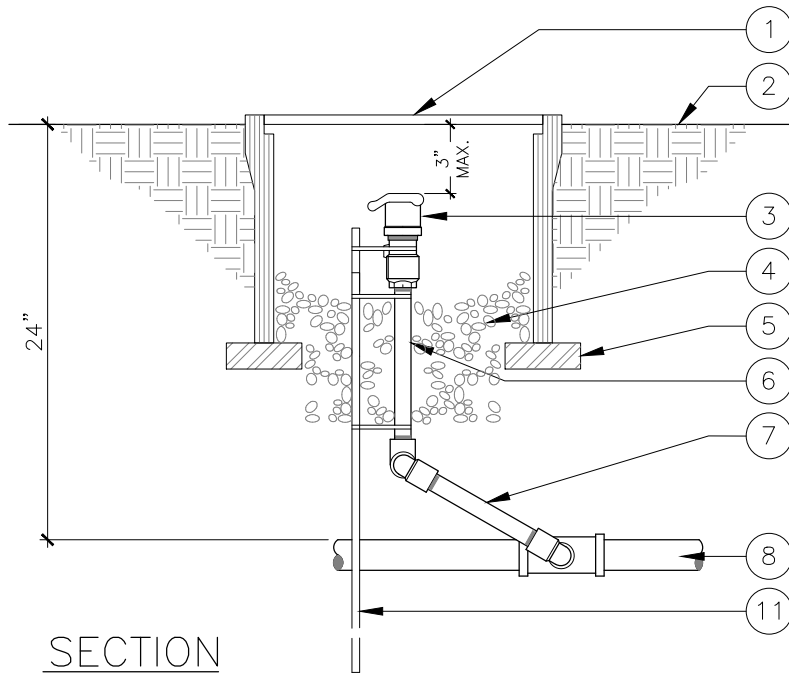
STANDARD DETAILS

GATE VALVE

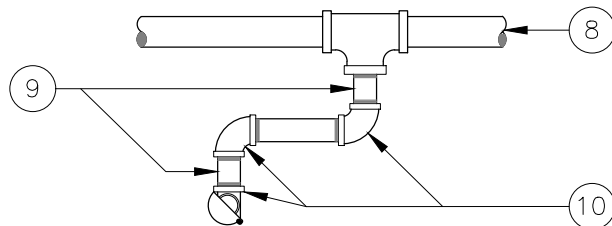
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
IRR-3



SECTION



PLAN

1. PLASTIC VALVE BOX (SEE SPECS.) W/ LOCK BOLT & Q.C. HEAT BRANDED ON COVER.
2. FINISH GRADE BELOW VALVE BOX LID (1/2" SEED, 1 1/2" SOD, 2" IN PLANTER BED.
3. QUICK COUPLING VALVE AS SPECIFIED.
4. PEA GRAVEL: 6" DEEP BELOW QUICK COUPLING VALVE.
5. BRICK: 2 PLACES.
6. 3/4" SCH. 80 PVC NIPPLE.
7. 3/4" SCH. 80 PVC 6" LONG NIPPLE.
8. PVC MAIN LINE.
9. 3/4" X 3" SCH. 80 NIPPLE.
10. 3/4" SCH. 80 PVC 90° ELL.
11. 2"x2"x1/4" ANGLE IRON (36" LONG) W/ STAINLESS STEEL SCREW CLAMPS MIN. (3) PLACES.
12. USE TEFLON TAPE ON ALL THREADED CONNECTIONS.



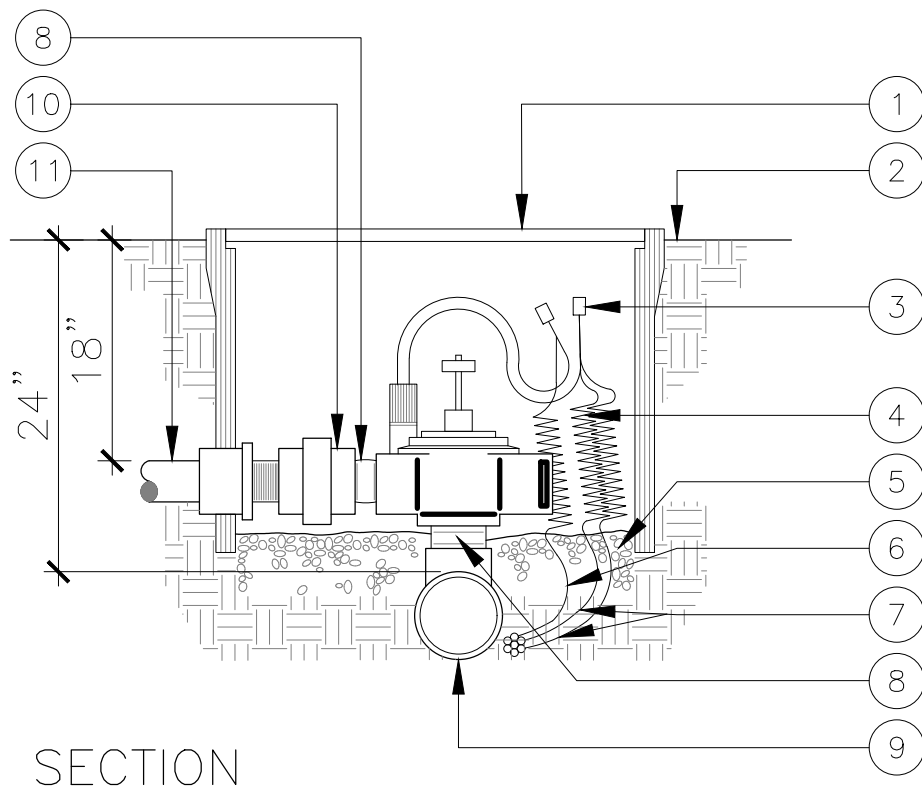
STANDARD DETAILS

QUICK COUPLING VALVE

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
IRR-4



1. AMETEK OR EQUAL PLASTIC VALVE BOX WITH BOLT DOWN LID.
2. FINISH GRADE 1" BELOW LID.
3. UL LISTED WATERPROOF CONNECTORS.
4. COILS: LEAVE EXCESS 2'-0" COILS IN EACH VALVE BOX. WRAP WIRE AROUND 1/2" PIPE 15 TIMES TO CREATE COILS.
5. 3" LAYER OF PEA GRAVEL.
6. CONTROL WIRE FROM CONTROLLER.
7. COMMON WIRES.
8. SCHEDULE 80 PVC NIPPLE.
9. PVC MAIN LINE.
10. PVC UNION.
11. PVC LATERAL TO SPRINKLER HEADS.
12. ALL WIRE TO BE INSTALLED AS PER LOCAL CODE.



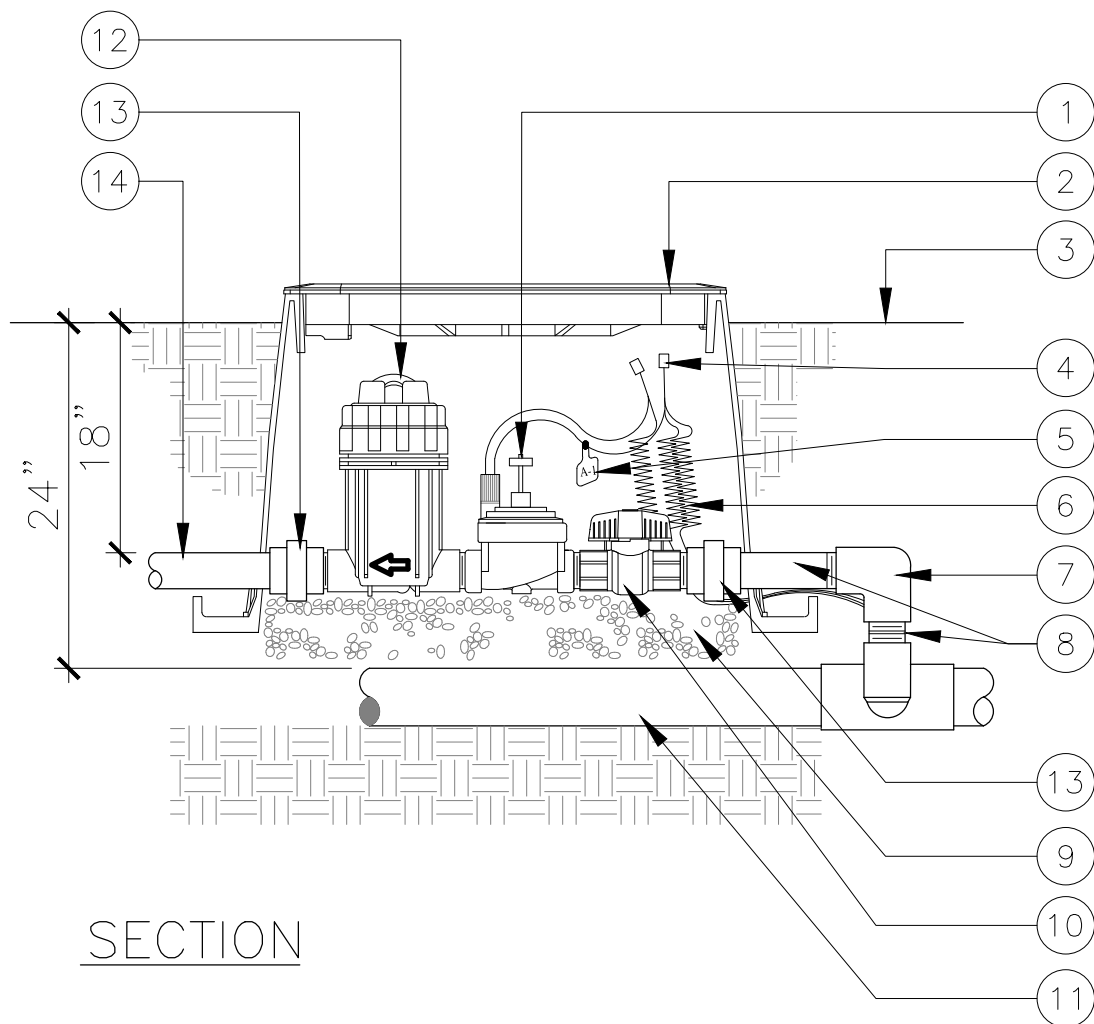
STANDARD DETAILS

REMOTE CONTROL VALVE

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
IRR-5



SECTION

1. REMOTE CONTROL VALVE.
2. PLASTIC VALVE BOX WITH BOLT DOWN LID. HEAT BRAND VALVE NUMBER ON LID.
3. FINISH GRADE: HOLD 2" BELOW LID IN PLANTER AREAS.
4. UL LISTED WATERPROOF CONNECTORS.
5. STAMPED VALVE NUMBER TAG.
6. COILS: LEAVE EXCESS 2'-0" COILS IN EACH VALVE BOX. WRAP WIRE AROUND 1/2" PIPE 15 TIMES TO CREATE COILS.
7. PVC SCHEDULE 40 ELL.
8. PVC SCHEDULE 80 NIPPLE (LENGTH AS REQUIRED).
9. 3" LAYER OF PEA GRAVEL.
10. BALL VALVE.
11. PVC MAIN LINE.
12. DRIP FILTER.
13. PVC UNION.
14. PVC LATERAL TO DRIP ZONE.
15. ALL WIRE TO BE INSTALLED AS PER LOCAL CODE.



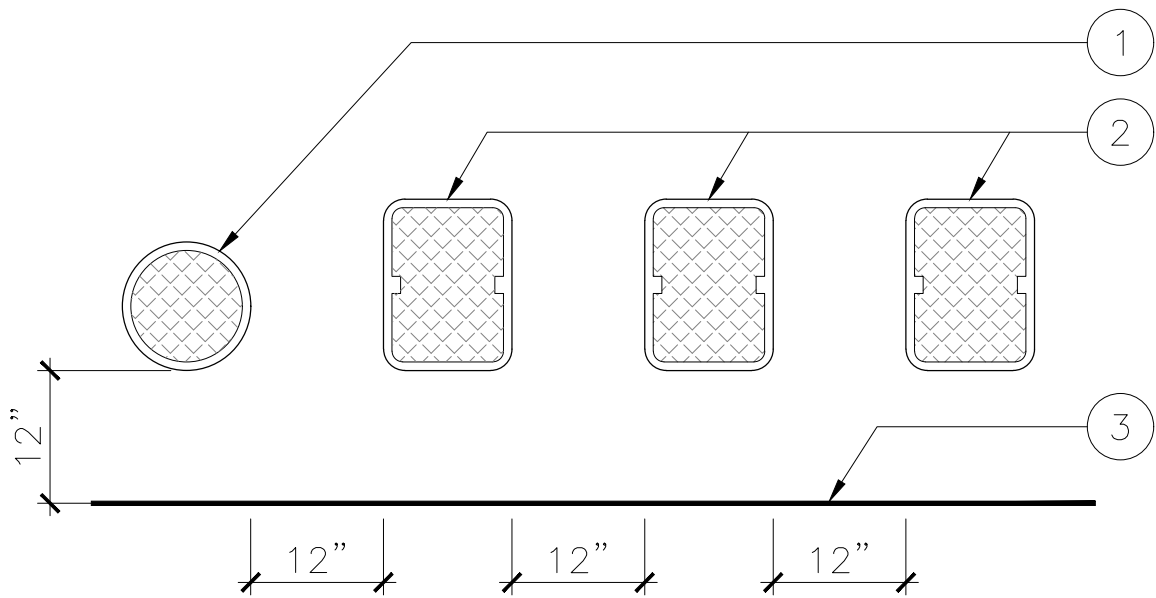
STANDARD DETAILS

DRIP REMOTE
CONTROL VALVE

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
IRR-6



1. QUICK COUPLING VALVE IN ROUND VALVE BOX.
2. CENTER VALVE BOX OVER REMOTE CONTROL VALVE TO FACILITATE SERVICING VALVE.
3. EDGE OF PLANTER.
4. SET REMOTE CONTROL VALVE ASSEMBLY IN GROUND COVER/ SHRUB AREA WHERE POSSIBLE. INSTALL IN LAWN ONLY IF GROUND COVER DOES NOT EXIST ADJACENT TO LAWN.
5. SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE.
6. AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOXES TO PREVENT COLLAPSE OF DEFORMATION OF VALVE BOX SIDES.



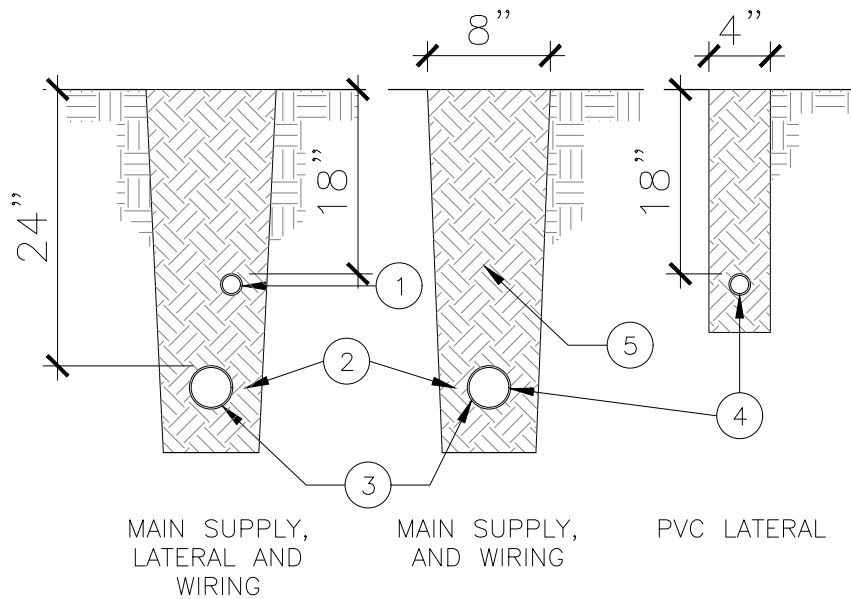
STANDARD DETAILS

VALVE BOX LAYOUT

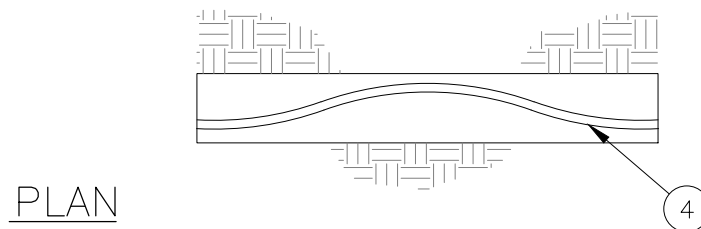
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
IRR-7



SECTION



PLAN

1. IRRIGATION LATERAL.
2. WIRING: TAPE AND BUNDLE WIRING AT 10'-0" INTERVALS. COMMON TRENCHING OF IRRIGATION PIPE AND REMOTE CONTROL VALVE WIRING TO BE DONE WHERE EVER POSSIBLE (INSTALL TRACE WIRE ALONG ALL MAIN LINE PIPE THAT DOES NOT HAVE CONTROL WIRES ADJACENT TO PIPE).
3. MAIN LINE: ALL MAIN LINE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. MAINTAIN MIN. 4" SPACE BETWEEN PARALLEL PIPE LINES AND 6" VERTICAL SPACE BETWEEN MAIN LINE AND LATERAL LINES. WIRING AND MAIN LINE TO BE AT SAME MIN. DEPTH OF 18".
4. ALL PVC PIPE TO BE SNAKED IN TRENCHED AS SHOWN.
5. BACKFILL, SEE SPECS.
6. ALL PIPING UNDER PAVING SHALL BE SLEEVED.



STANDARD DETAILS

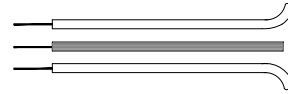
TRENCHING

COTTAGE GROVE, MINNESOTA

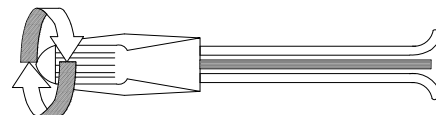
JANUARY 2024

PLATE NO.
IRR-8

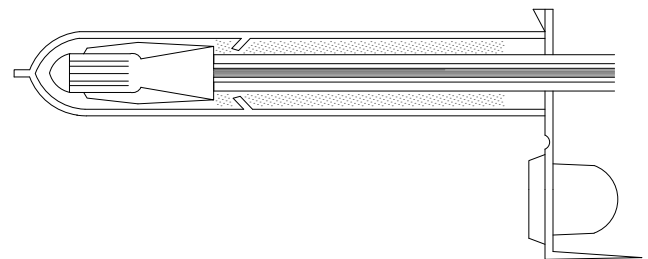
STEP 1: STRIP WIRES 1/2" FROM ENDS.



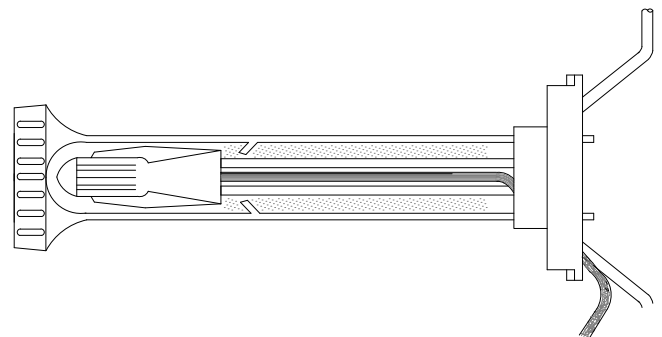
STEP 2: APPLY SCOTCHLOK Y SPRING CONNECTOR IN A CLOCKWISE DIRECTION.



STEP 3: INSERT SPLICE TO BOTTOM OF GEL-FILLED TUBE. CHECK TO MAKE SURE CONNECTOR HAS BEEN PUSHED PAST LOCKING FINGERS AND IS SEATED AT BOTTOM OF TUBE.



STEP 4: POSITION WIRES IN WIRE CHANNELS AND CLOSE INSULATOR TUBE COVER.

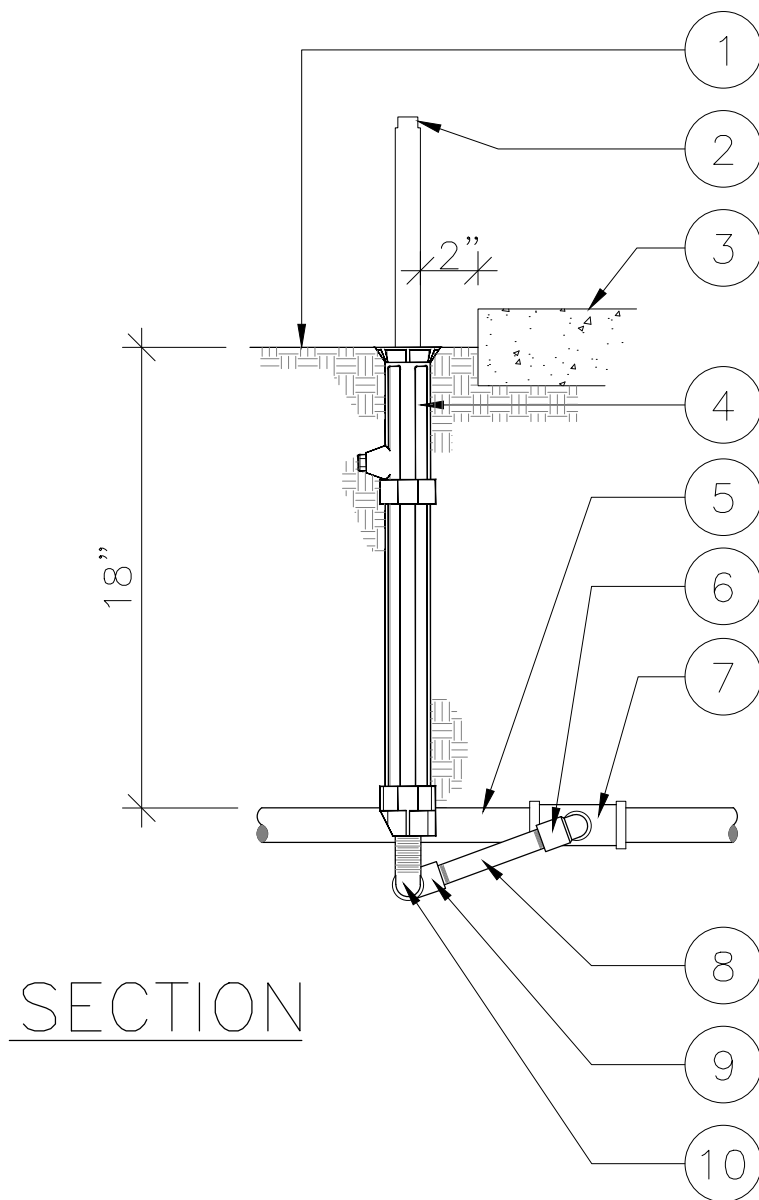


STANDARD DETAILS
WATERPROOF CONNECTOR

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
IRR-9



1. FINISH GRADE.
2. NOZZLE.
3. CURB, WALK, HEADER OR WALL.
4. POP-UP SPRAY BODY PER IRRIGATION PLAN. SET HEAD FLUSH WITH FINISH GRADE.
5. PVC LATERAL LINE.
6. SCH. 40 PVC STREET 90° ELL.
7. SCH. 40 PVC TEE.
8. SCH. 80 PVC NIPPLE (6" LONG).
9. MARLEX 90° STREET ELL.
10. MARLEX 90° ELL.
11. LOCATE HEAD 2" FROM WALKS, CURBS, PAVING, MOWSTRIPS OR HEADER.
12. USE TEFLON TAPE ON ALL MALE THREADS (EXCEPT MARLEX FITTINGS).



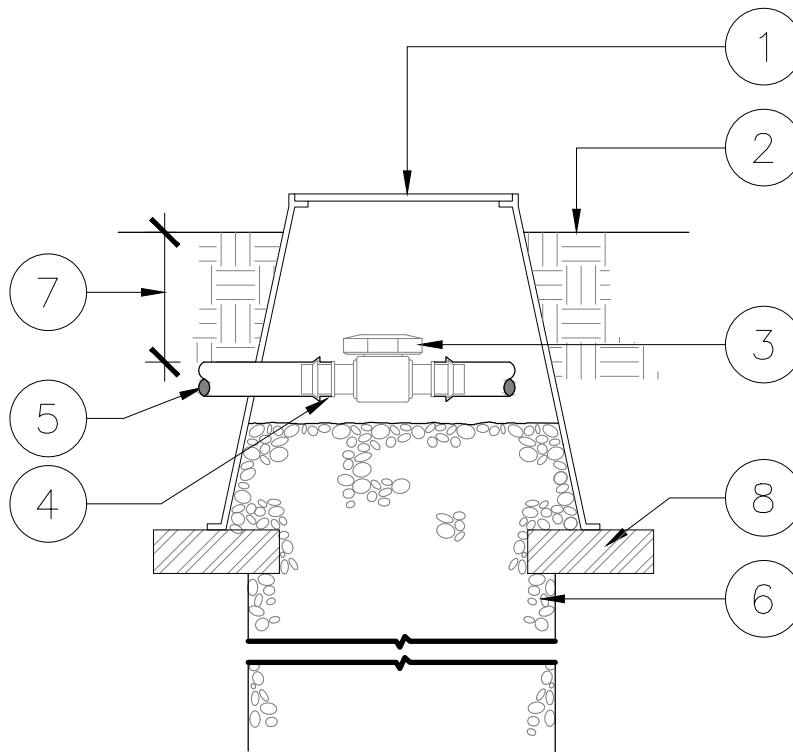
STANDARD DETAILS

POP-UP SPRINKLER

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
IRR-10



SECTION

1. 10" ROUND PLASTIC VALVE BOX.
2. FINISH GRADE: HOLD 1" BELOW TOP OF LID.
3. MANUAL FLUSH/SHUT-OFF VALVE.
4. BARB FITTING.
5. DRIP LINE.
6. 8" DIA. x 24" DEEP MIN. ROCK SUMP FILLED W/ 3/4" CRUSHED ROCK.
7. DRIPPER LINE DEPTH.
8. BRICK SUPPORT (TYP. 3 PLACES).



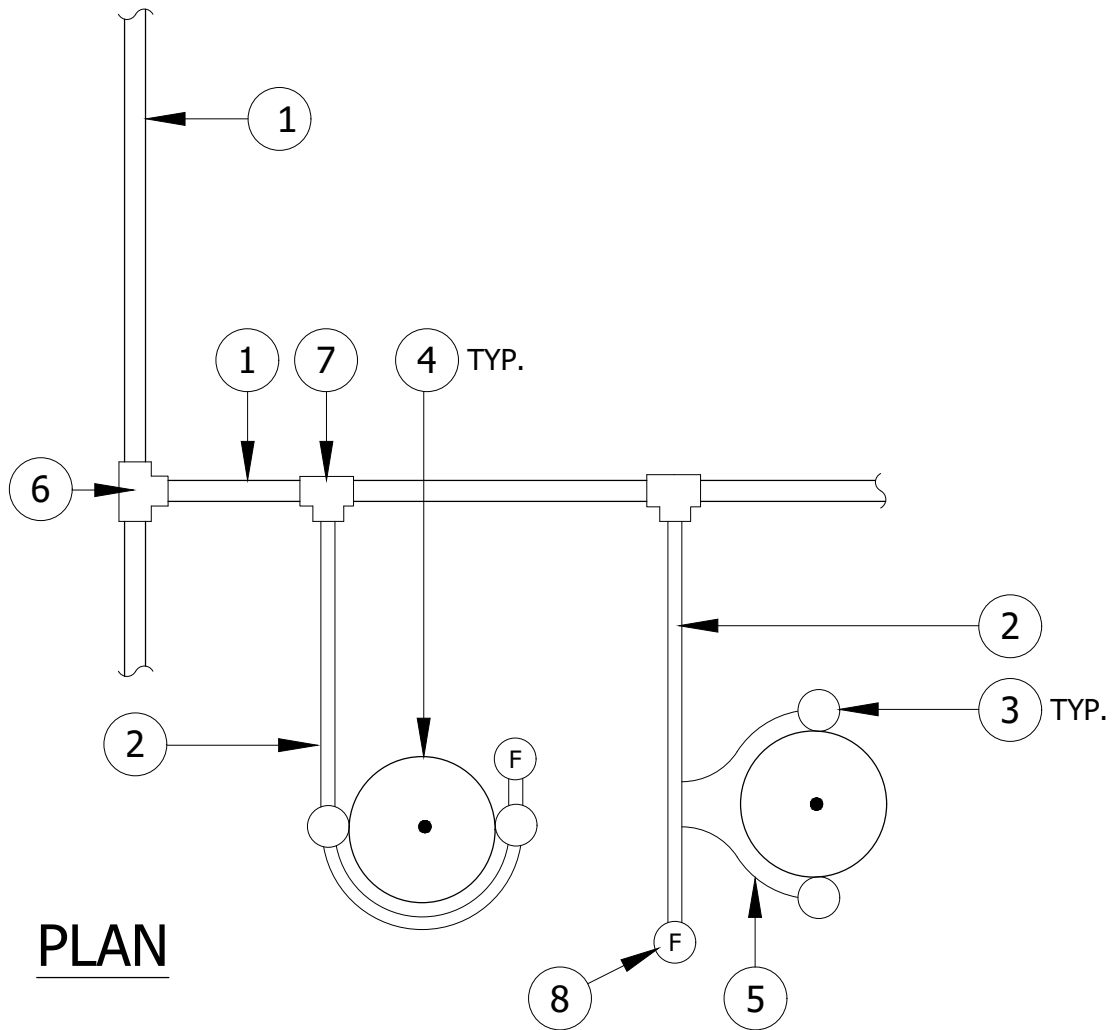
STANDARD DETAILS

MANUAL FLUSH VALVE

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
IRR-11



KEY NOTES

1. SALCO FLEXIBLE PVC LINE, 3/4" DIA.
2. EMITTER SUB-LATERAL (TYP) PEPKO FLEXIBLE DRIP DISTRIBUTION TUBE, 1/2" DIA., 3'-0" MAXIMUM LENGTH. 150' OR 200 GPH MAXIMUM FROM ANY ONE CONNECTION AT FLEXIBLE PVC.
3. SINGLE-PORT DRIP EMITTER, SEE IRRIGATION LEGEND.
4. SHRUB OR TREE ROOT BALL.
5. 1/4" DISTRIBUTION TUBE CONNECTED WITH TRANSFER BARBS, 3'-0" MAXIMUM LENGTH.
6. PVC TEES, SOLVENT WELD.
7. INSERT NO BARBED CONNECTORS INTO FLEXIBLE PVC LINES, USE PVC TEES AT INDIVIDUAL PLANTS.
8. FLUSHING VALVE IN VALVE BOX, TYPICAL.

GENERAL NOTES

- a. EMITTERS SHALL BE EQUALLY SPACED AND LOCATED TO DIRECT WATER FLOW TO THE PERIMETER OF THE PLANT ROOT BALL.
- b. LOCATE EMITTERS UPHILL OF PLANT CENTER.
- c. USE CONNECTORS SPECIFIED BY TUBE MANUFACTURER.
- d. ANCHOR DRIP TUBE TO MAINTAIN EMITTER LOCATION IN RELATION TO PLANT, 8'-0" ON CENTER MAXIMUM.

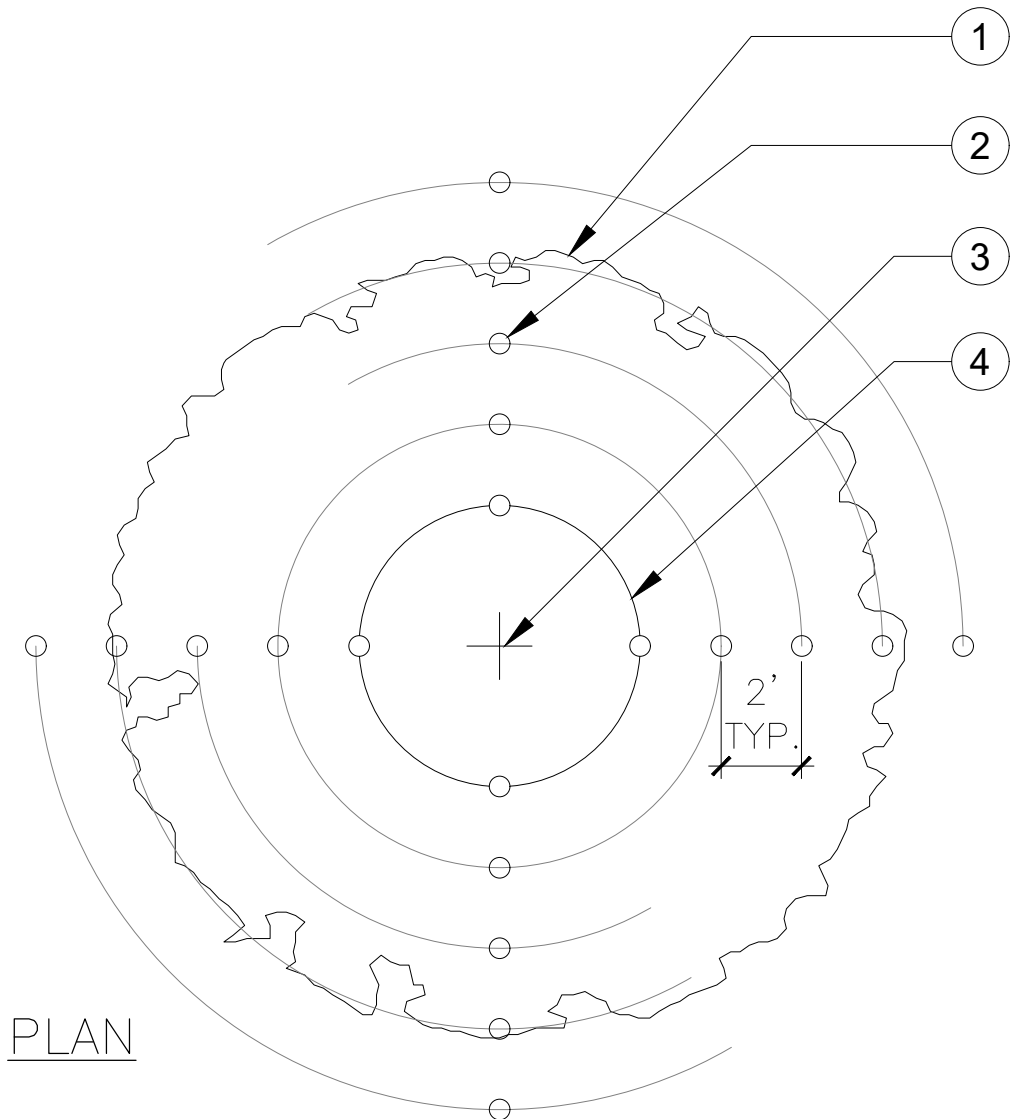


STANDARD DETAILS DRIP IRRIGATION LAYOUT

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
IRR-12



NOTES:

1. SHRUB OR TREE CANOPY.
2. DRIP EMITTER, TYP.
3. CENTER OF SHRUB OR TREE.
4. EDGE OF ROOTBALL.
5. THIS IS A SUGGESTED EMITTER LAYOUT PLAN. ACTUAL LAYOUT MAY VARY DEPENDING ON SURROUNDING FEATURES. THE INTENT IS TO PROVIDE WATER FOR FUTURE ROOT GROWTH.
6. ADJACENT TREES AND SHRUBS MAY SHARE THE SAME EMITTER WHERE PATTERNS OVERLAP.
7. BEGIN PLACEMENT OF EMITTERS ADJACENT TO ROOTBALL OF PLANT AND WORK OUTWARD IN ALL DIRECTIONS UNTIL THE REQUIRED NUMBER OF EMITTERS PER PLANT IS OBTAINED. SEE IRRIGATION LEGEND FOR NUMBER OF EMITTERS REQUIRED.
8. KEEP ALL EMITTERS 18" FROM ANY CURB, WALK, OR OTHER PLANTER EDGE AND 36" FROM ANY BUILDING OR STRUCTURE.

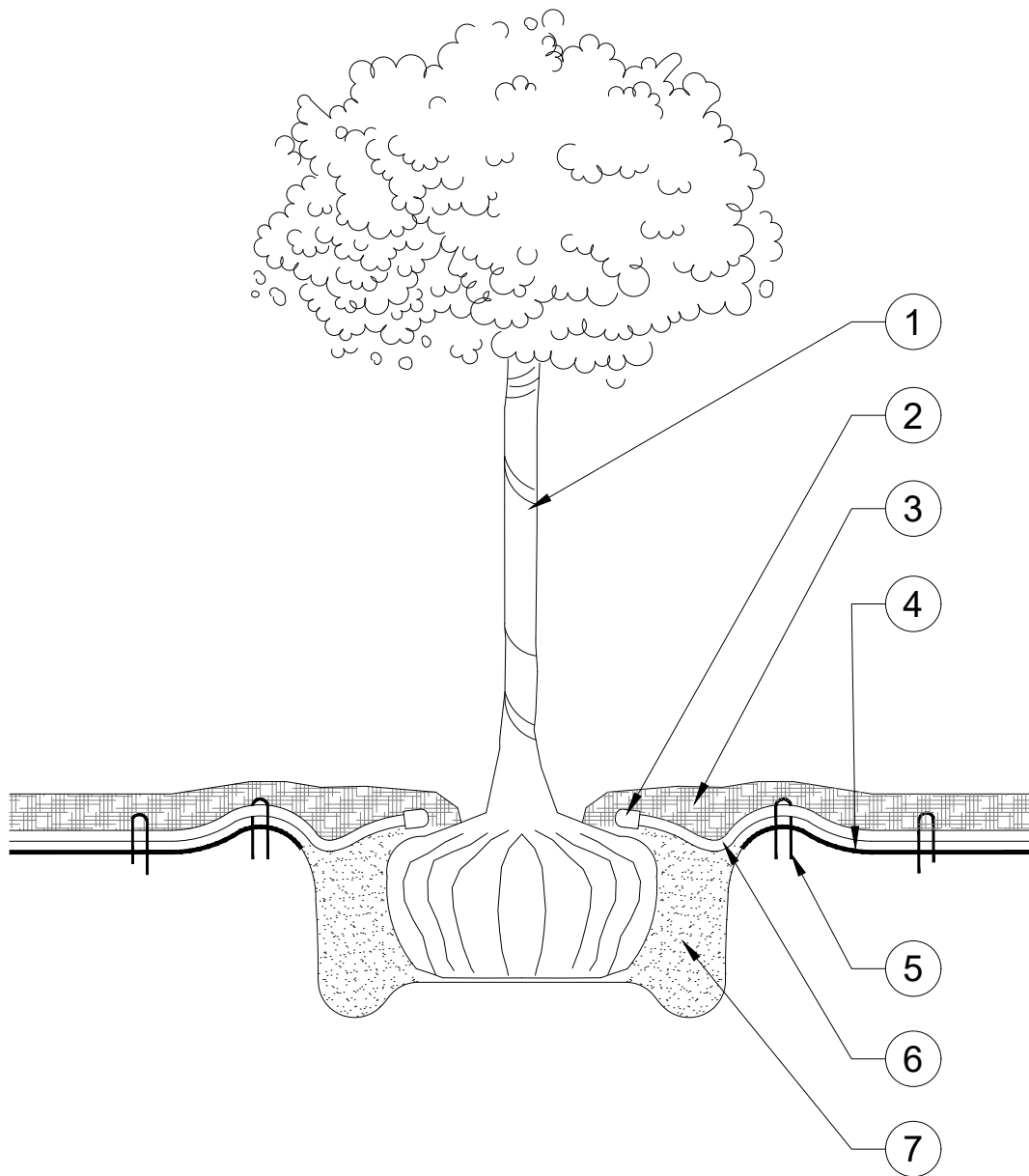


STANDARD DETAILS
DRIP EMITTER SPACING

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
IRR-13



1. TREE OR SHRUB.
2. BUG CAP AT END OF DRIP TUBING, TYP.
3. MULCH, SEE SPECIFICATIONS.
4. FINISH GRADE.
5. 8" STEEL STAKES PLACED AT 5' O.C.
6. 1/4" DRIP TUBING.
7. PLANT PIT.



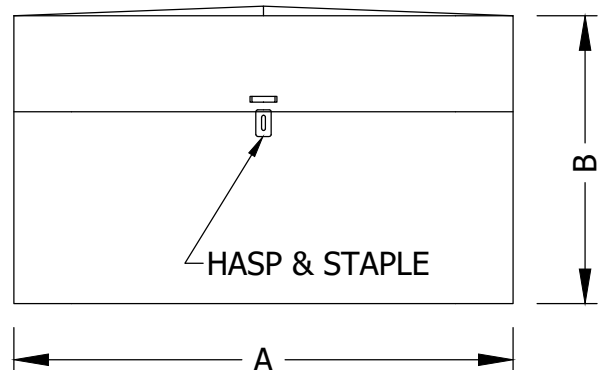
STANDARD DETAILS
DRIP EMITTER INSTALLATION

COTTAGE GROVE, MINNESOTA

JANUARY 2024

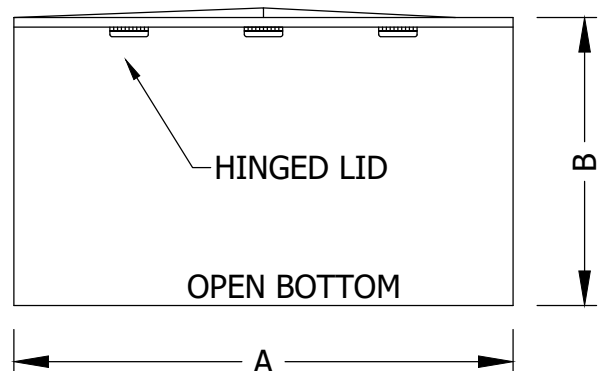
PLATE NO.
IRR-14

FRONT VIEW

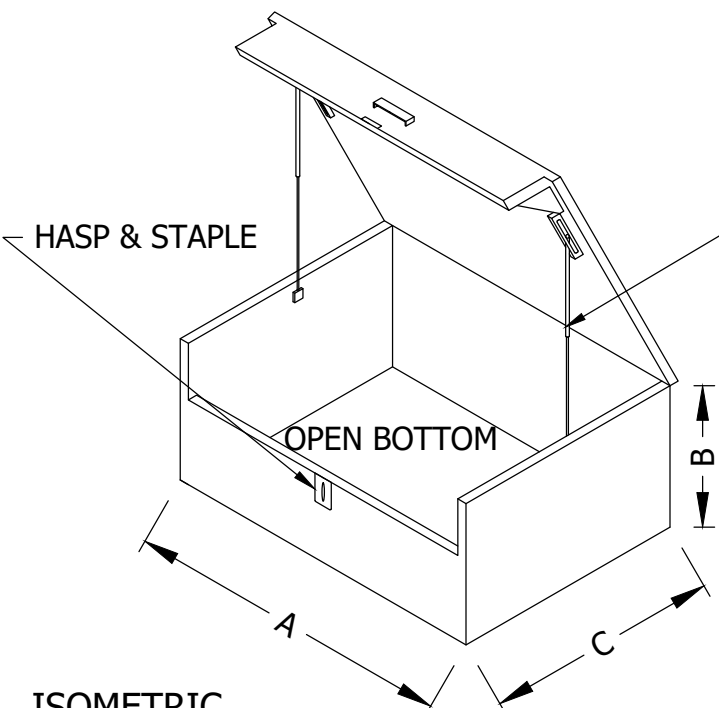
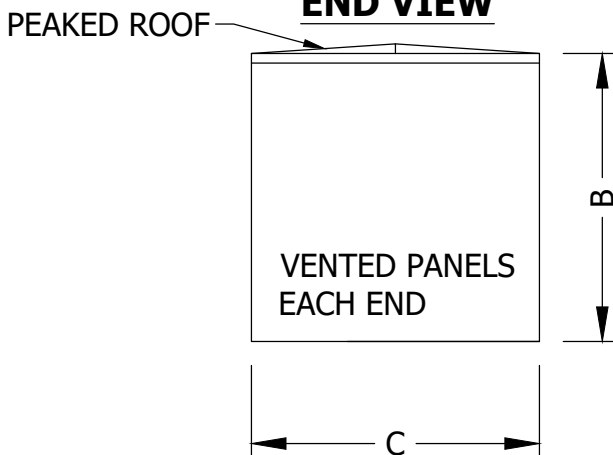


NOTE: FRONT OF BOX ALSO AVAILABLE WITH FULL FACE.

REAR VIEW



END VIEW



ISOMETRIC

NOTE: GAS SHOCKS TO SUPPORT LID.

BUILT TO SPECIFICATIONS

PAINTED: NON-DIRECTIONAL STL. STL.
LENGTH A: SIZE TO FIT
LENGTH B: SIZE TO FIT
LENGTH C: SIZE TO FIT

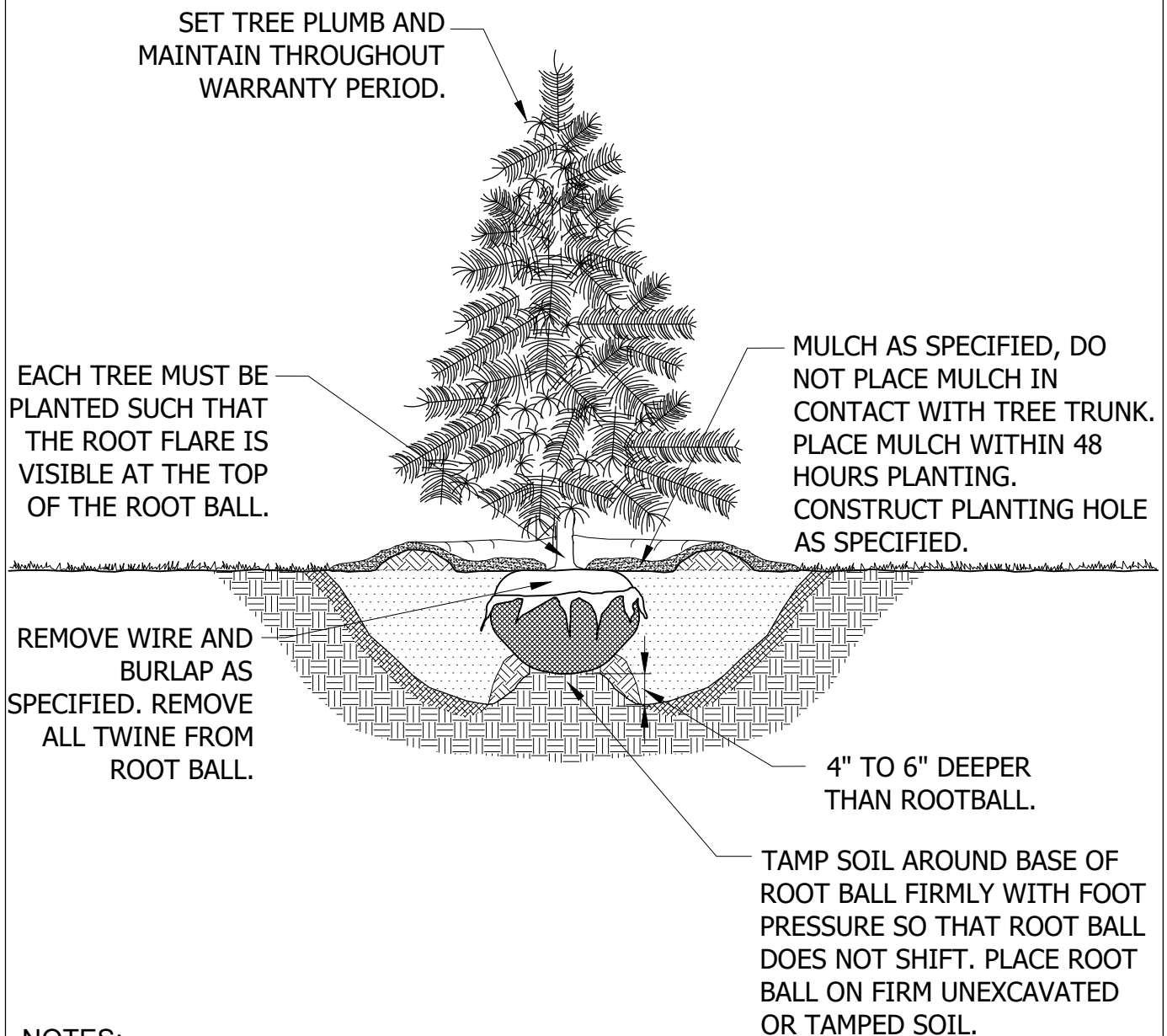


STANDARD DETAILS
IRRIGATION CABINET

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
IRR-15



NOTES:

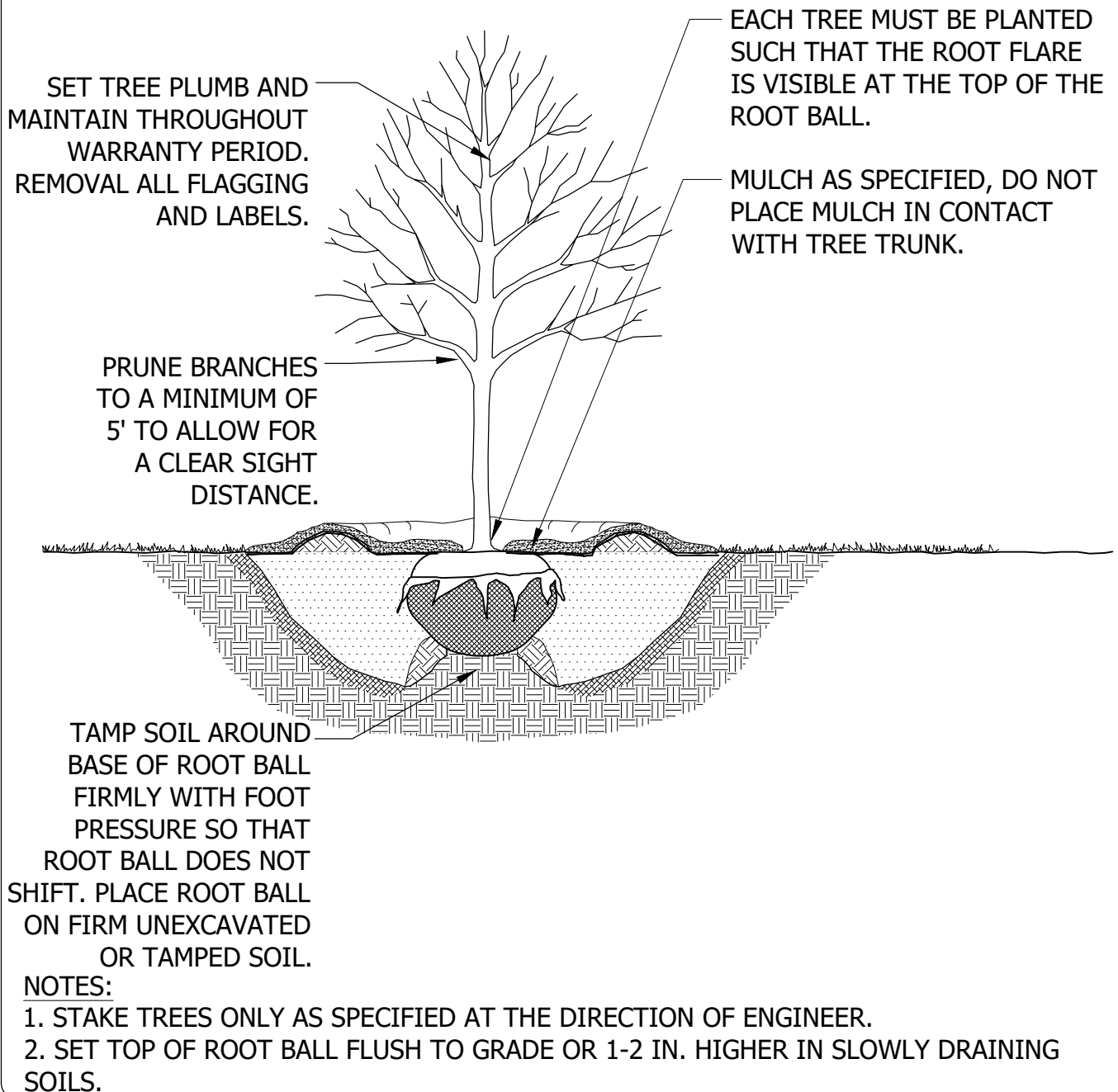
1. STAKE TREES ONLY AS SPECIFIED A THE DIRECTION OF LANDSCAPE ARCHITECT.
2. WRAP TREE TRUNKS ONLY AS SPECIFIED AT THE DIRECTION OF LANDSCAPE ARCHITECT.



STANDARD DETAILS
TYPICAL EVERGREEN TREE
PLANTING
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
LAN-1



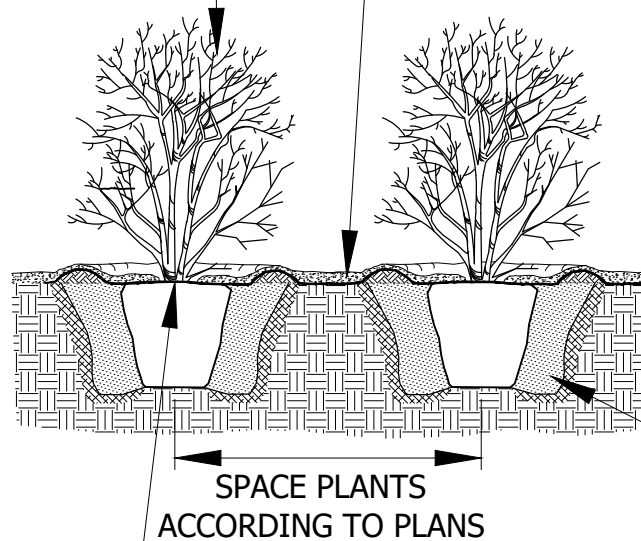
STANDARD DETAILS
TYPICAL DECIDUOUS TREE
PLANTING
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
LAN-2

IF PLANT IS SHIPPED WITH A
CONTAINER AROUND THE
ROOTBALL, SLICE SIDES OF
CONTAINER AND REMOVE
COMPLETELY.

MULCH AS SPECIFIED. DO NOT
PLACE MULCH IN CONTACT WITH
THE PLANT.



SET TOP OF ROOT BALL
FLUSH TO GRADE .

DIG HOLE FOR PLANTING ROOT
BALL. SCARIFY THE SIDES AND
BOTTOM OF THE HOLE BEFORE
PLACING THE SHRUB IN THE
PLANTING HOLE.



STANDARD DETAILS

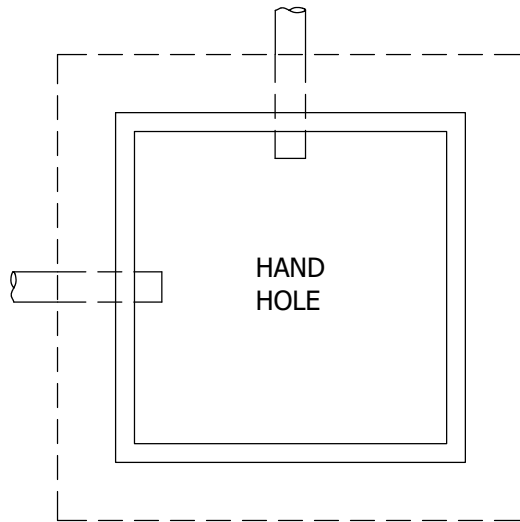
TYPICAL SHRUB PLANTING
B&B OR CONTAINER GROWN

COTTAGE GROVE, MINNESOTA

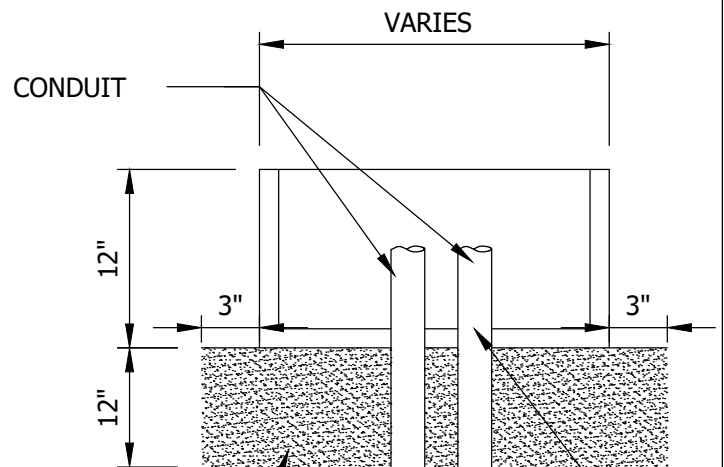
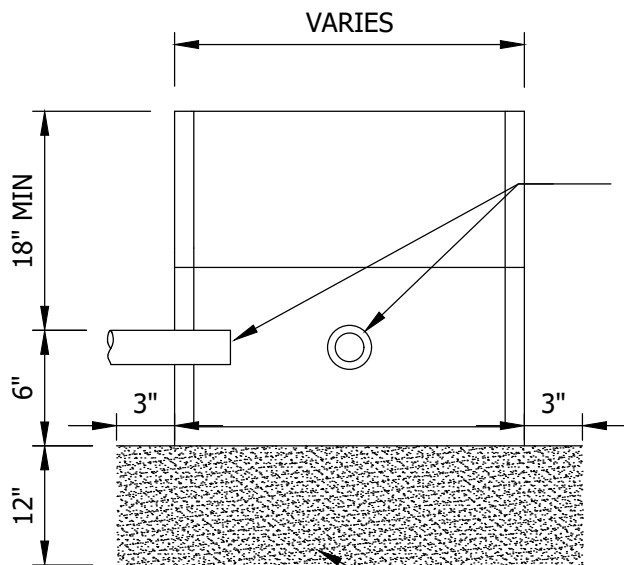
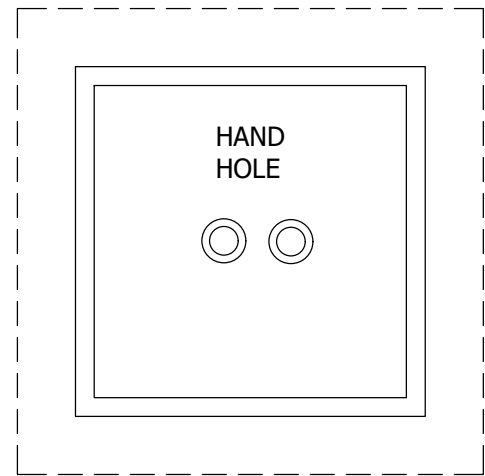
JANUARY 2024

PLATE NO.
LAN-3

24" HEIGHT HANDHOLE AS SPECIFIED



12" HEIGHT HANDHOLE AS SPECIFIED



COARSE FILTER AGG.
MNDOT SPEC. 3149.2.H MOD.

CONDUIT TO EXTEND MIN 3"
MAX 6" ABOVE BOTTOM
EDGE OF HANDHOLE

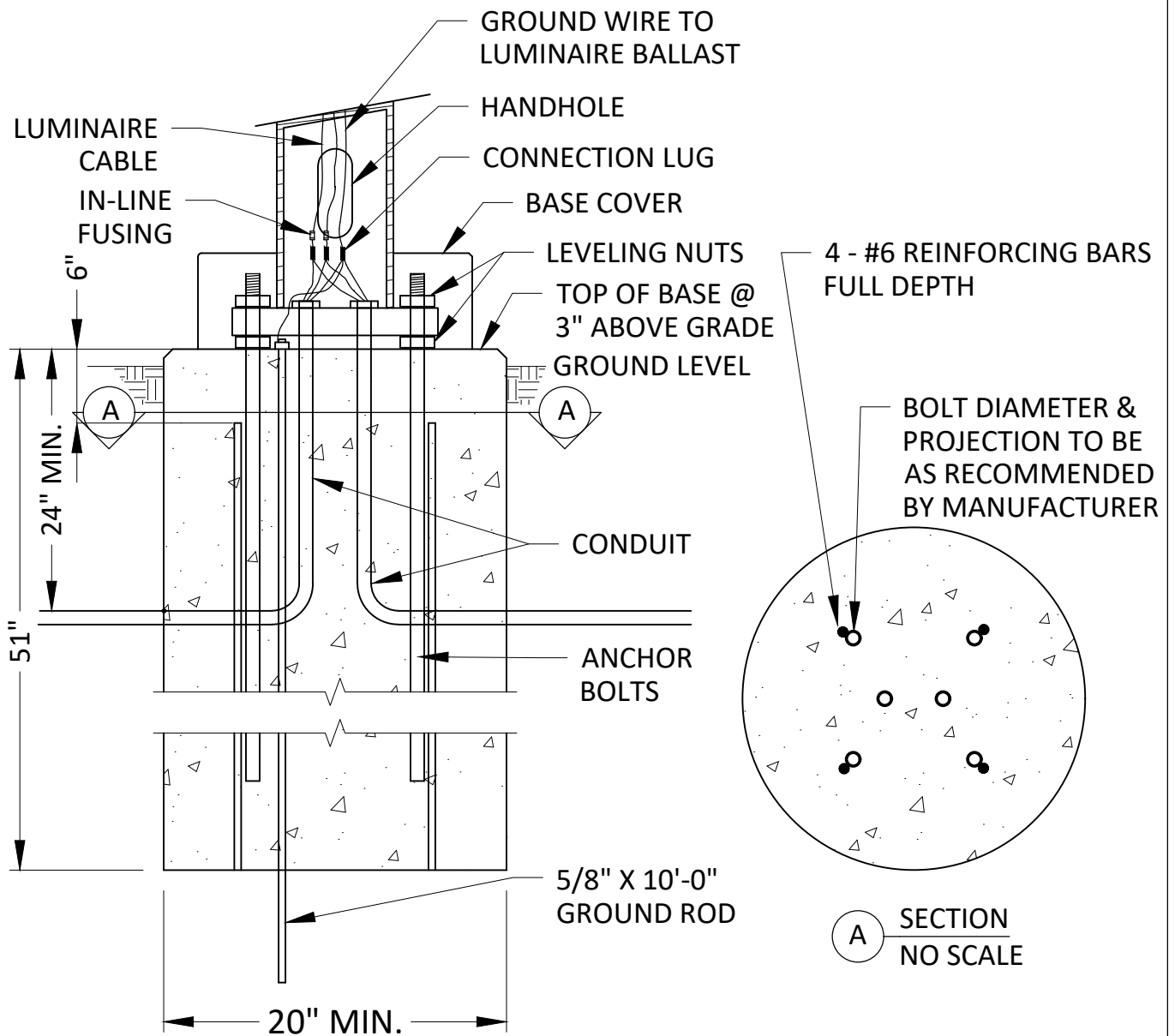


STANDARD DETAILS
LIGHTING HANDHOLE

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
LGT-1

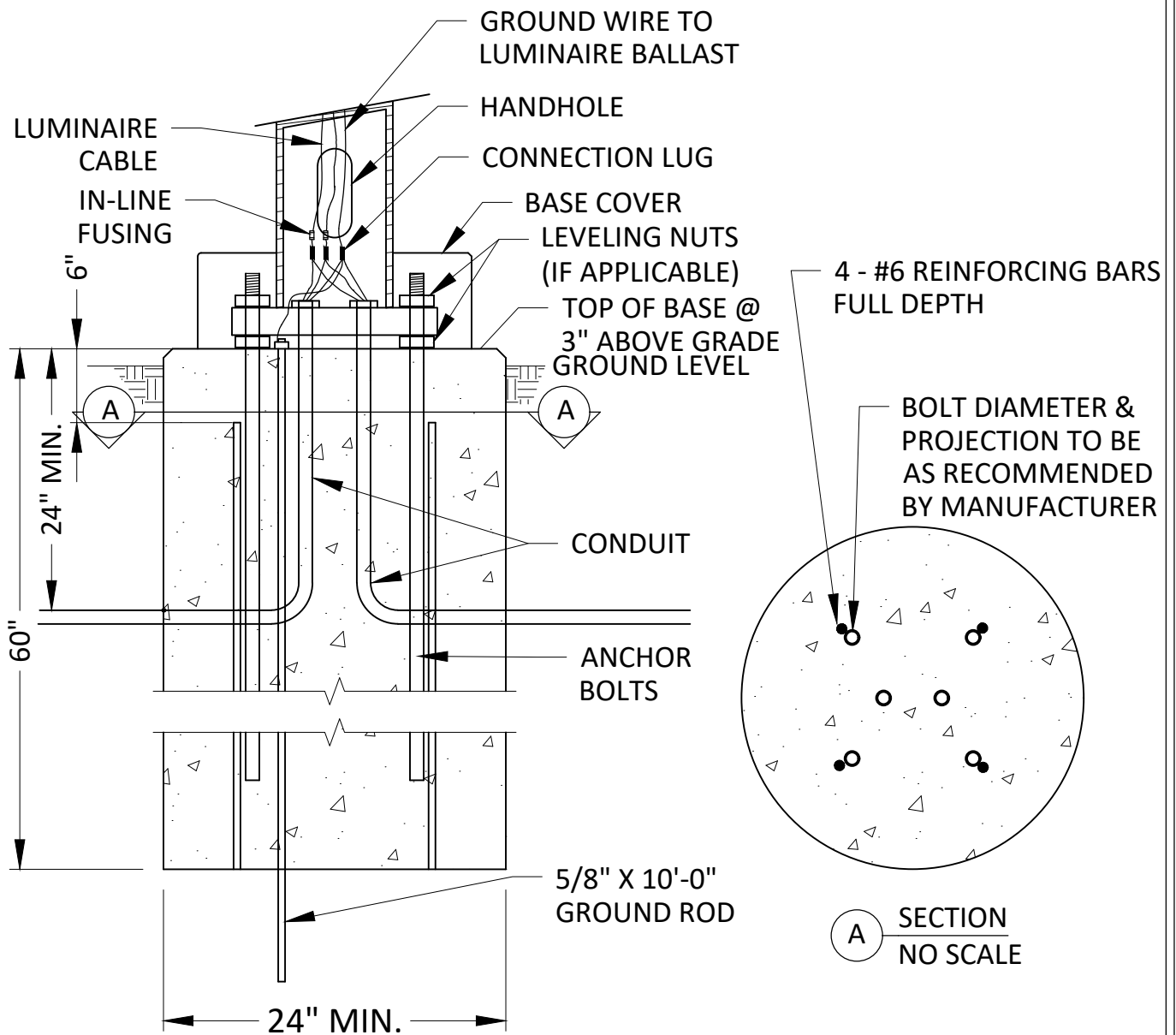


STANDARD DETAILS
CONCRETE LIGHT BASE TYPE A

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
LGT-2

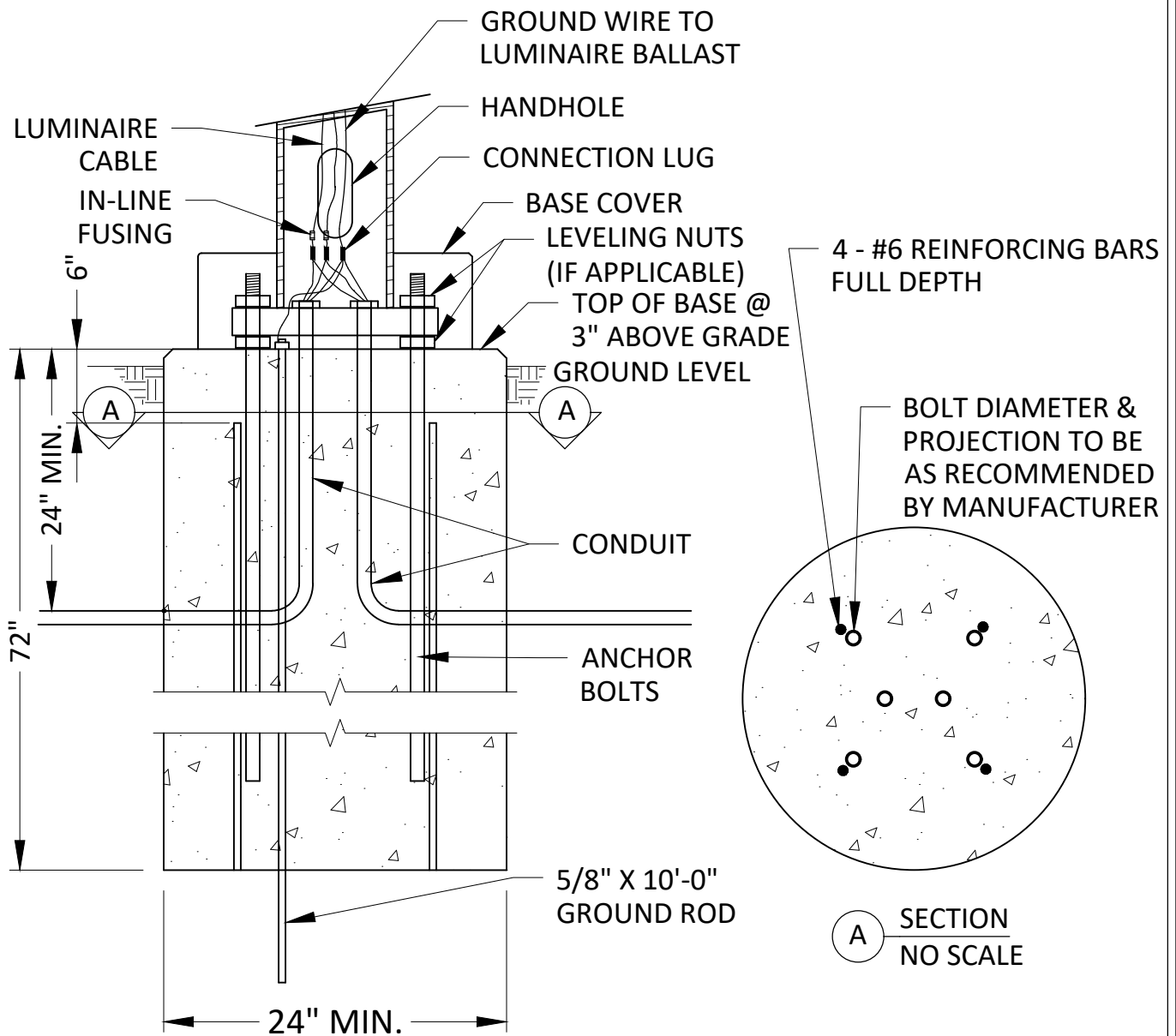


STANDARD DETAILS
CONCRETE LIGHT BASE TYPE P

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
LGT-3

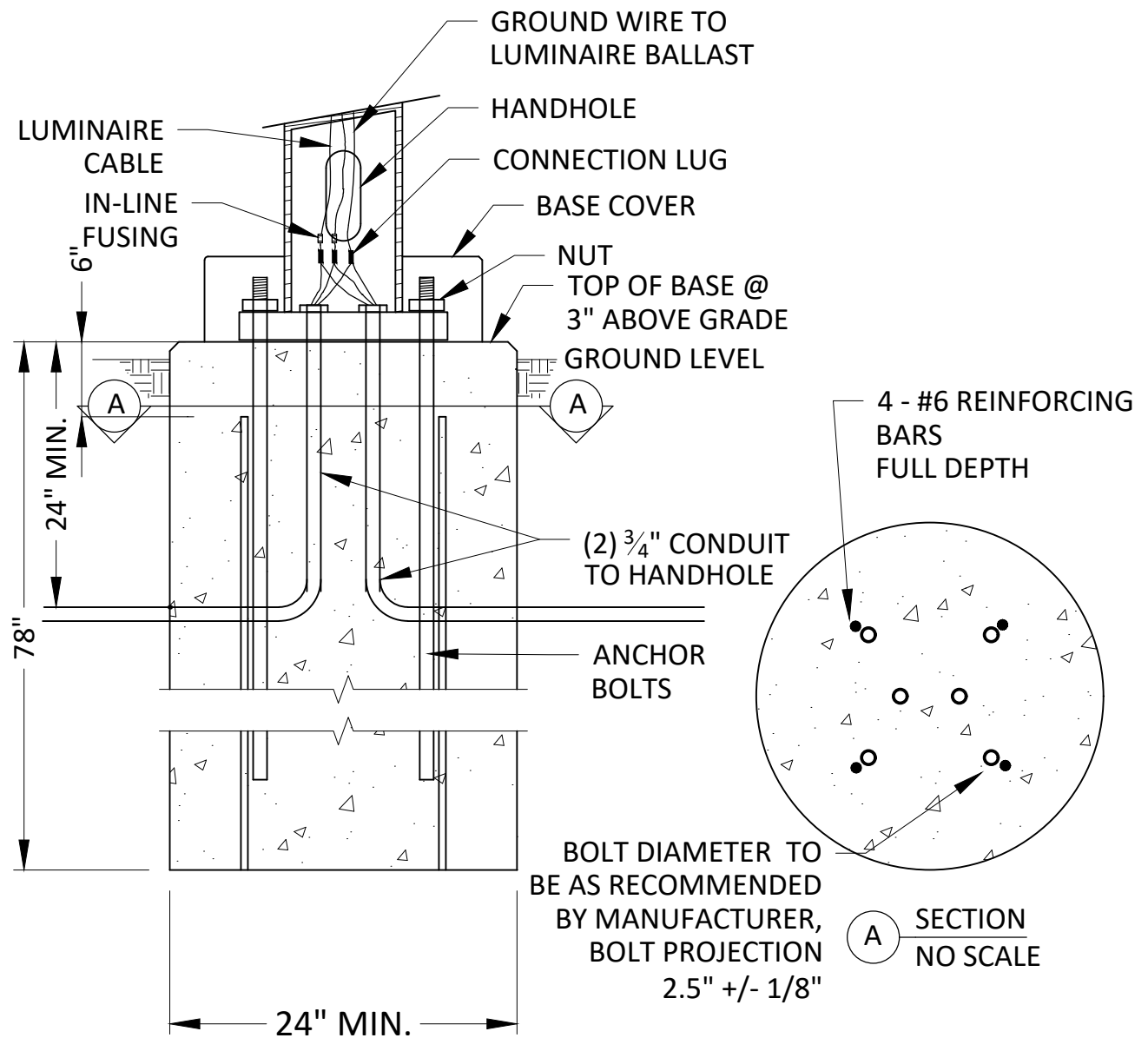


STANDARD DETAILS
CONCRETE LIGHT BASE TYPE E

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
LGT-4



- NOTES: 1. 5/8" X 10'-0" GROUND ROD TO BE LOCATED IN HANDHOLE ADJACENT TO BASE.
2. DESIGN F FOUNDATIONS SHALL BE PRECAST

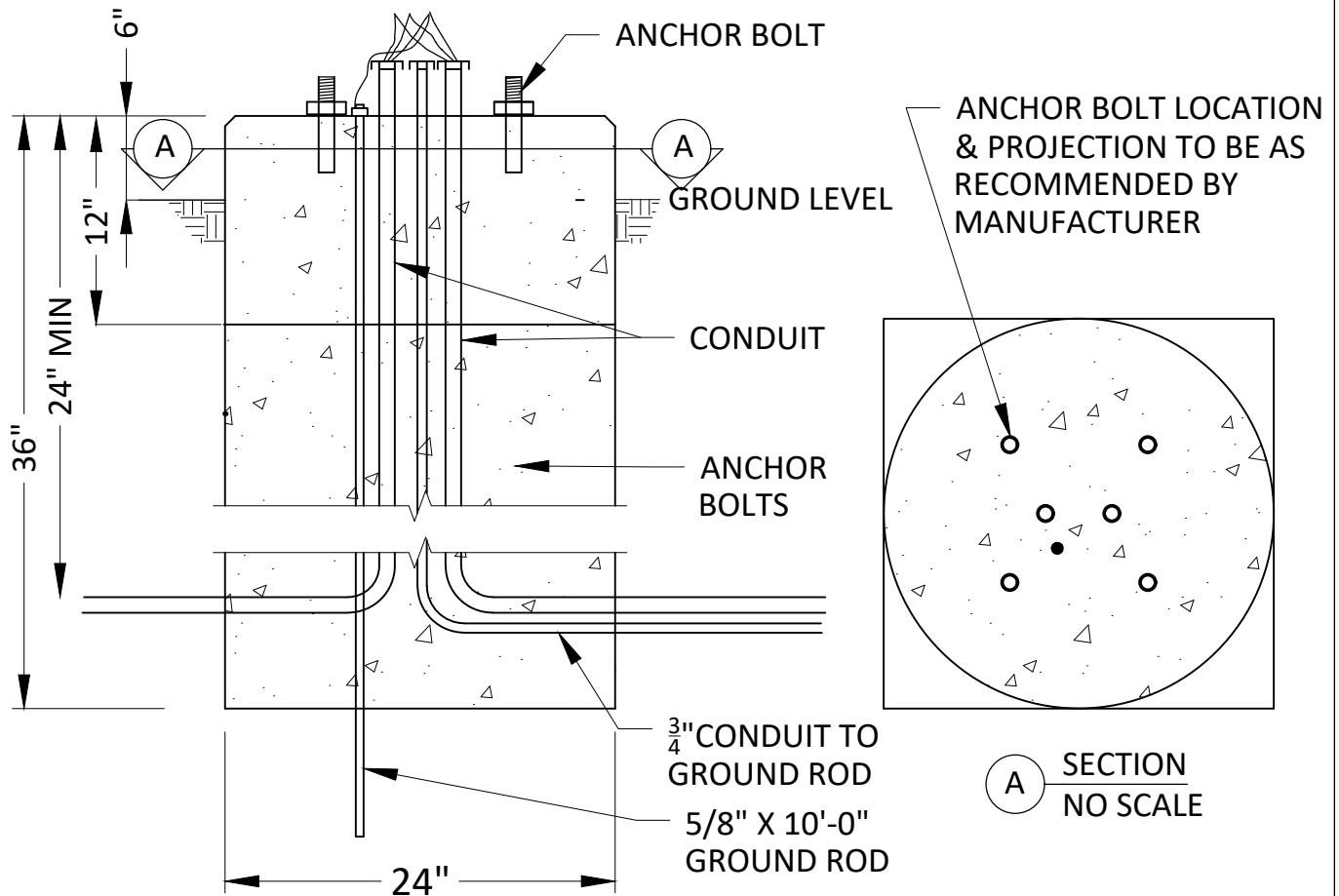


STANDARD DETAILS
CONCRETE LIGHT BASE TYPE F

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
LGT-5



- NOTES:
1. TOP 1' OF PAD TO BE 24" X 24" SQUARE
 2. BOTTOM 24" OF PAD TO BE 24" CYLINDER FORMED WITH SONA TUBE
 3. A SECOND GROUNDING ROD IS TO BE LOCATED 6' AWAY FROM THE BASE WITH A #6 GROUNDING CONDUCTOR RUNNING TO IT WITHIN A 3/4" CONDUIT

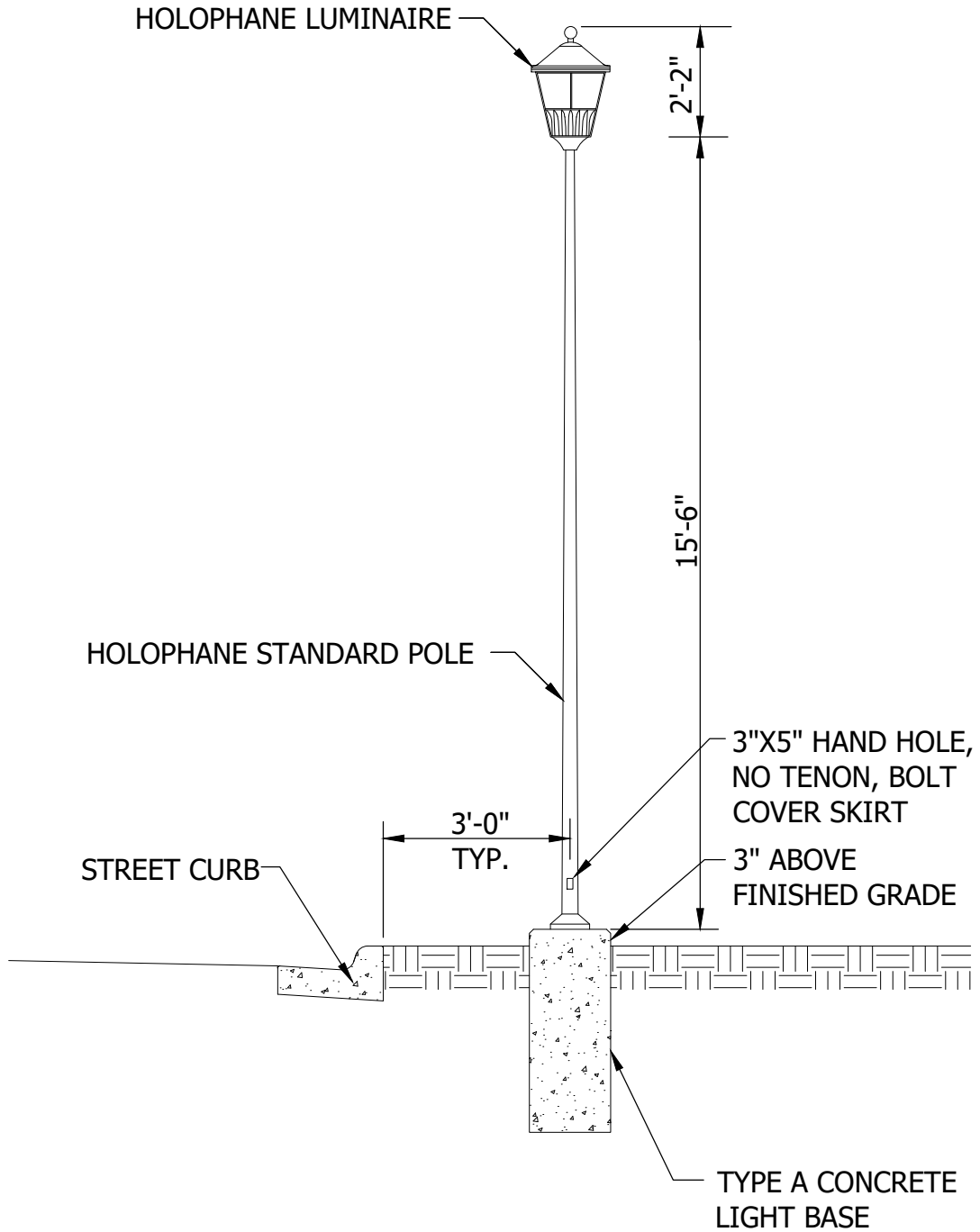


STANDARD DETAILS
LIGHTING EQUIPMENT PAD

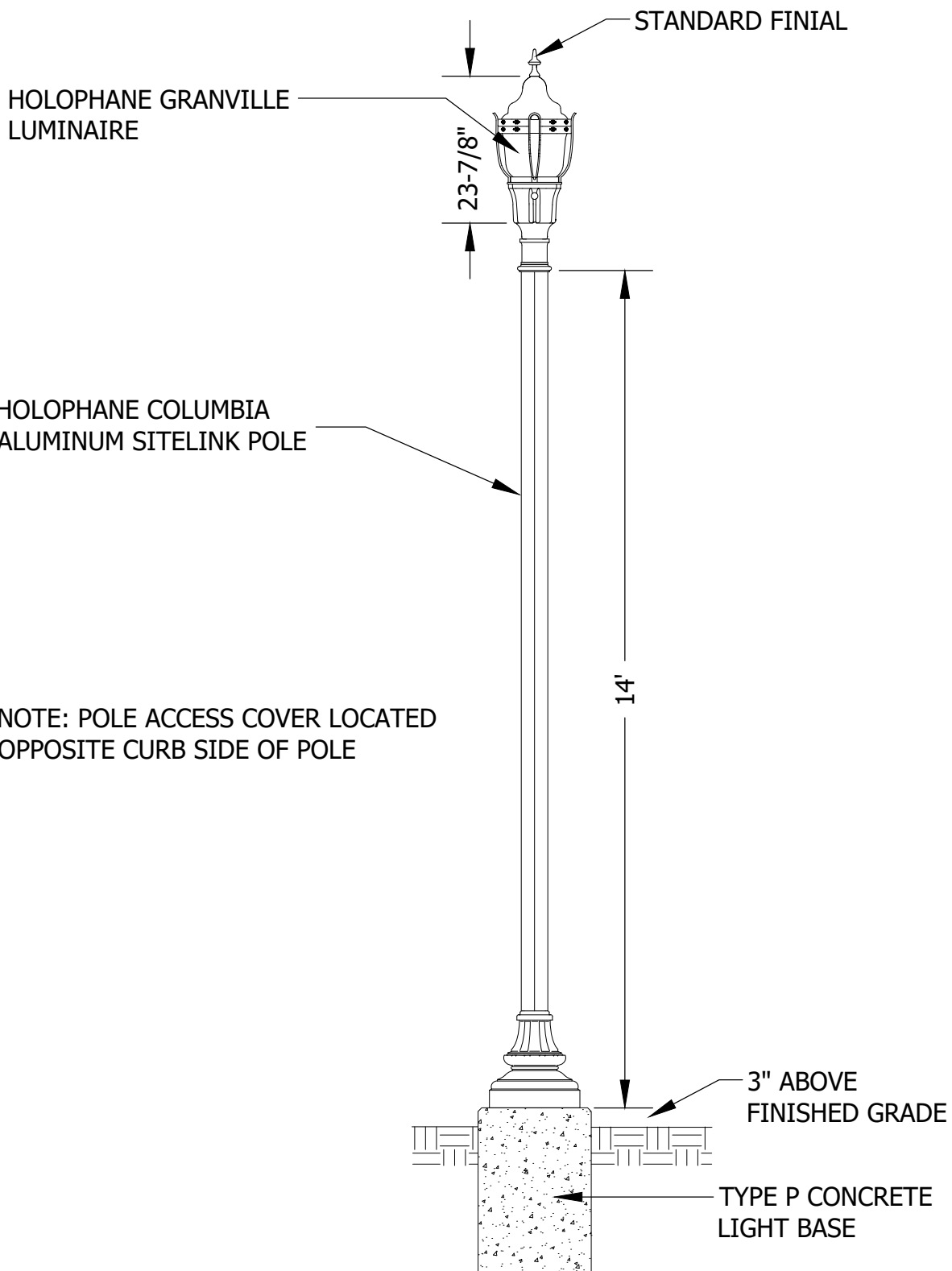
COTTAGE GROVE, MINNESOTA

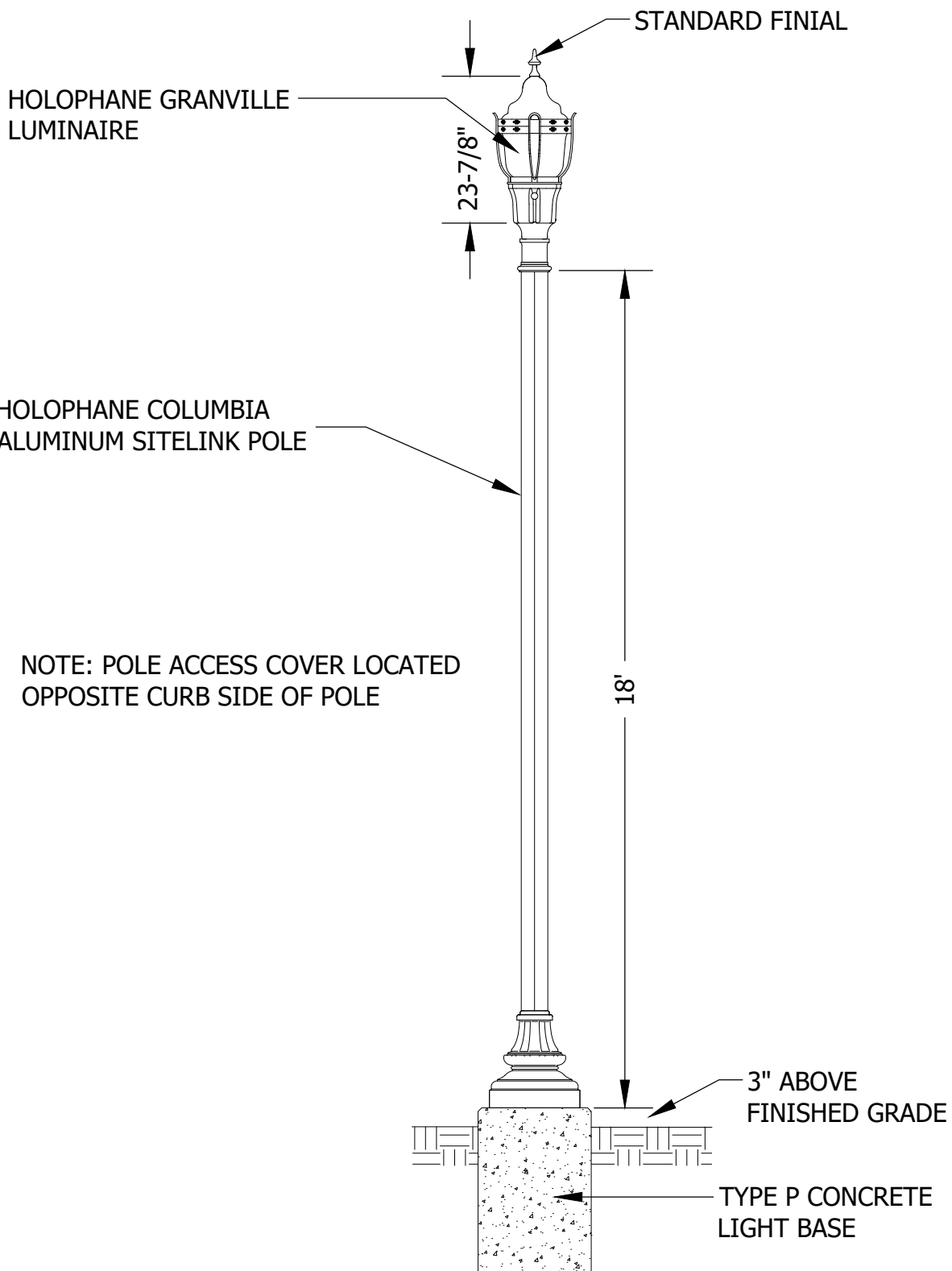
JANUARY 2024

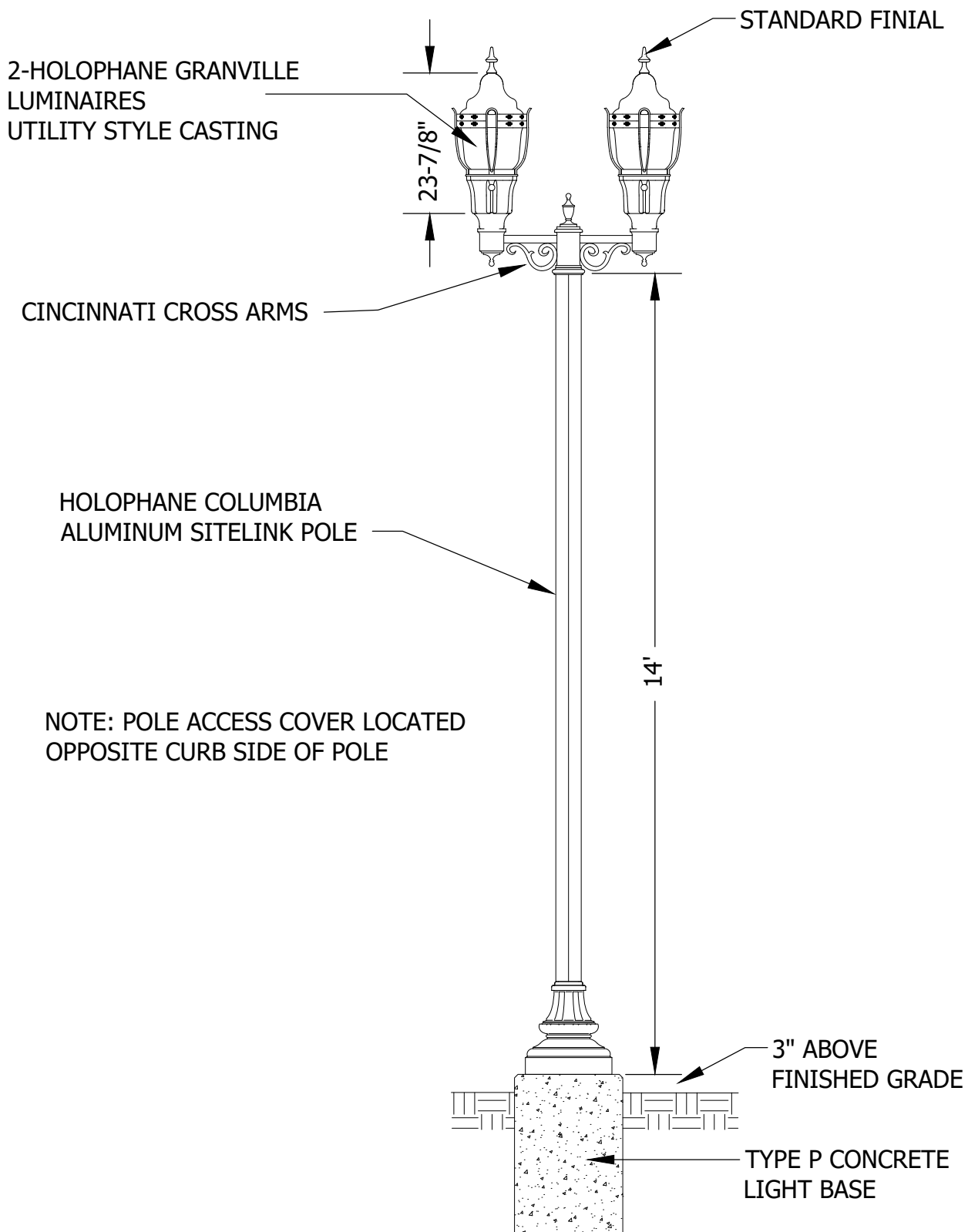
PLATE NO.
LGT-6



NOTE: POLE ACCESS COVER LOCATED OPPOSITE CURB SIDE OF POLE



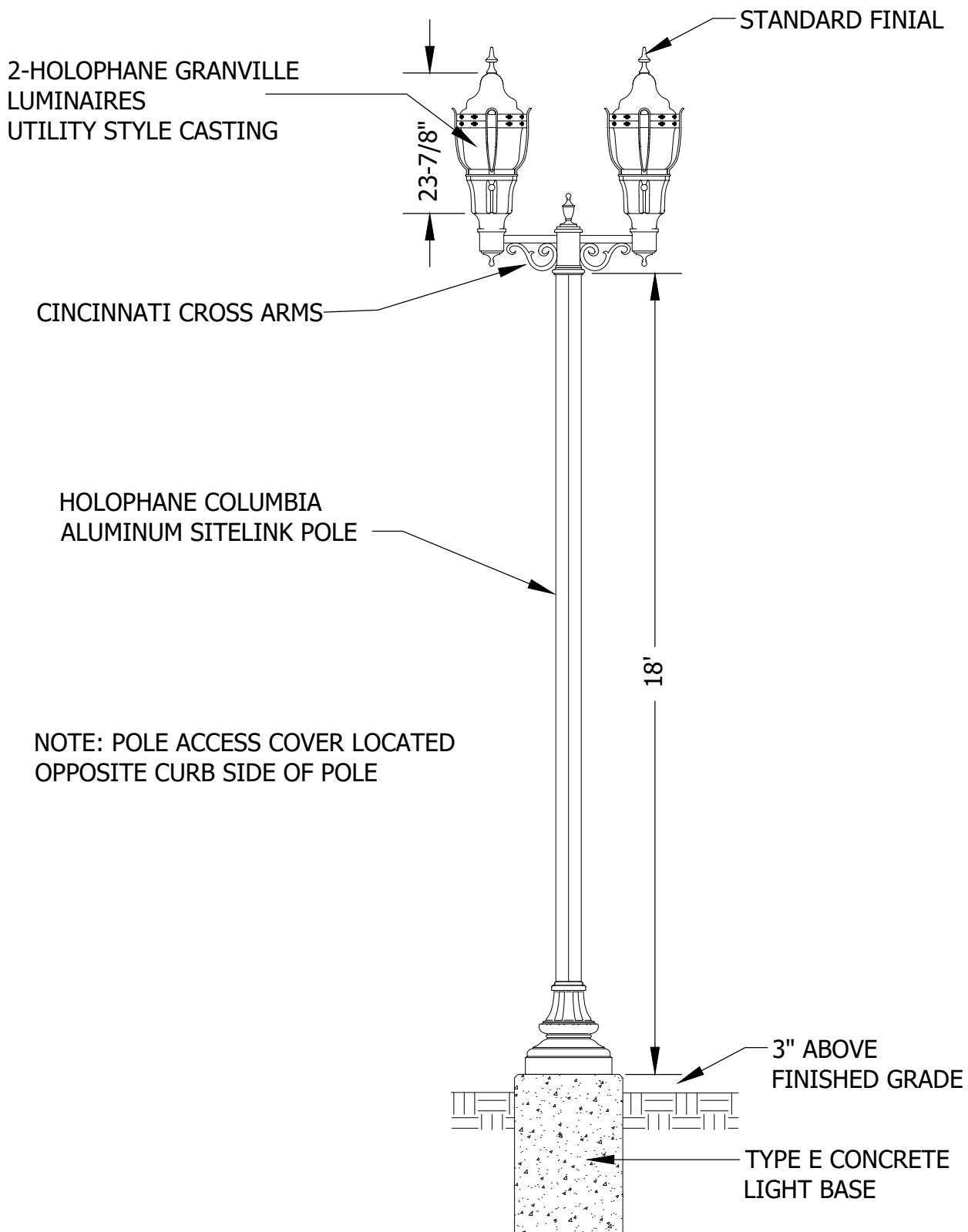




STANDARD DETAILS
LIGHT POLE TYPE P3
RAVINE DOUBLE LED FIXTURE 14 FOOT
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
LGT-10



STANDARD DETAILS
LIGHT POLE TYPE E1
RAVINE DOUBLE LED FIXTURE 18 FOOT
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
LGT-11

AMERICAN ELECTRIC
AUTOBAHN SERIES

3'
STAND OFF

HOLOPHANE
STANDARD
MAST ARM

HOLOPHANE STANDARD POLE

20'

HAND HOLE AND
COVER PLATE

3.0'
TYP.

3" ABOVE
FINISHED GRADE

STREET CURB

FINISHED GRADE

TYPE P CONCRETE LIGHT BASE

NOTE: POLE ACCESS COVER LOCATED OPPOSITE CURB SIDE OF POLE

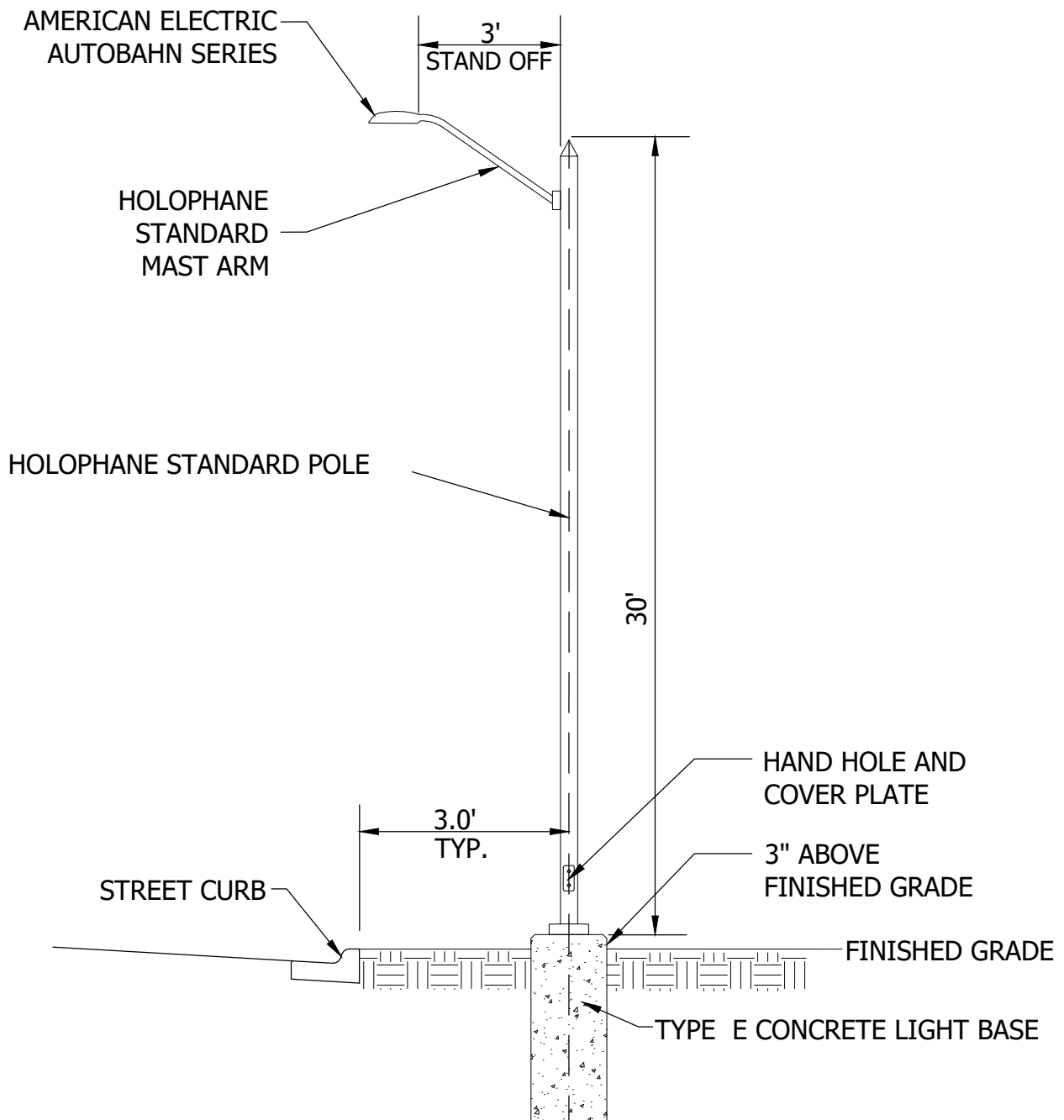


STANDARD DETAILS

LIGHT POLE TYPE P4
COBRA HEAD LED FIXTURE 20 FOOT
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
LGT-12



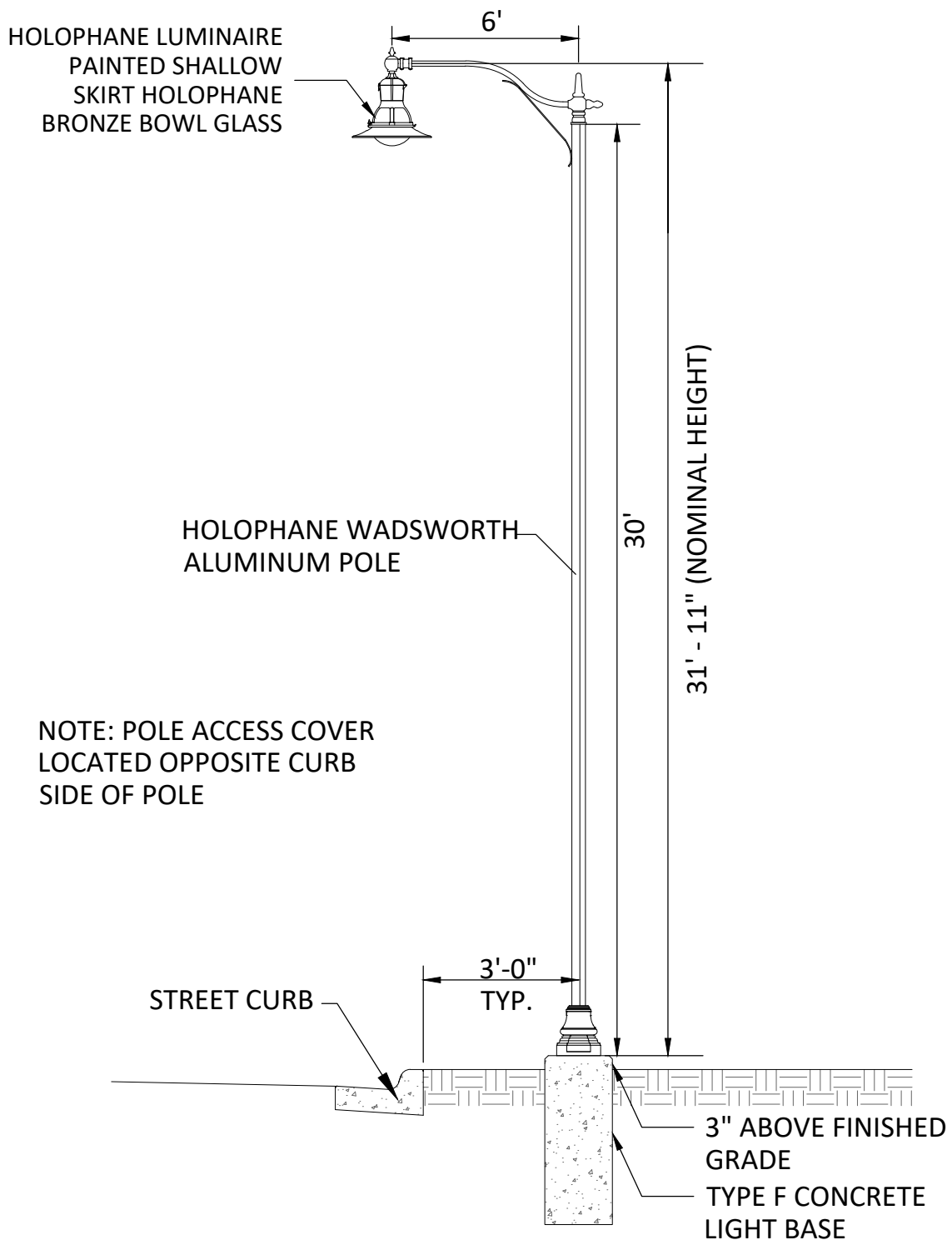
NOTE: POLE ACCESS COVER LOCATED OPPOSITE CURB SIDE OF POLE



STANDARD DETAILS
LIGHT POLE TYPE E2
COBRA HEAD LED FIXTURE 30 FOOT
COTTAGE GROVE, MINNESOTA

JANUARY 2024

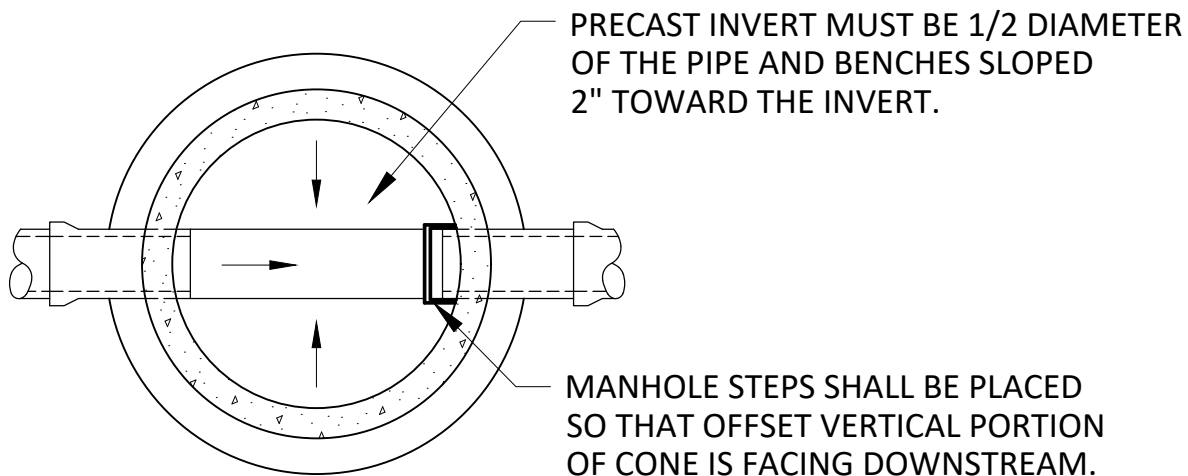
PLATE NO.
LGT-13



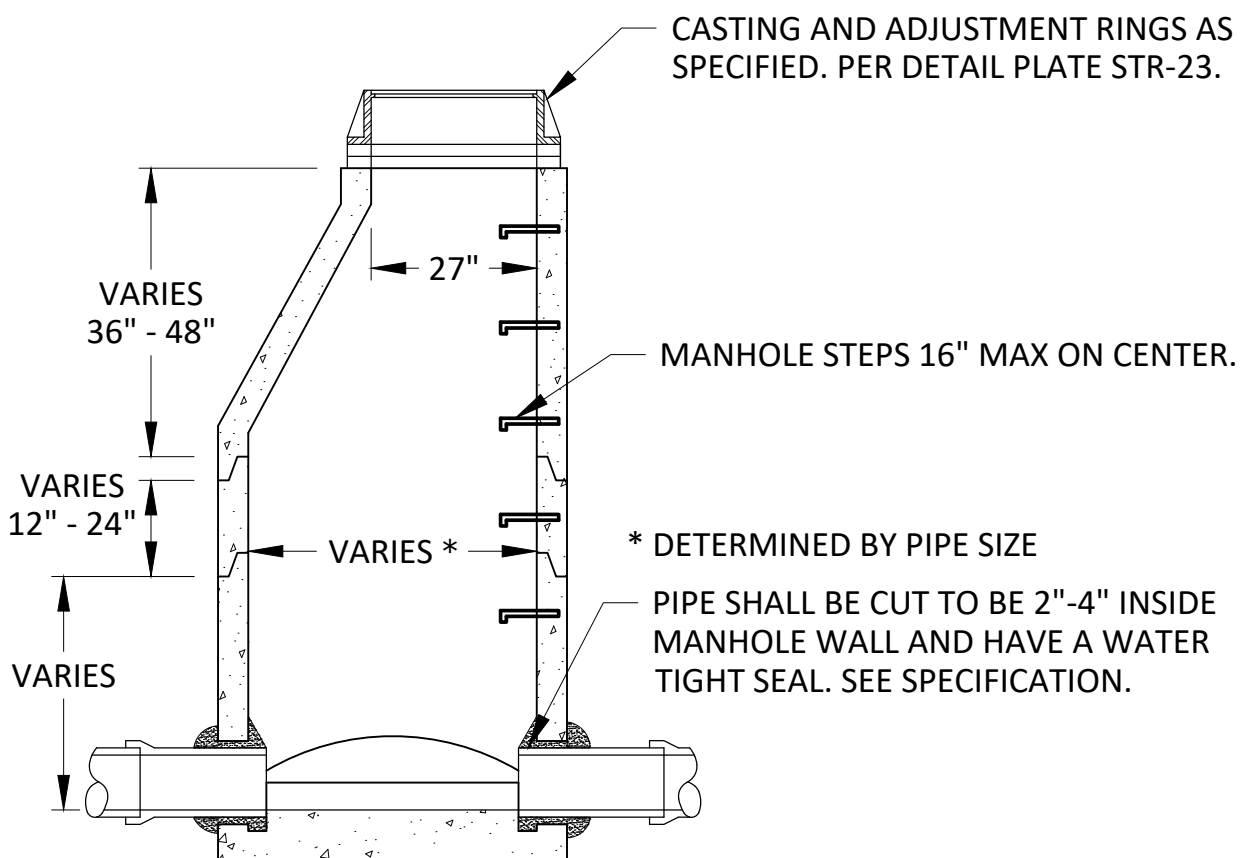
STANDARD DETAILS
LIGHT POLE TYPE F1
LED LIGHTING UNIT 31 FOOT - 11 INCH
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
LGT-14



PLAN



SECTION

ALL DOG HOUSES SHALL BE MORTARED ON INSIDE AND OUTSIDE.

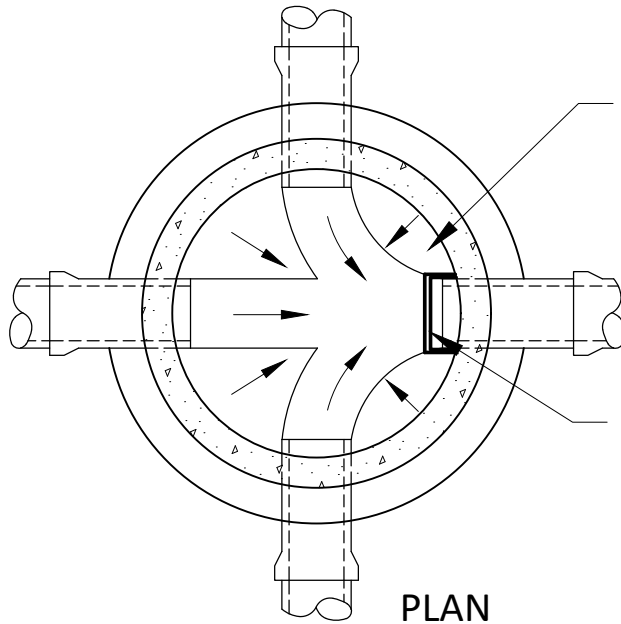


STANDARD DETAILS
SANITARY SEWER MANHOLE

COTTAGE GROVE, MINNESOTA

JANUARY 2024

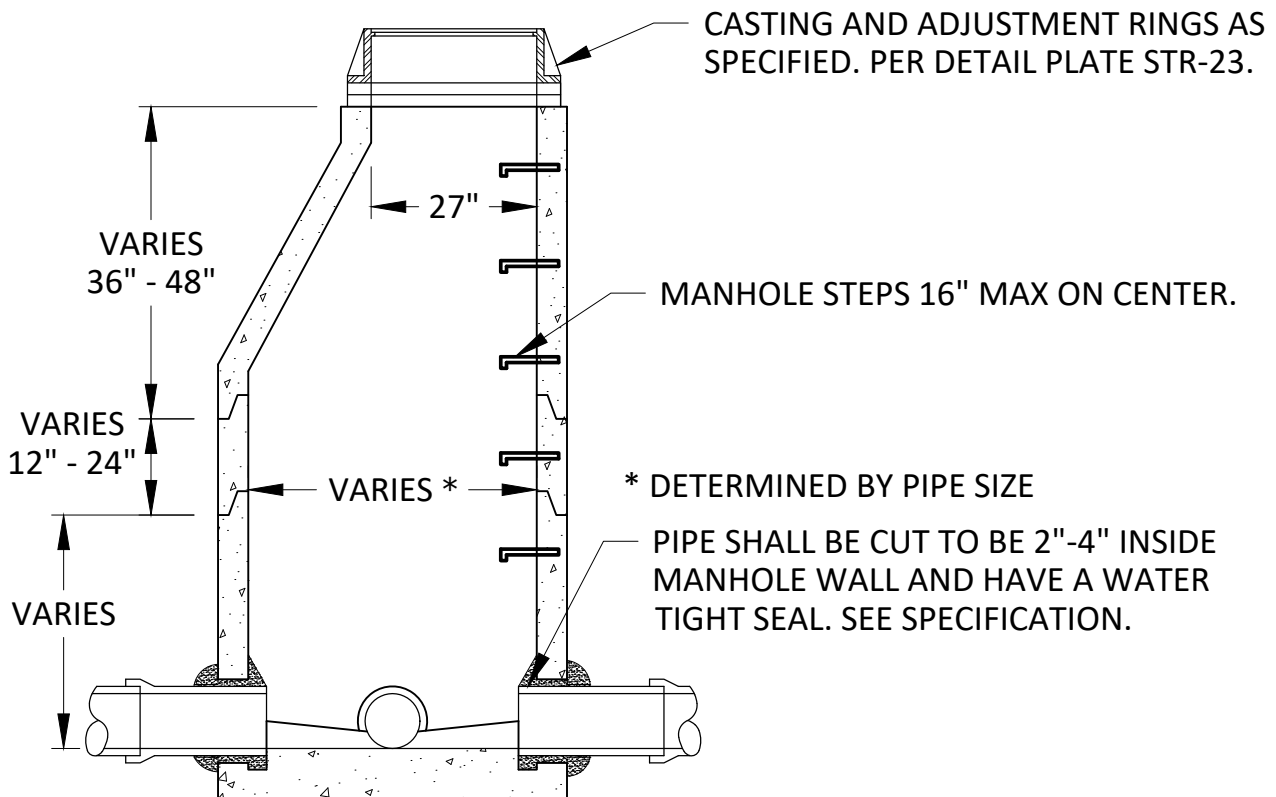
PLATE NO.
SAN-1



PRECAST INVERT MUST BE 1/2 DIAMETER OF THE PIPE AND BENCHES SLOPED 2" TOWARD THE INVERT.

MANHOLE STEPS SHALL BE PLACED SO THAT OFFSET VERTICAL PORTION OF CONE IS FACING DOWNSTREAM.

PLAN



CASTING AND ADJUSTMENT RINGS AS SPECIFIED. PER DETAIL PLATE STR-23.

MANHOLE STEPS 16" MAX ON CENTER.

* DETERMINED BY PIPE SIZE

PIPE SHALL BE CUT TO BE 2"-4" INSIDE MANHOLE WALL AND HAVE A WATER TIGHT SEAL. SEE SPECIFICATION.

ALL DOG HOUSES SHALL BE MORTARED ON INSIDE AND OUTSIDE.

SECTION



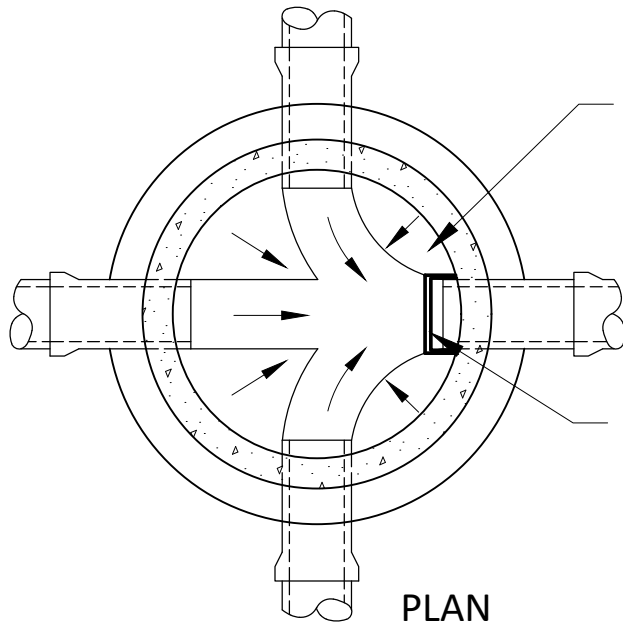
**Cottage
Grove**

Where Pride and Prosperity Meet

**STANDARD DETAILS
SANITARY SEWER
JUNCTION MANHOLE
COTTAGE GROVE, MINNESOTA**

JANUARY 2024

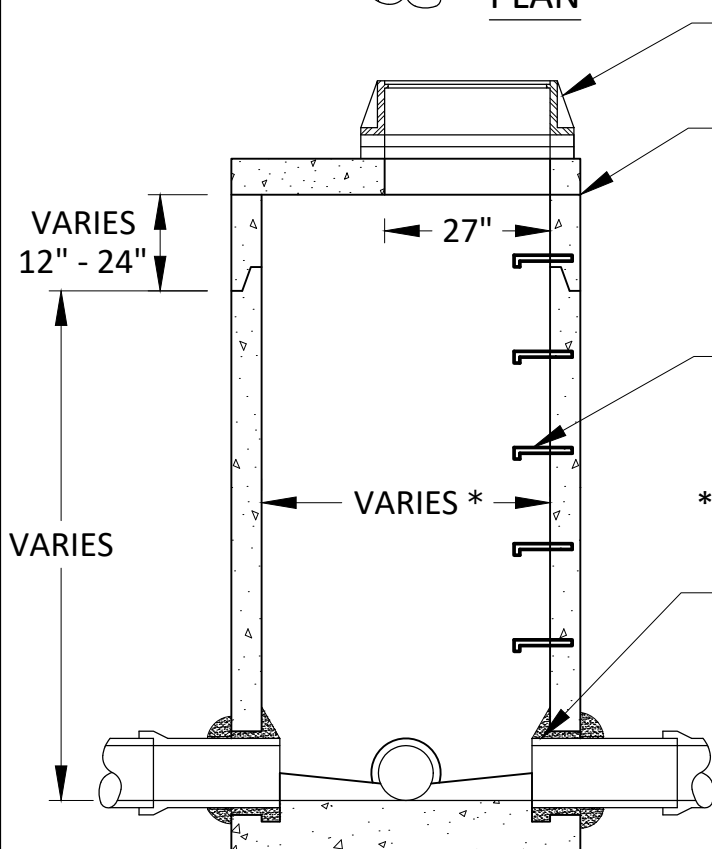
PLATE NO.
SAN-2



PRECAST INVERT MUST BE 1/2 DIAMETER OF THE PIPE AND BENCHES SLOPED 2" TOWARD THE INVERT.

MANHOLE STEPS SHALL BE PLACED SO THAT OFFSET VERTICAL PORTION OF CONE IS FACING DOWNSTREAM.

PLAN



CASTING AND ADJUSTMENT RINGS AS SPECIFIED. PER DETAIL PLATE STR-23.

TOP OF BARREL SECTION BELOW TOP SLAB TO HAVE FLAT TOP EDGE SEALED WITH 2 BEADS OF RAMNEK OR EQUAL.

MANHOLE STEPS 16" MAX ON CENTER.

* DETERMINED BY PIPE SIZE

PIPE SHALL BE CUT TO BE 2"-4" INSIDE MANHOLE WALL AND HAVE A WATER TIGHT SEAL. SEE SPECIFICATION.

ALL DOG HOUSES SHALL BE MORTARED ON INSIDE AND OUTSIDE.

SECTION



**Cottage
Grove**
Where Pride and Prosperity Meet

STANDARD DETAILS
SANITARY SEWER JUNCTION MANHOLE
WITH REINFORCED TOP SLAB
COTTAGE GROVE, MINNESOTA

JANUARY 2024

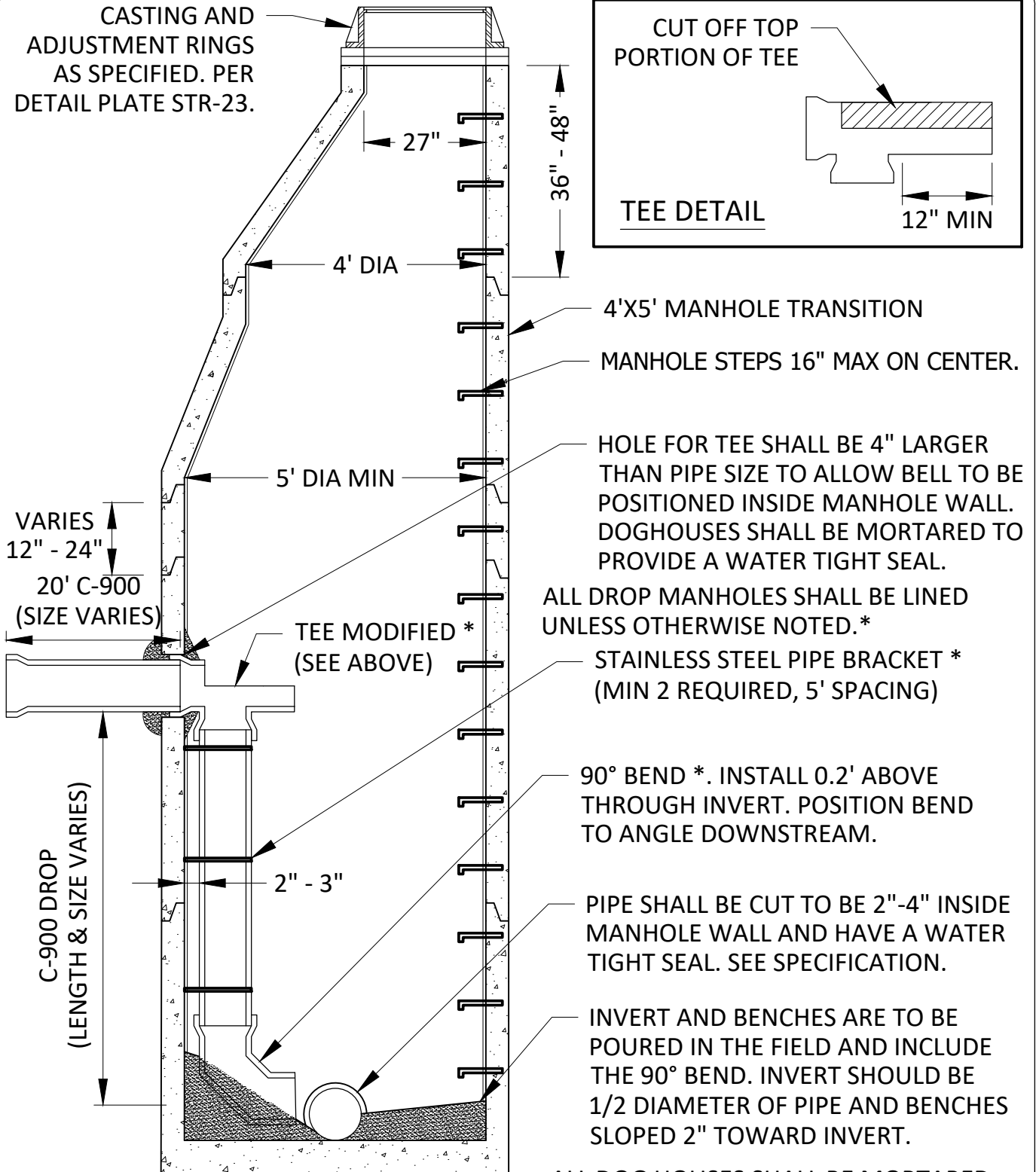
PLATE NO.
SAN-3

CASTING AND
ADJUSTMENT RINGS
AS SPECIFIED. PER
DETAIL PLATE STR-23.

CUT OFF TOP
PORTION OF TEE

TEE DETAIL

12" MIN



* SEE SPECIFICATIONS

SECTION

ALL DOG HOUSES SHALL BE MORTARED
ON INSIDE AND OUTSIDE.



**Cottage
Grove**

Where Pride and Prosperity Meet

STANDARD DETAILS

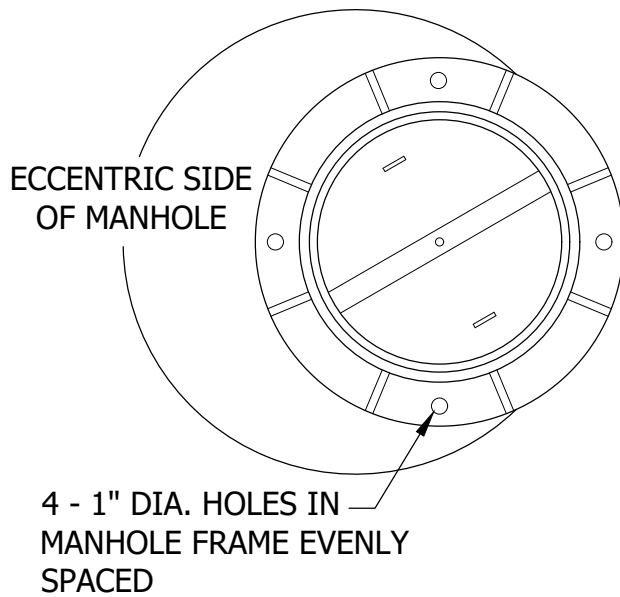
SANITARY SEWER
DROP INLET MANHOLE

COTTAGE GROVE, MINNESOTA

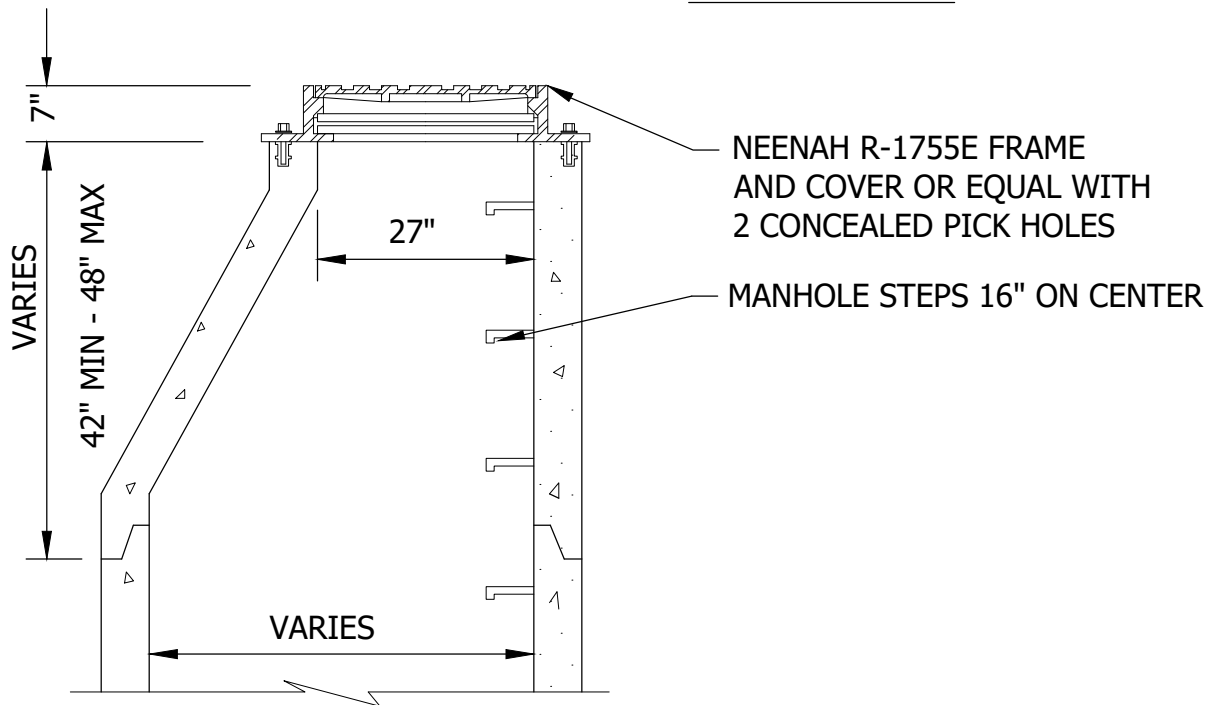
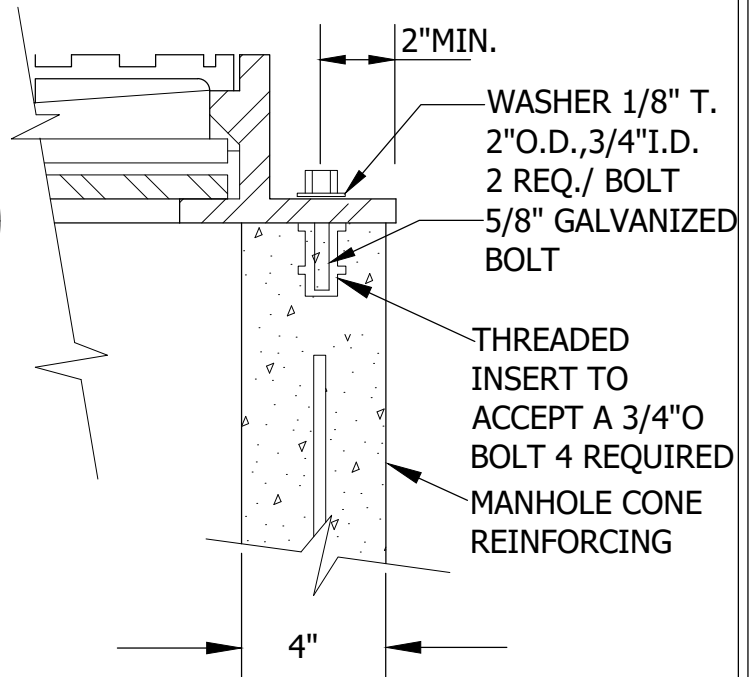
JANUARY 2024

PLATE NO.

SAN-4



PLAN VIEW TOP COVER REMOVED



ECCENTRIC WATERTIGHT MANHOLE



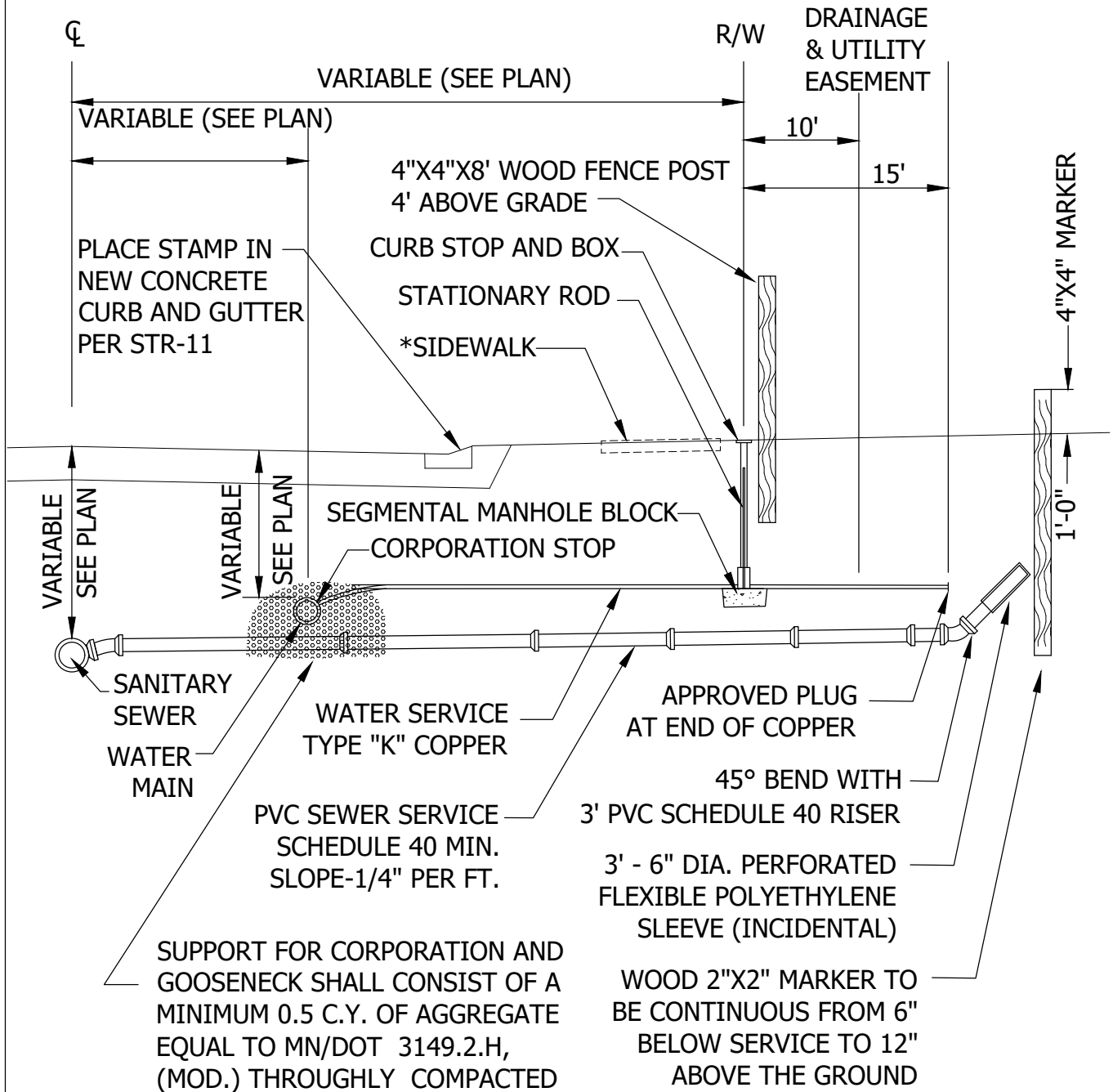
STANDARD DETAILS
WATERTIGHT CASTING FOR
SANITARY SEWER MANHOLE
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
SAN-5

NOTES:

- ① REF. SER-11 FOR CURB STOP AND BOX THAT FALL WITHIN BITUMINOUS OR CONCRETE.
- ② *EXTEND CURB STOP 1' BEYOND R/W WHEN SIDEWALK IS PRESENT.

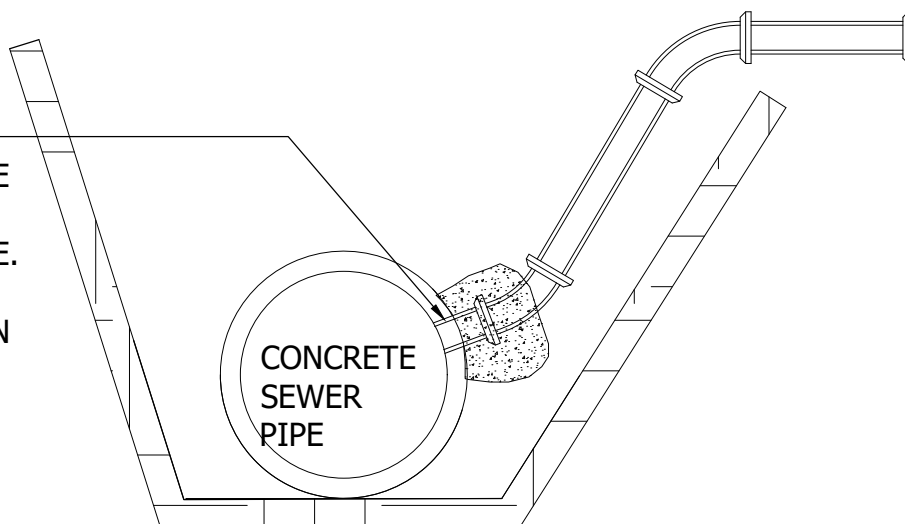


STANDARD DETAILS
RESIDENTIAL SEWER AND WATER SERVICE CONNECTIONS
COTTAGE GROVE, MINNESOTA

JANUARY 2024

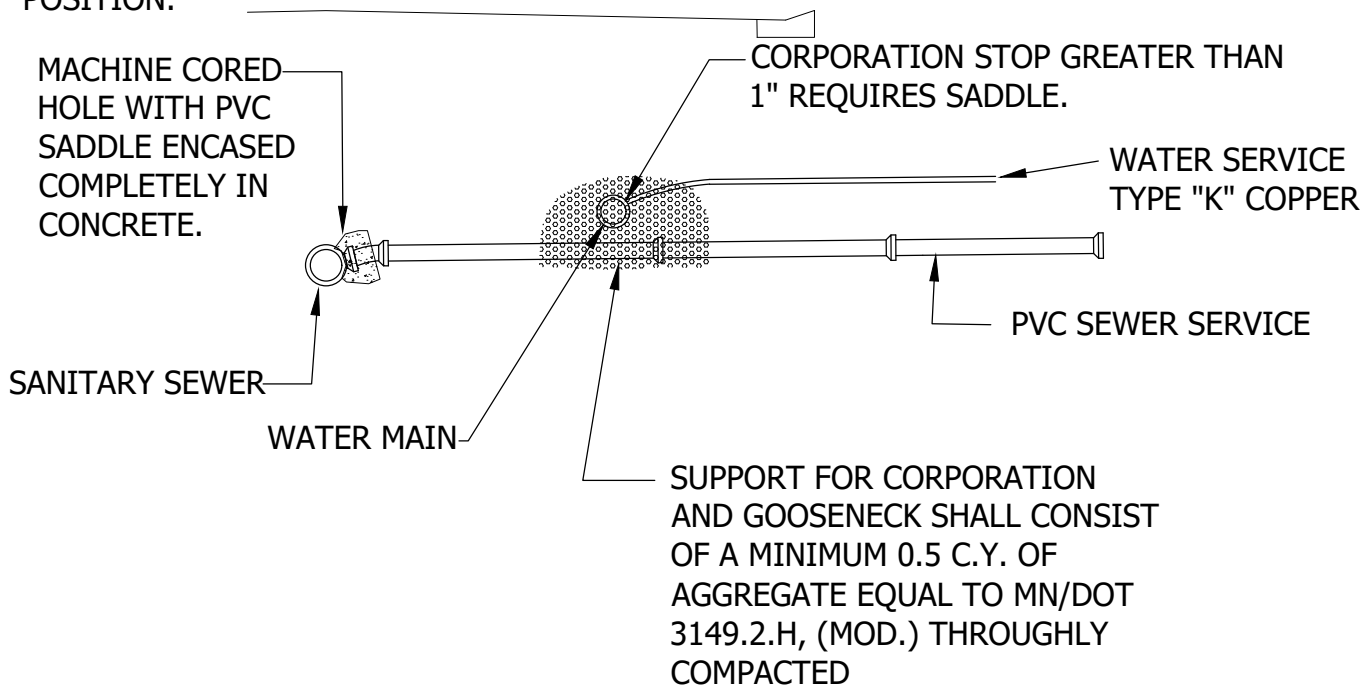
PLATE NO.
SER-1

MACHINE CORED HOLE WITH CAST IRON SADDLE WITH STAINLESS STEEL BANDS AROUND THE PIPE. THE SADDLE TO BE COMPLETELY ENCASED IN CONCRETE.



CONCRETE SANITARY OR STORM SEWER

NOTE: SERVICE CONNECTIONS TO BE AT 2 O'CLOCK OR 10 O'CLOCK POSITION.



WATER AND PVC SANITARY SEWER



STANDARD DETAILS
PRIVATE CONNECTIONS TO
PUBLIC UTILITIES

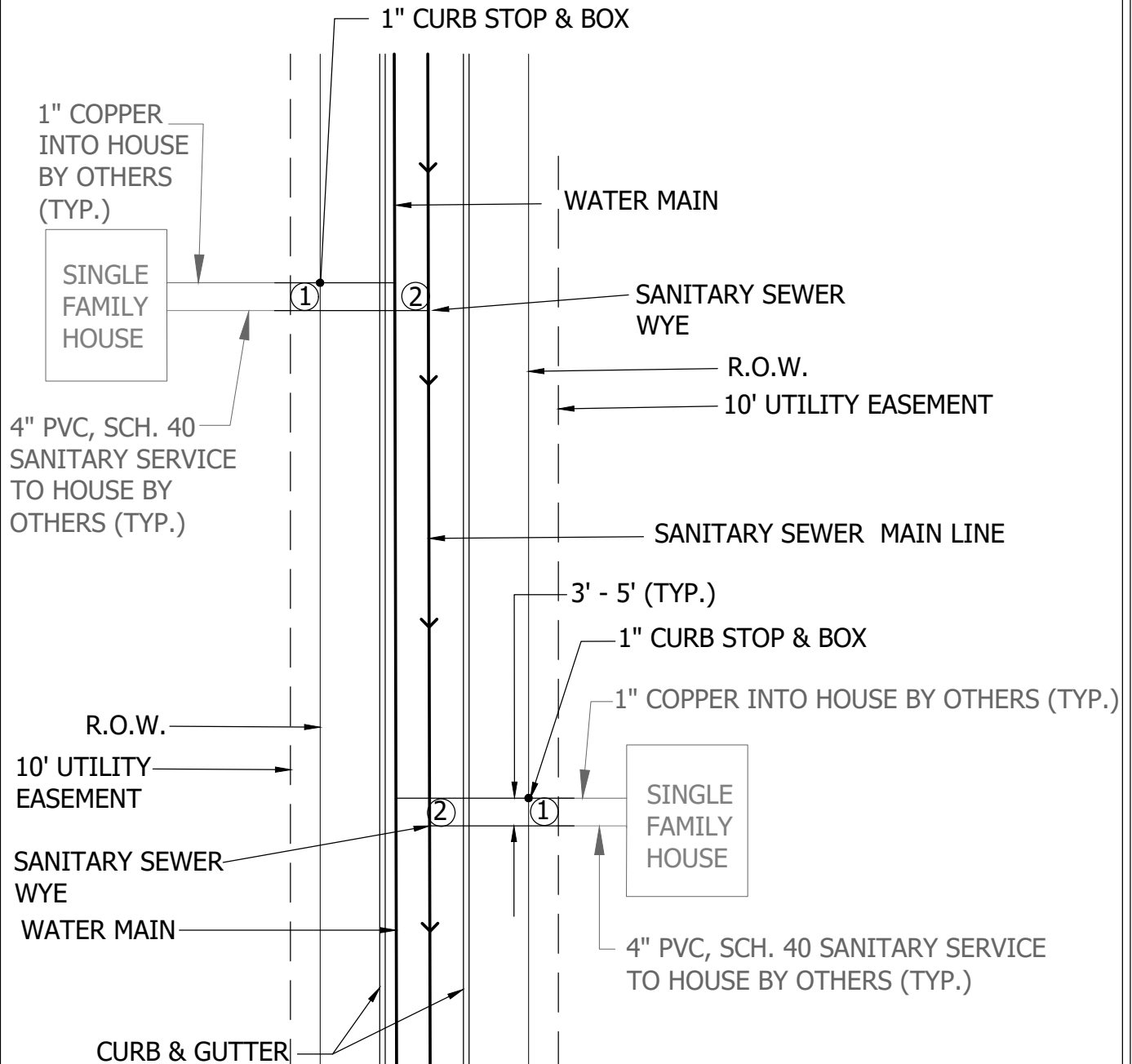
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
SER-2

CONTRACTOR TO PROVIDE THE FOLLOWING DIMENSIONS:

- ① CURB STOP TO SANITARY SEWER PIPE (PERPENDICULAR TO COPPER).
- ② SANITARY SEWER PIPE TO COPPER WATER LINE (PERPENDICULAR TO COPPER ALONG SANITARY SEWER MAIN) OR CORPORATION STOP TO SANITARY SEWER SERVICE LINE (PERPENDICULAR TO COPPER WATER LINE).
- ③ EXTEND CURB STOP 1' BEYOND R/W WHEN SIDEWALK IS PRESENT.



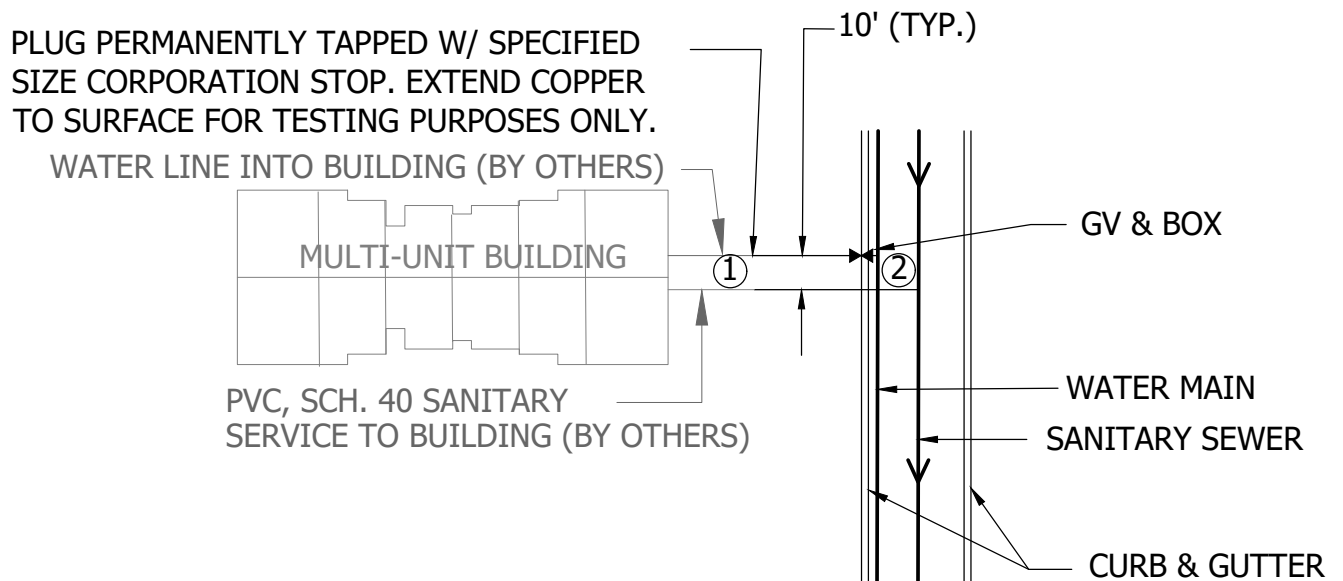
STANDARD DETAILS
LOCATING REQUIREMENTS FOR
SINGLE FAMILY HOUSES
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
SER-5

CONTRACTOR TO PROVIDE THE FOLLOWING DIMENSIONS:

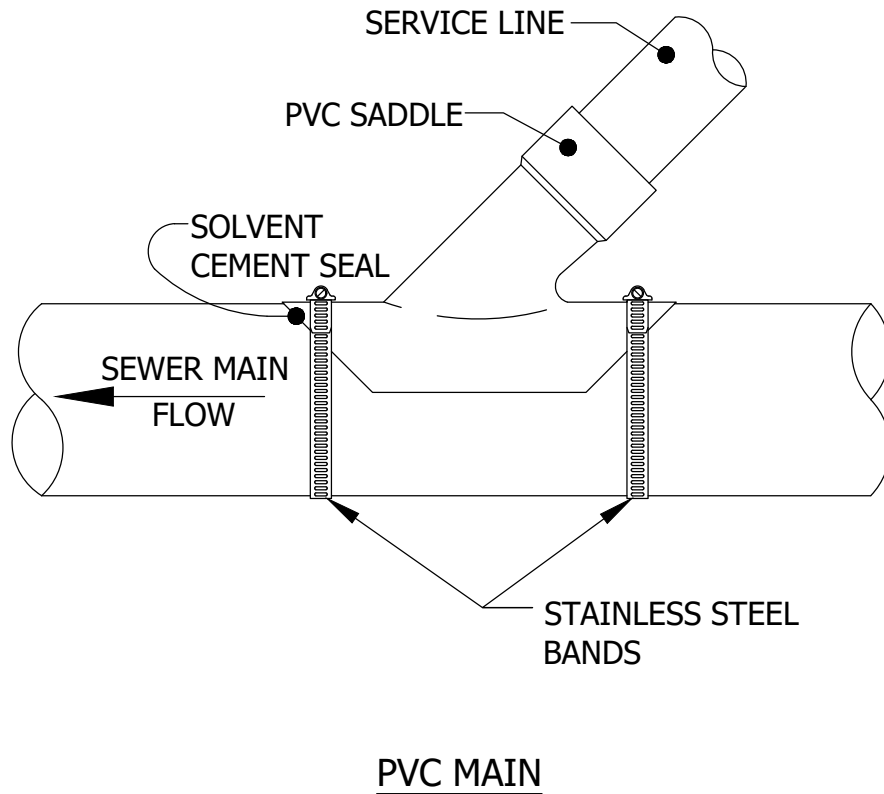
- ① WATER LINE PLUG TO SANITARY SEWER PLUG (PERPENDICULAR TO WATER LINE).
- ② SANITARY SEWER PIPE TO WATER LINE (PERPENDICULAR TO WATER LINE ALONG SANITARY SEWER MAIN) OR WATER MAIN TEE TO SANITARY SEWER LINE (PERPENDICULAR TO WATER LINE).
- ③ EXTEND CURB STOP 1' BEYOND R/W WHEN SIDEWALK IS PRESENT.



STANDARD DETAILS
LOCATING REQUIREMENTS FOR
MULTI-UNIT AND COMMERCIAL BUILDINGS
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
SER-6



NOTES:

1. PVC SOLVENT CEMENT SHALL BE USED FOR PVC SADDLES.

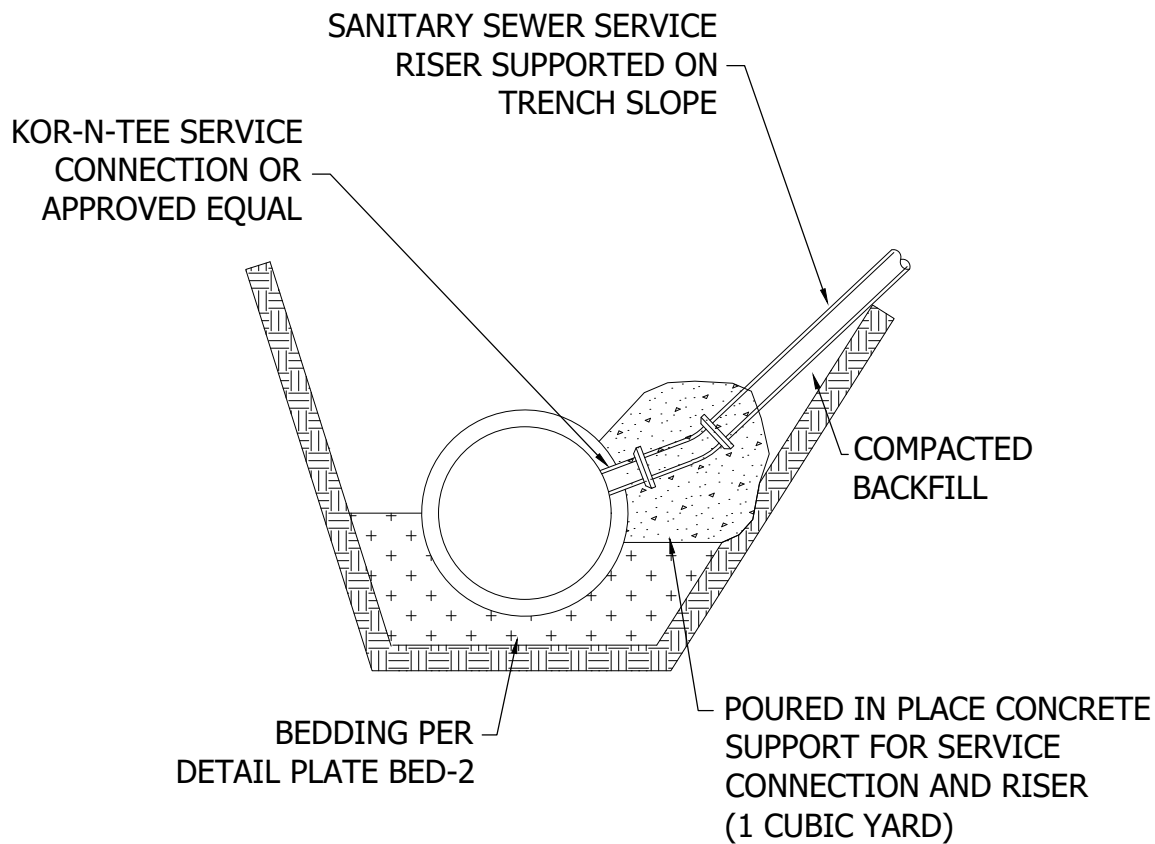


STANDARD DETAILS
PVC SANITARY SERVICE SADDLE
CONNECTION
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
SER-7

NOTE:
SERVICE CONNECTIONS
TO BE AT 2 O'CLOCK OR 10 O'CLOCK

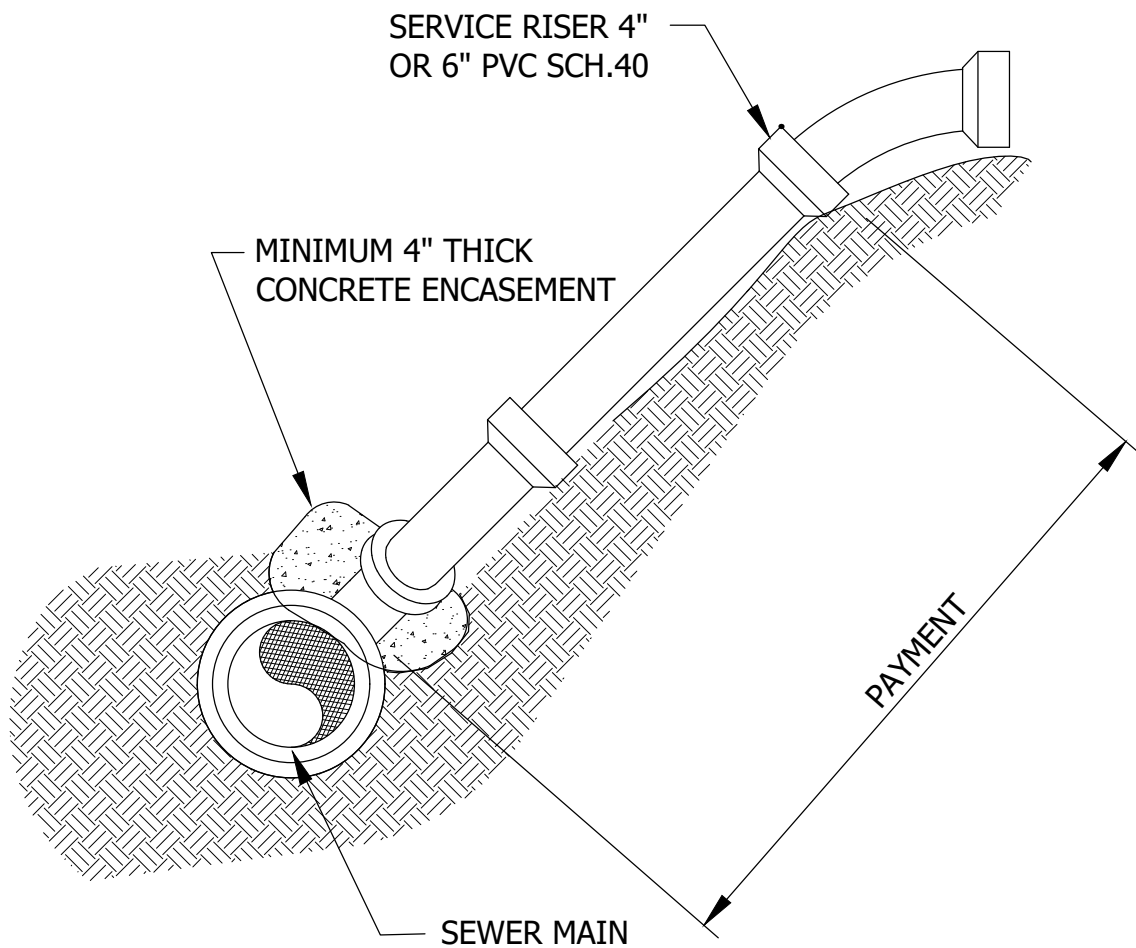


STANDARD DETAILS
SERVICE CONNECTION TO RCP

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
SER-8



**Cottage
Grove**
Where Pride and Prosperity Meet

STANDARD DETAILS

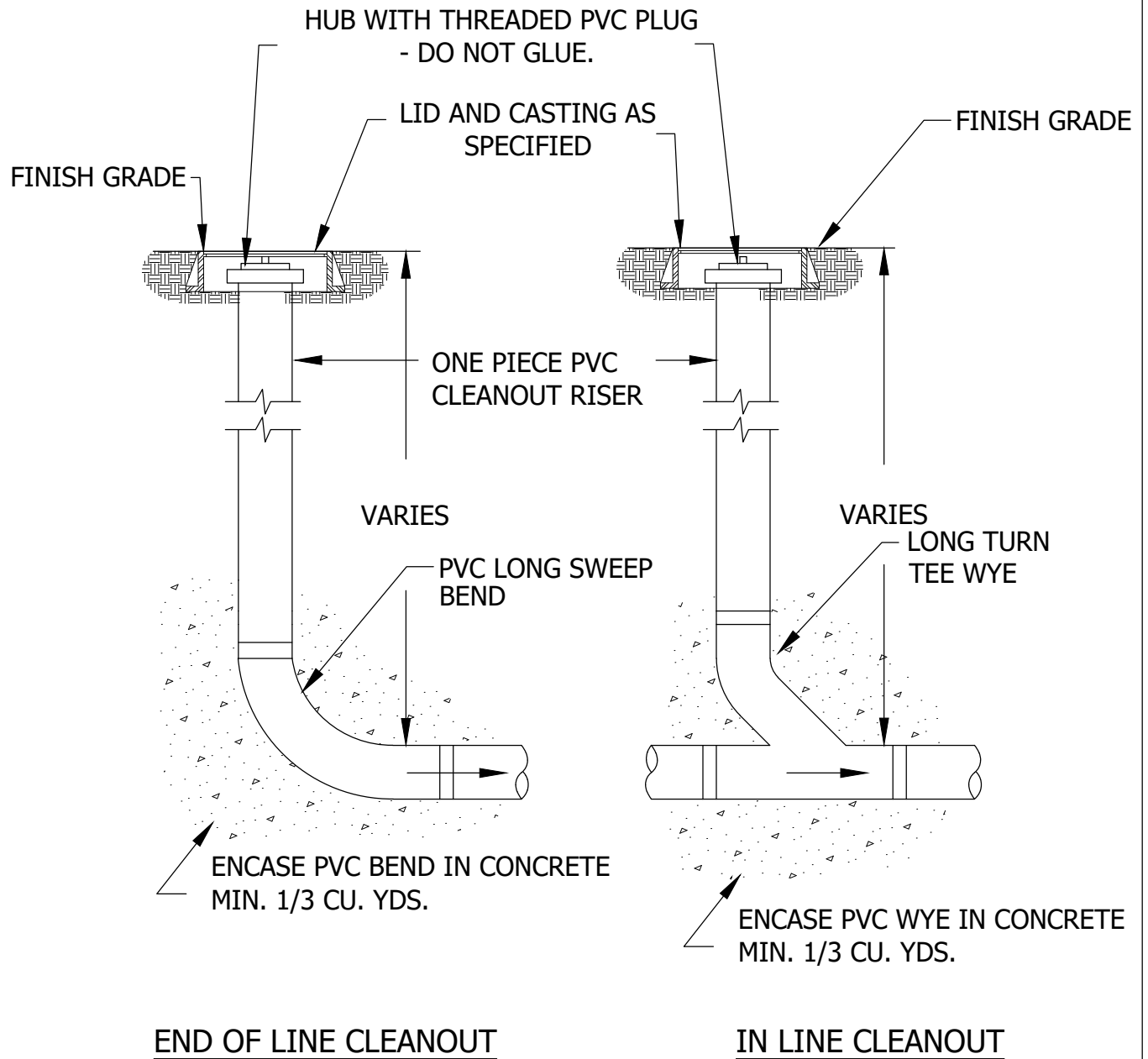
SERVICE RISER

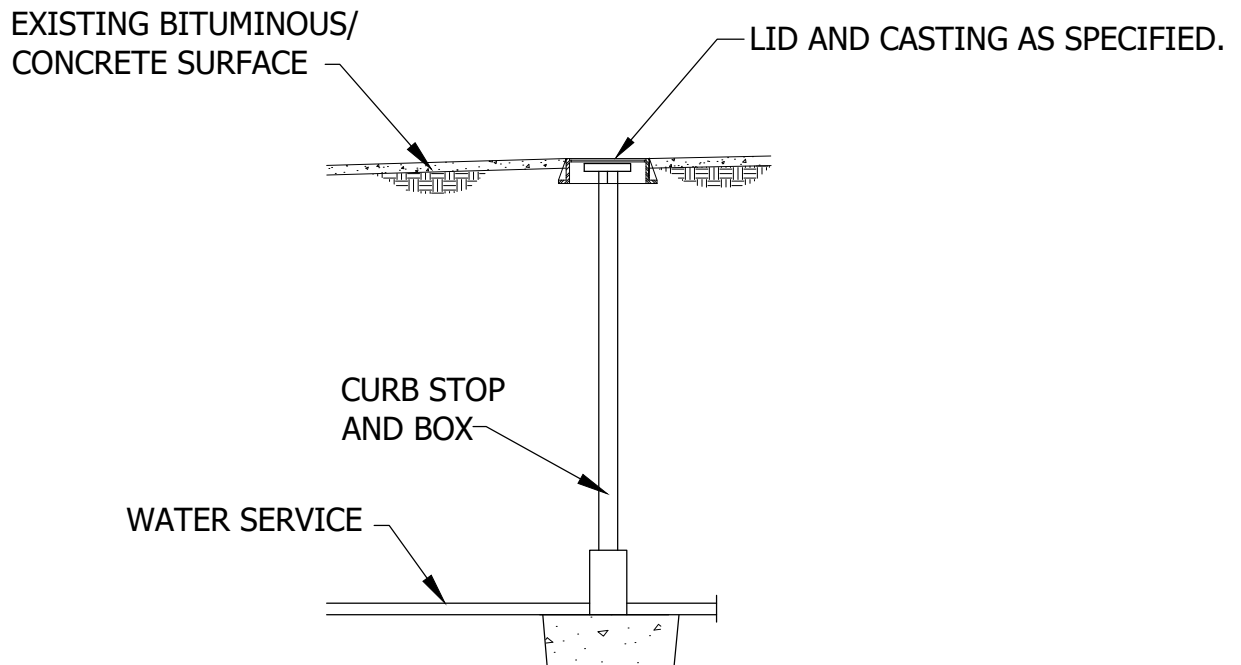
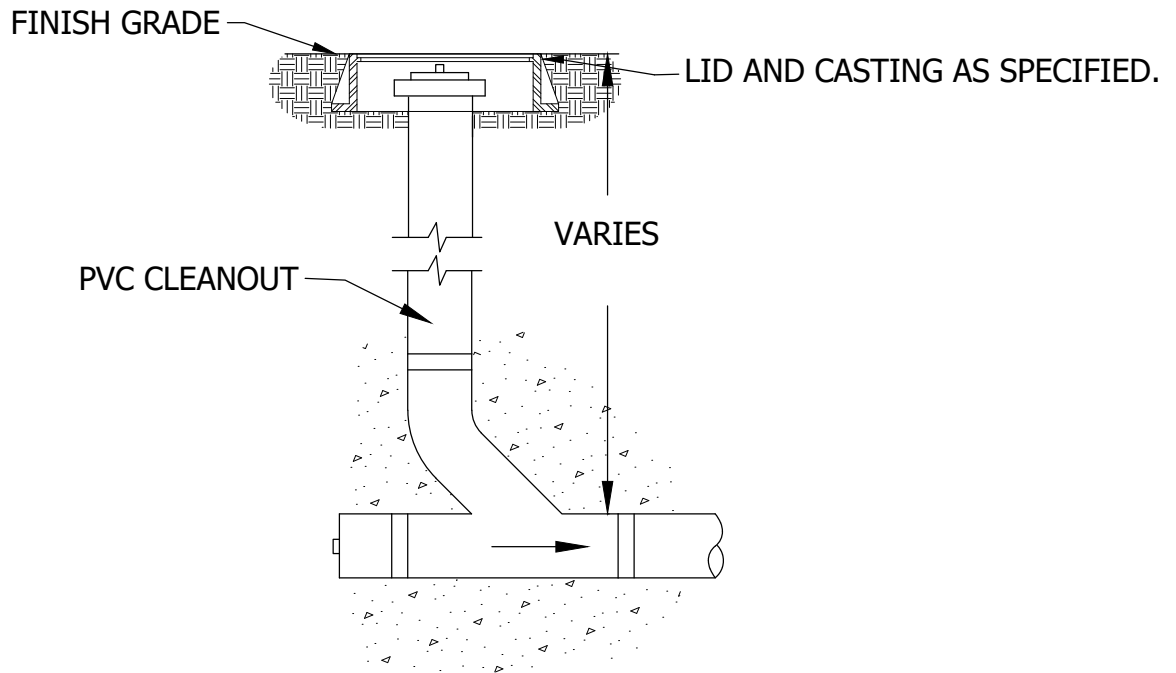
COTTAGE GROVE, MINNESOTA

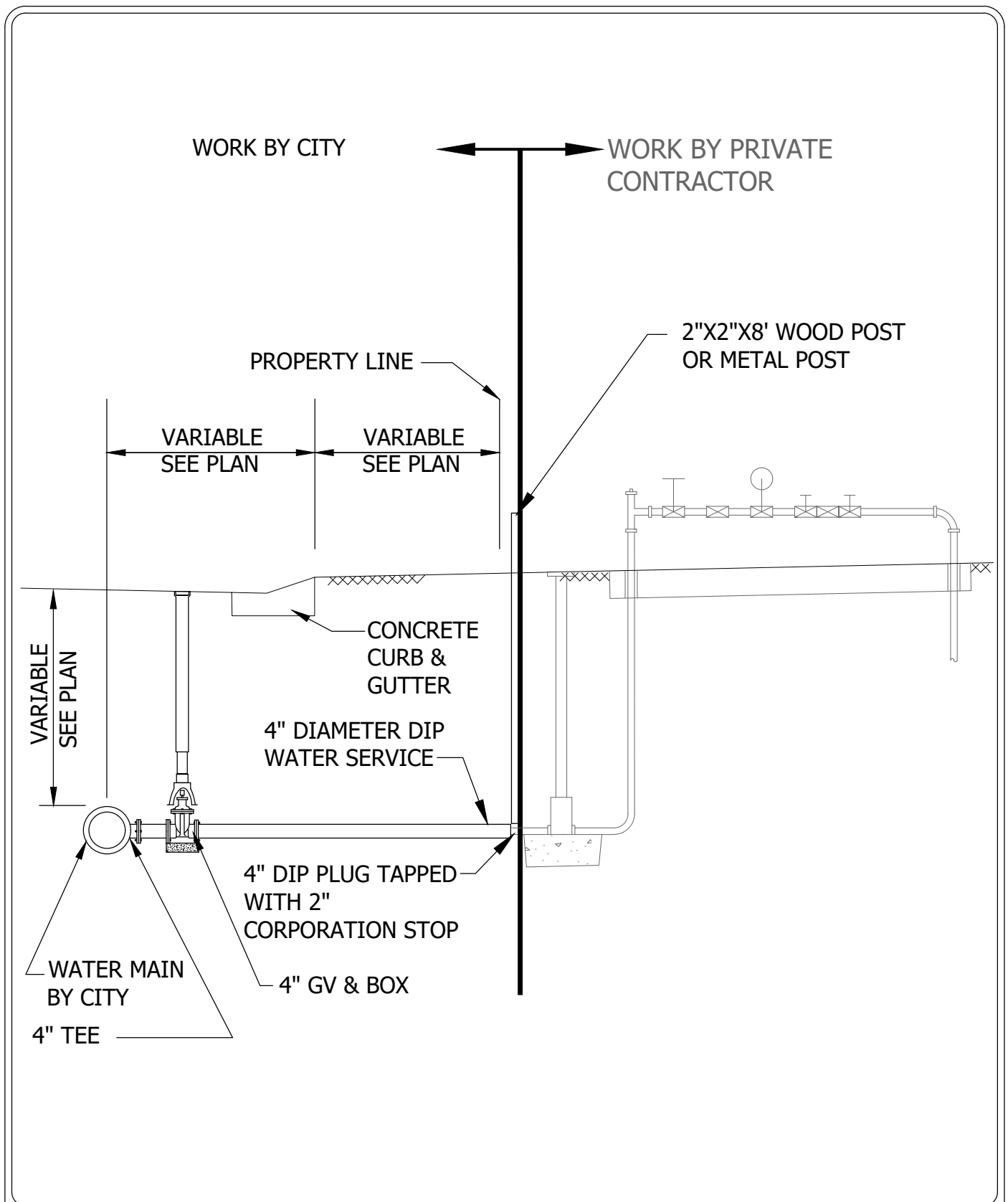
JANUARY 2024

PLATE NO.

SER-9







STANDARD DETAILS
IRRIGATION SERVICE

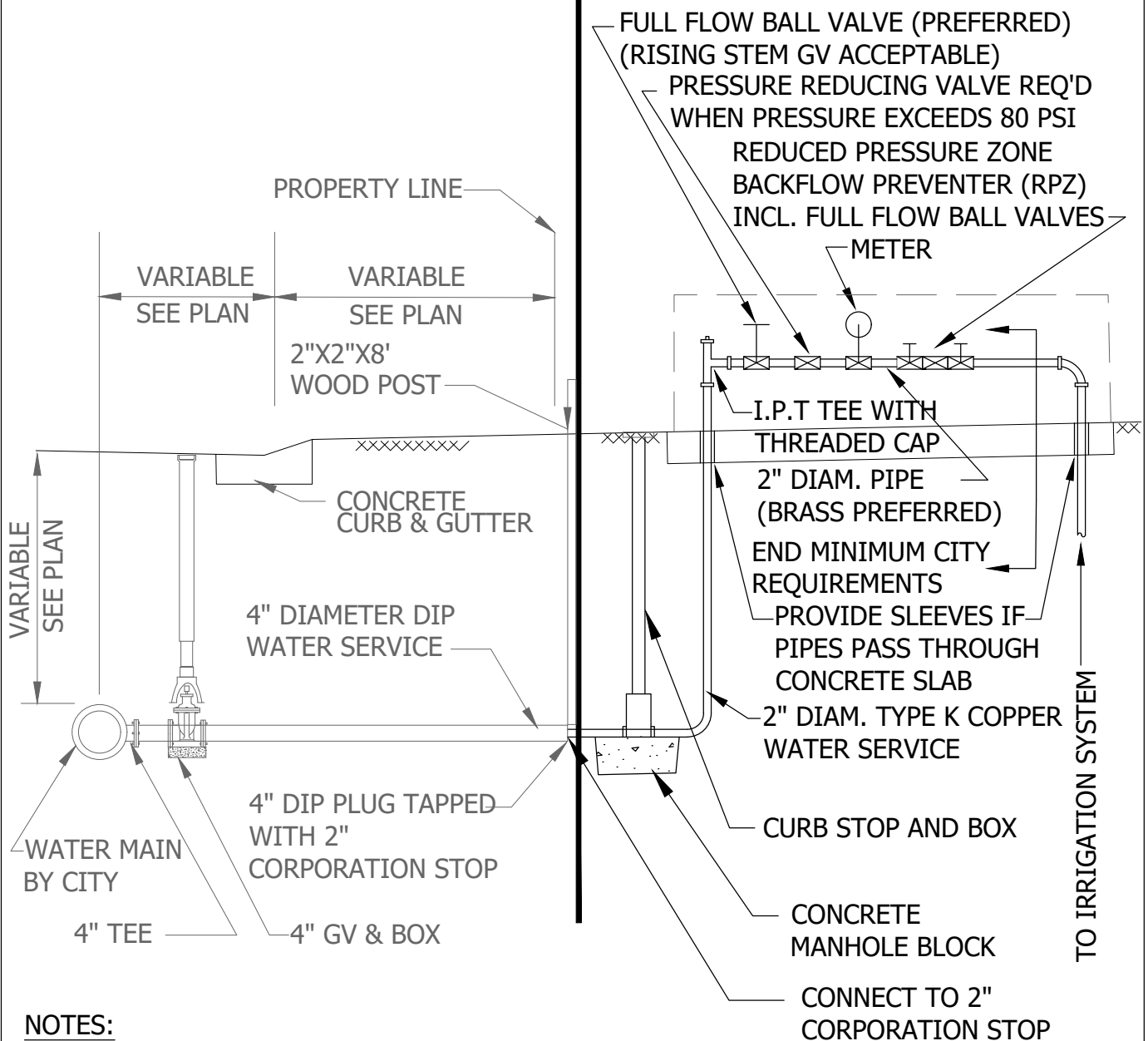
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
SER-12

PUBLIC IMPROVEMENT

PRIVATE IMPROVEMENT



NOTES:

1. CITY WATER SERVICE & PLUMBING PERMITS REQUIRED FOR WORK BY PRIVATE CONTRACTORS.
2. ANNUAL TESTING OF RPZ REQUIRED
3. REQUIRED EQUIPMENT MUST BE ENCLOSED AND SUPPORTED.
4. 2" DIAMETER SIZE IS STANDARD. OTHER SIZES ALLOWED ONLY BY APPROVAL OF CITY.
5. SLEEVES FOR PIPES IN CONCRETE SLABS SHALL BE 4" DIAMETER PVC OR SIMILAR.



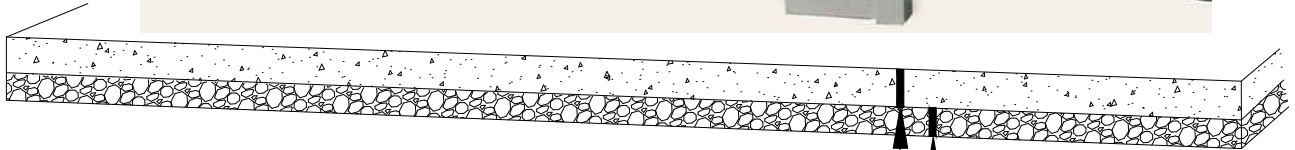
STANDARD DETAILS

IRRIGATION SERVICE BY
PRIVATE CONTRACTOR

COTTAGE GROVE, MINNESOTA

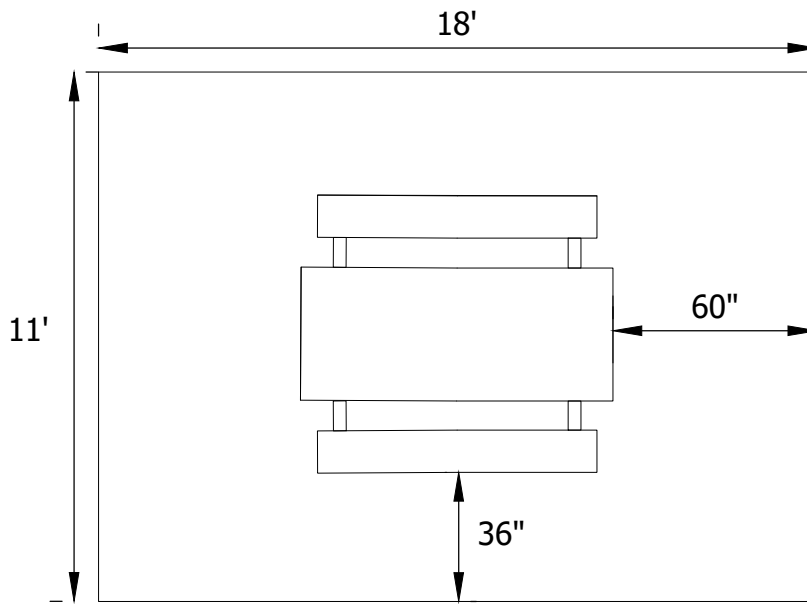
JANUARY 2024

PLATE NO.
SER-13



6" CONCRETE

4" AGGREGATE BASE



TOP VIEW

DESCRIPTION	PATTERN
8' TWIN PEDESTAL ADA TABLE WITH SQUARE FRAME	DIAMOND (V)



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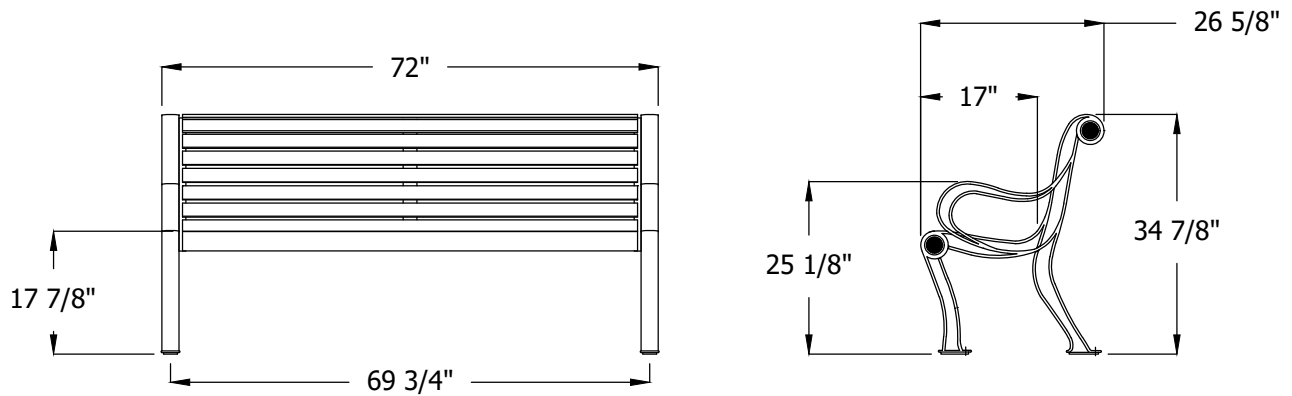
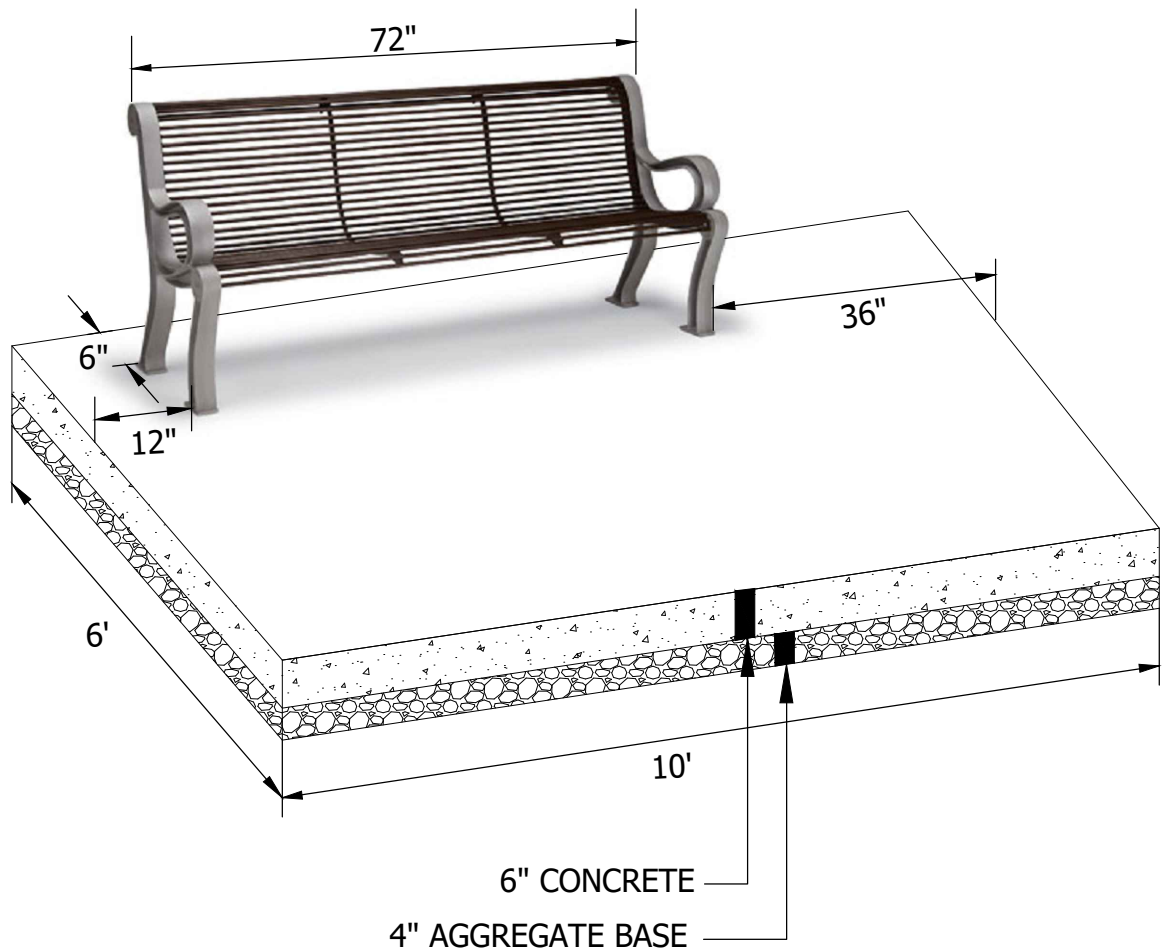
STANDARD DETAILS

PICNIC TABLE

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
SPECIAL-1



Description	Pattern	Weight	Concrete
6' Bench with back	Rod (O)	254 lb.	6' x 10'



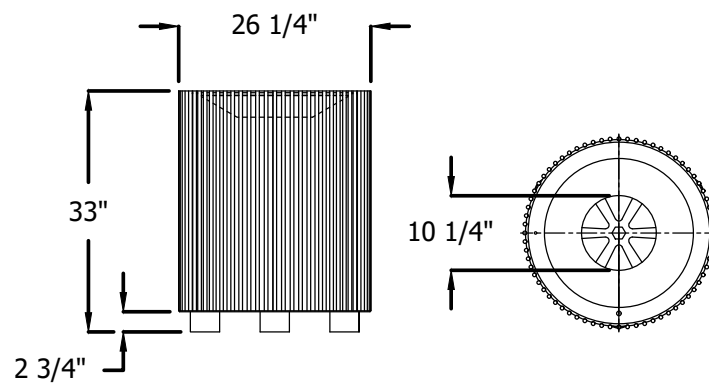
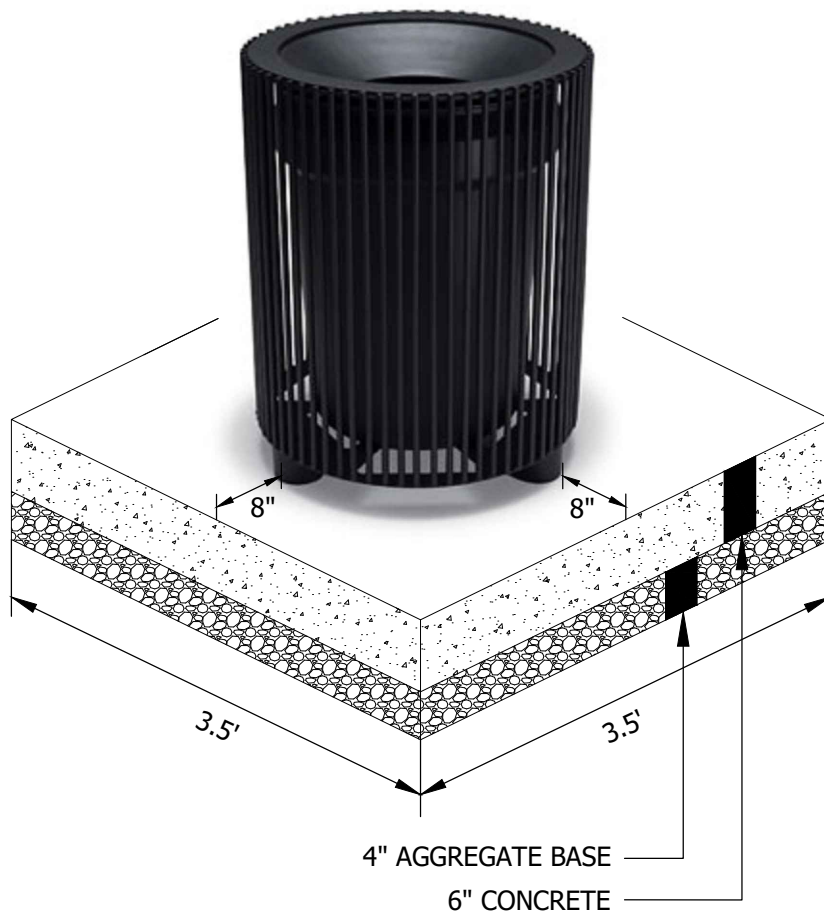
STANDARD DETAILS

PARK BENCH

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
SPECIAL-2



Description	Pattern	Weight	Concrete
32-Gallon Flat Top Lid	Rod (O)	177 lb.	3.5' x 3.5'



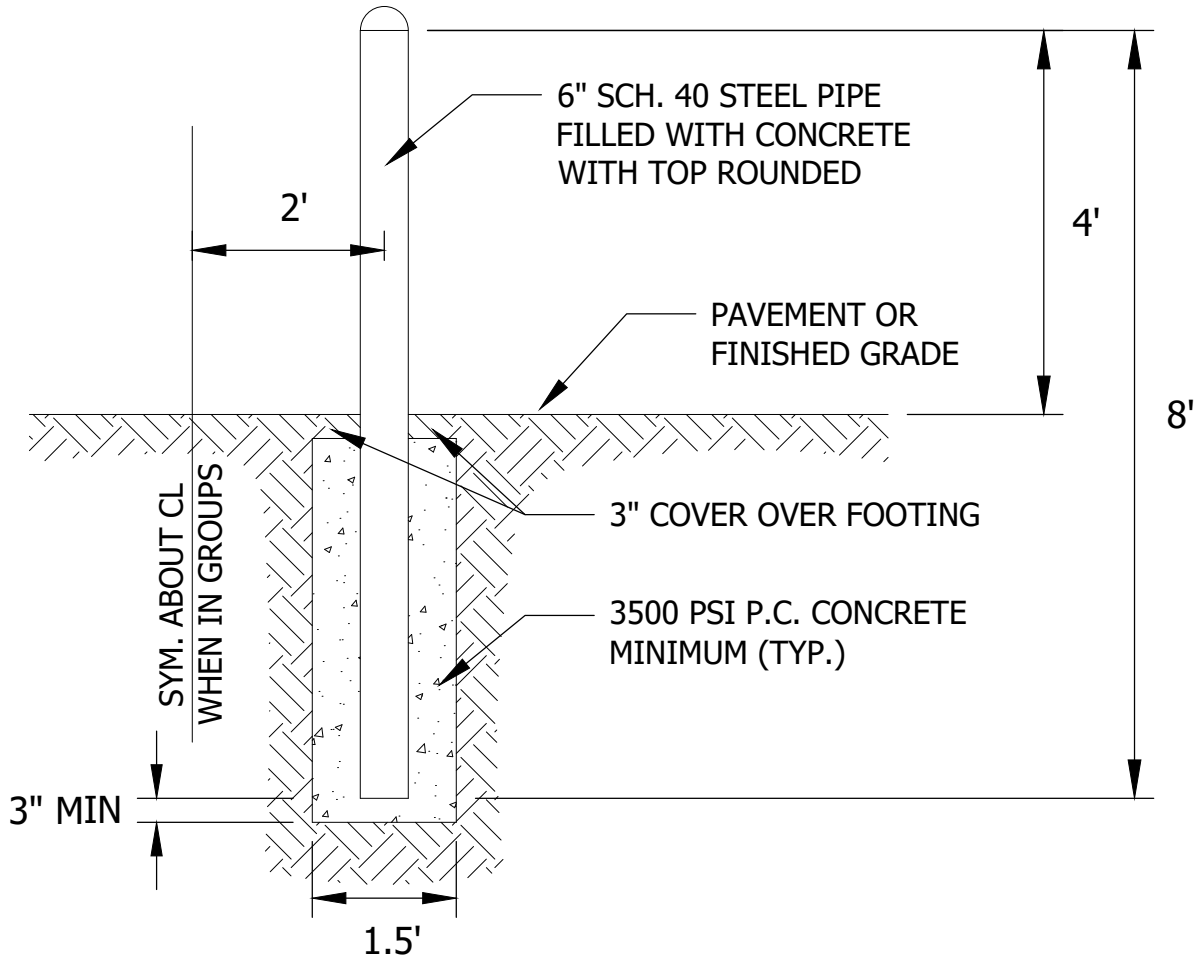
STANDARD DETAILS

TRASH CAN

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
SPECIAL-3



**Cottage
Grove**
Where Pride and Prosperity Meet

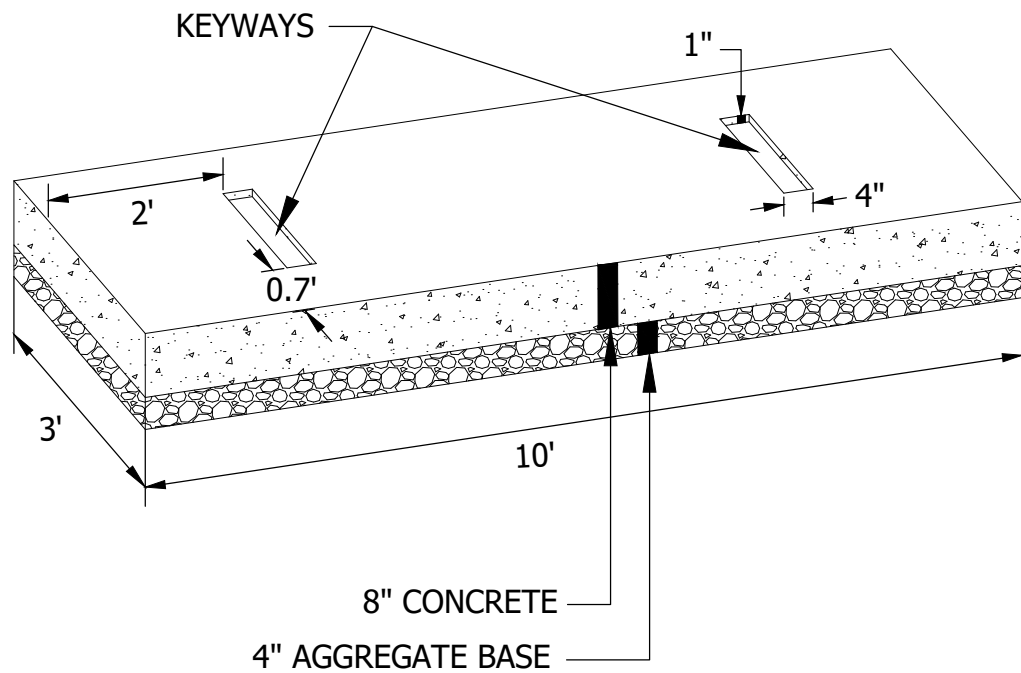
STANDARD DETAILS

BOLLARD

COTTAGE GROVE, MINNESOTA

JANUARY 2024

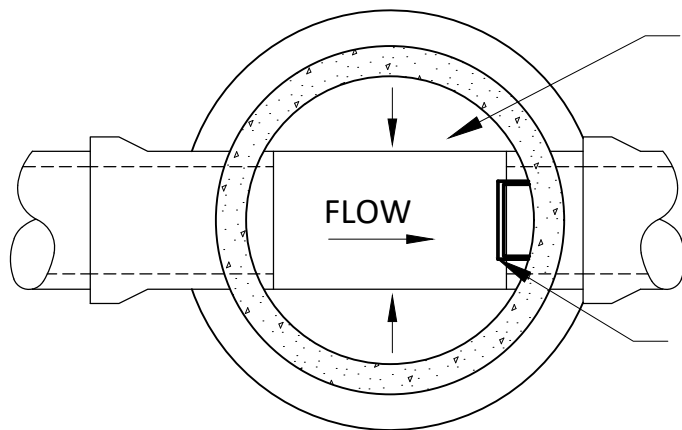
PLATE NO.
SPECIAL-4



STANDARD DETAILS
PARK MONUMENT SIGN
CONCRETE SLAB
COTTAGE GROVE, MINNESOTA

JANUARY 2024

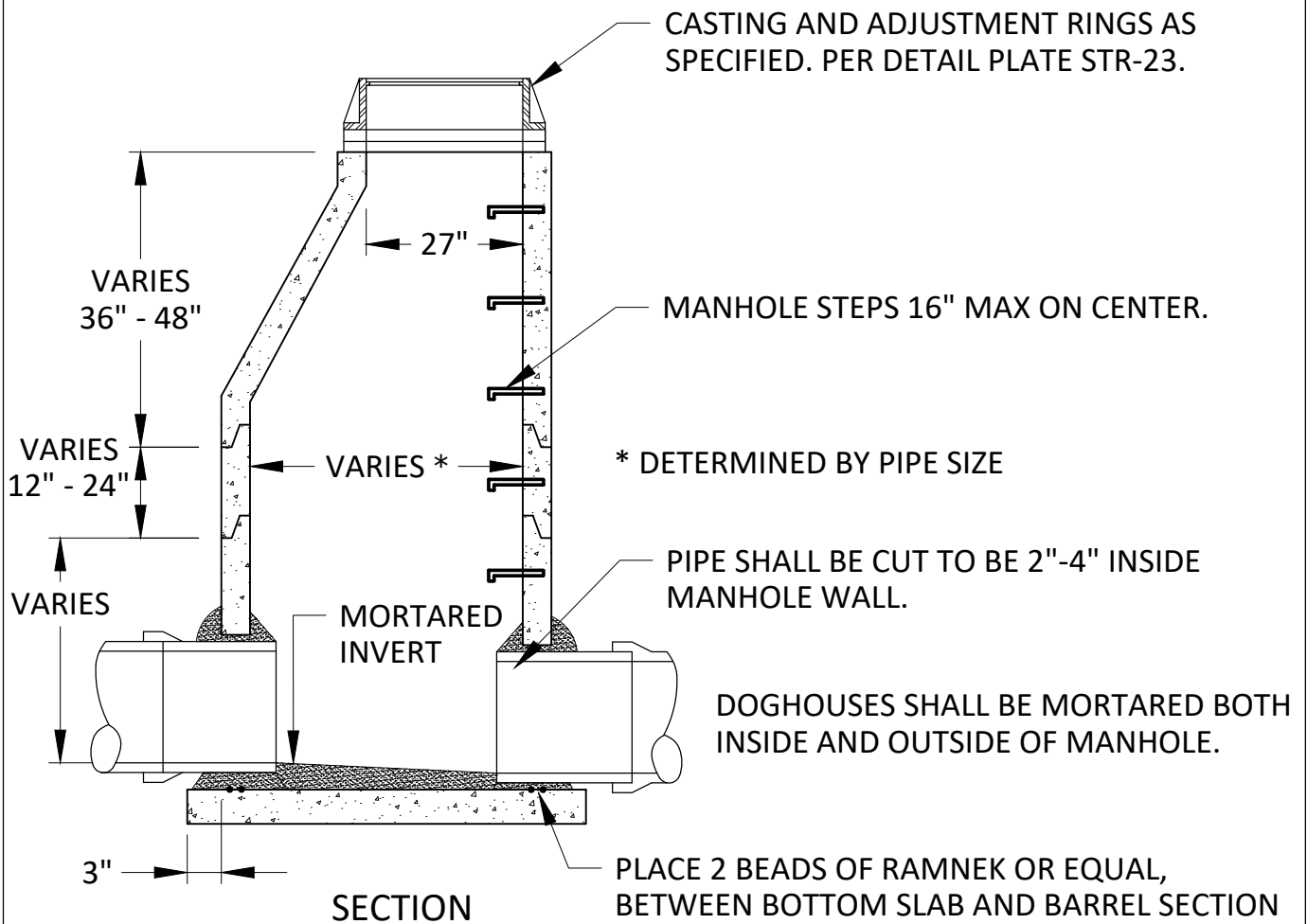
PLATE NO.
SPECIAL-5



MORTAR BOTTOM OF MANHOLE TO 1/2
DIAMETER AT PIPE AND SLOPE MORTAR
2" TOWARD INVERT.

MANHOLE STEPS SHALL BE PLACED
SO THAT OFFSET VERTICAL PORTION
OF CONE IS FACING DOWNSTREAM.

PLAN



CASTING AND ADJUSTMENT RINGS AS
SPECIFIED. PER DETAIL PLATE STR-23.

MANHOLE STEPS 16" MAX ON CENTER.

* DETERMINED BY PIPE SIZE

PIPE SHALL BE CUT TO BE 2"-4" INSIDE
MANHOLE WALL.

DOGHOUSES SHALL BE MORTARED BOTH
INSIDE AND OUTSIDE OF MANHOLE.

PLACE 2 BEADS OF RAMNEK OR EQUAL,
BETWEEN BOTTOM SLAB AND BARREL SECTION

SECTION

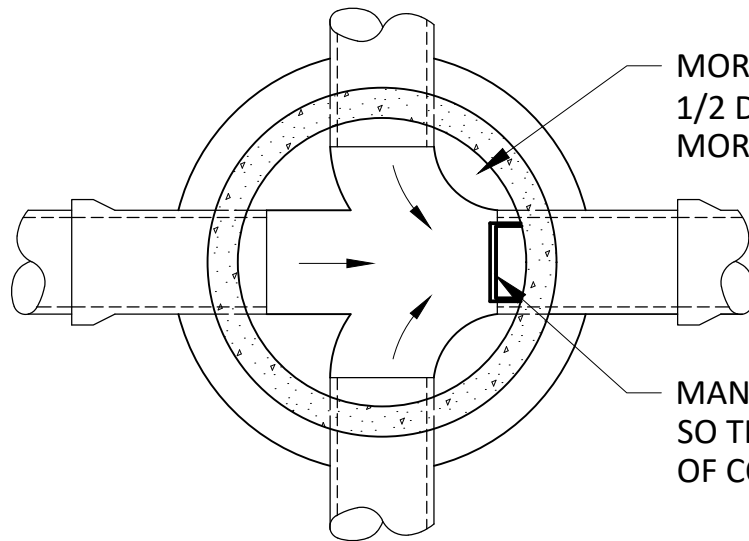


STANDARD DETAILS
STORM SEWER MANHOLE

COTTAGE GROVE, MINNESOTA

JANUARY 2024

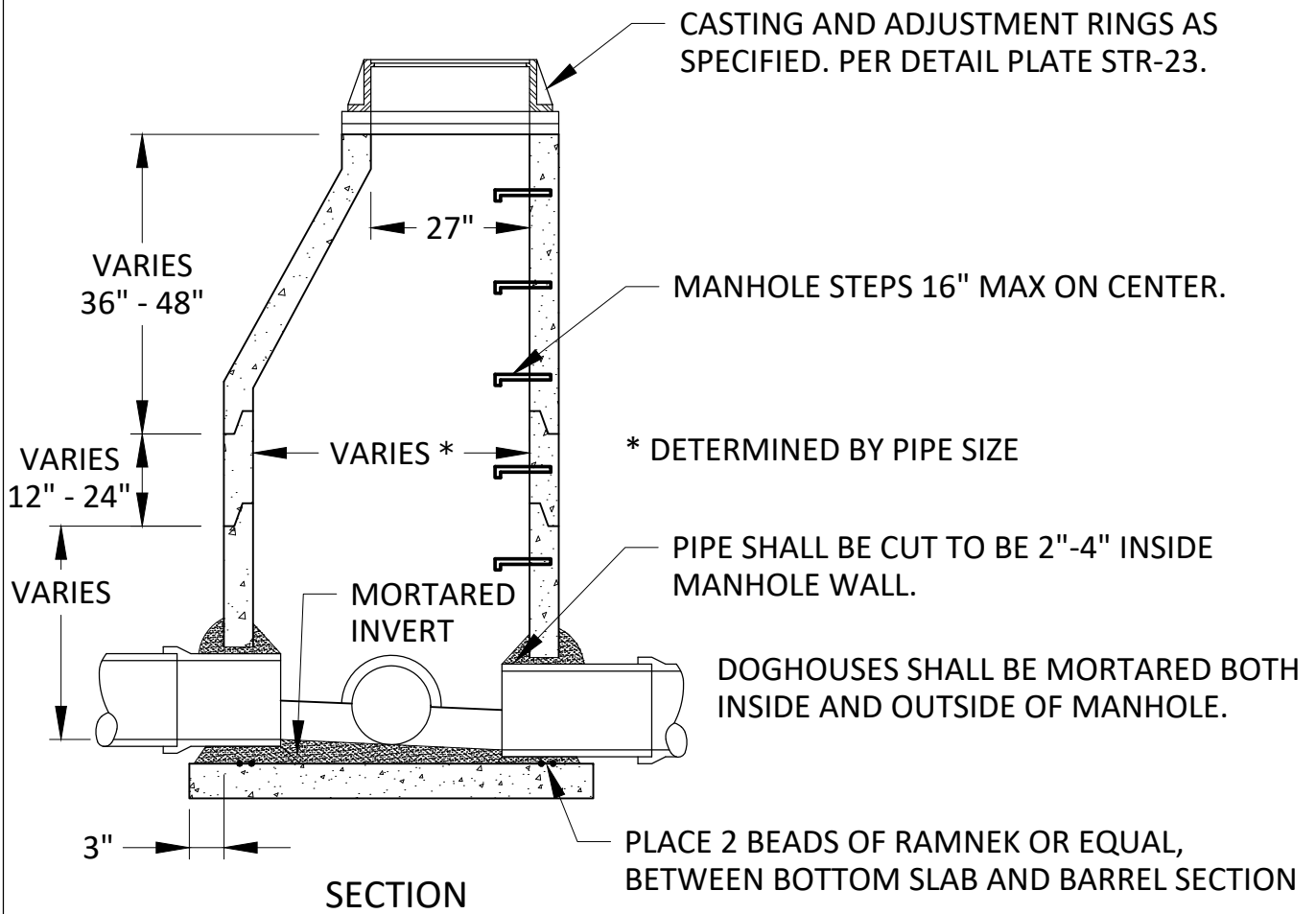
PLATE NO.
STO-1



MORTAR BOTTOM OF MANHOLE TO 1/2 DIAMETER AT PIPE AND SLOPE MORTAR 2" TOWARD INVERT.

MANHOLE STEPS SHALL BE PLACED SO THAT OFFSET VERTICAL PORTION OF CONE IS FACING DOWNSTREAM.

PLAN



CASTING AND ADJUSTMENT RINGS AS SPECIFIED. PER DETAIL PLATE STR-23.

MANHOLE STEPS 16" MAX ON CENTER.

* DETERMINED BY PIPE SIZE

PIPE SHALL BE CUT TO BE 2"-4" INSIDE MANHOLE WALL.

DOGHOUSES SHALL BE MORTARED BOTH INSIDE AND OUTSIDE OF MANHOLE.

PLACE 2 BEADS OF RAMNEK OR EQUAL, BETWEEN BOTTOM SLAB AND BARREL SECTION

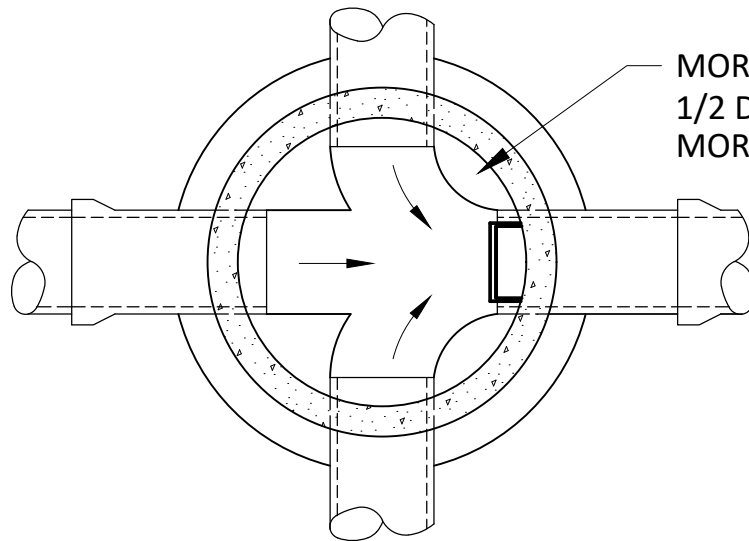
SECTION



STANDARD DETAILS
STORM SEWER
JUNCTION MANHOLE
COTTAGE GROVE, MINNESOTA

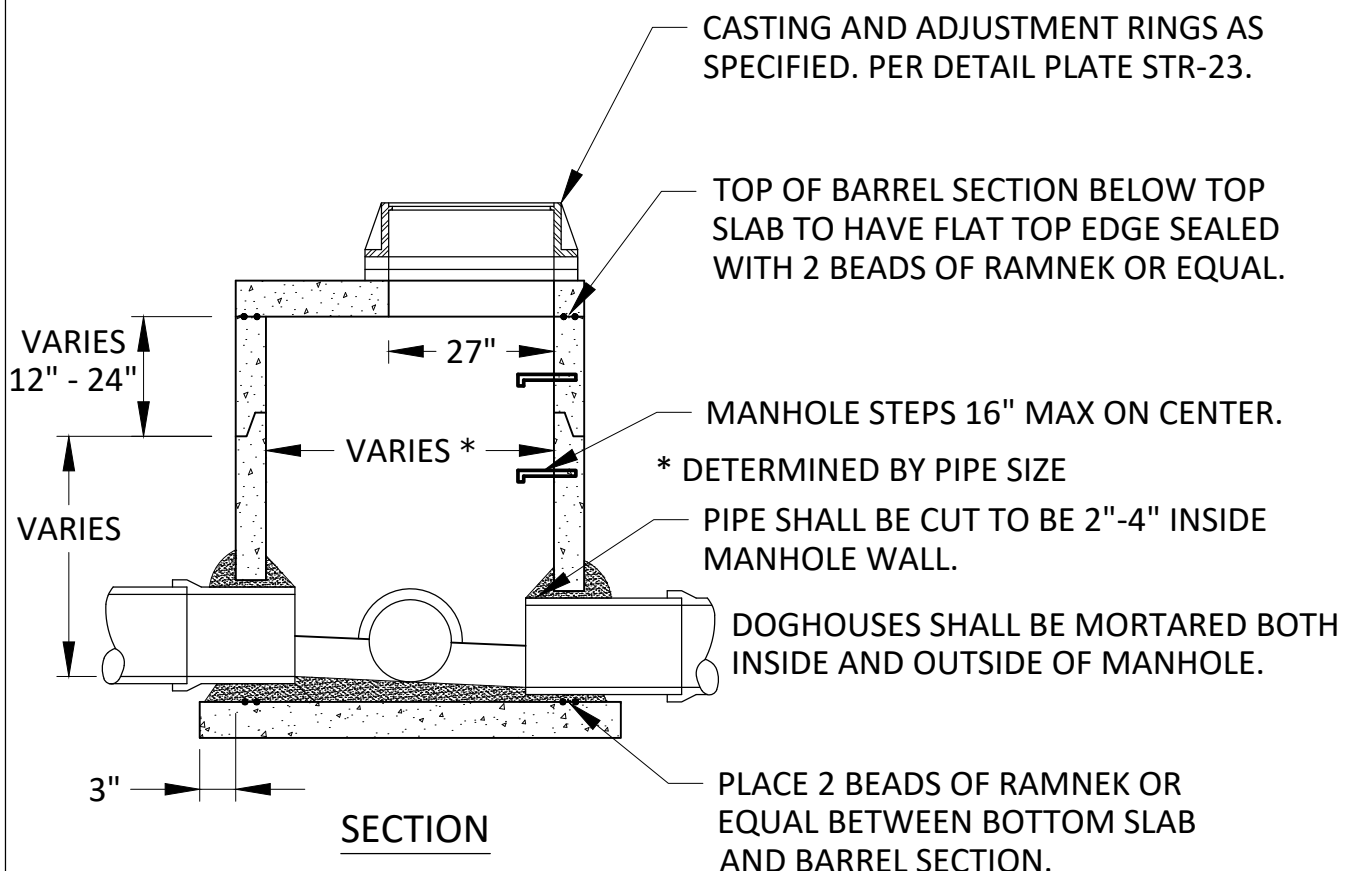
JANUARY 2024

PLATE NO.
STO-2



MORTAR BOTTOM OF MANHOLE TO 1/2 DIAMETER AT PIPE AND SLOPE MORTAR 2" TOWARD INVERT.

PLAN



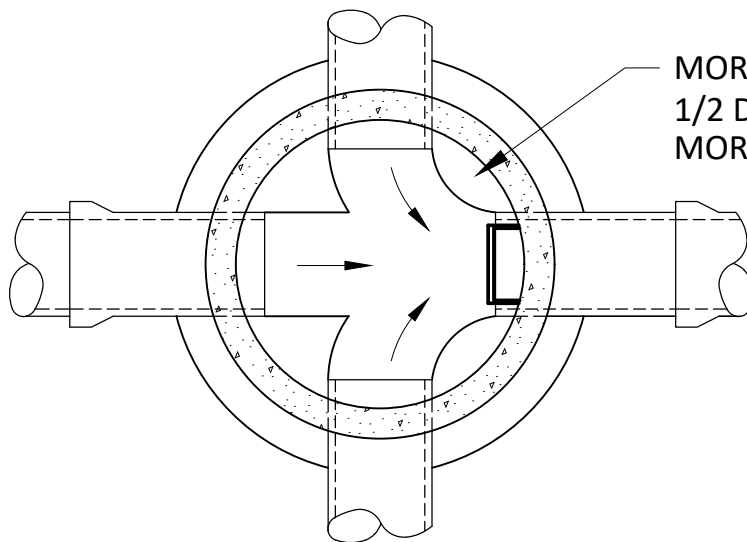
SECTION



STANDARD DETAILS
STORM SEWER JUNCTION MANHOLE
WITH REINFORCED TOP SLAB
COTTAGE GROVE, MINNESOTA

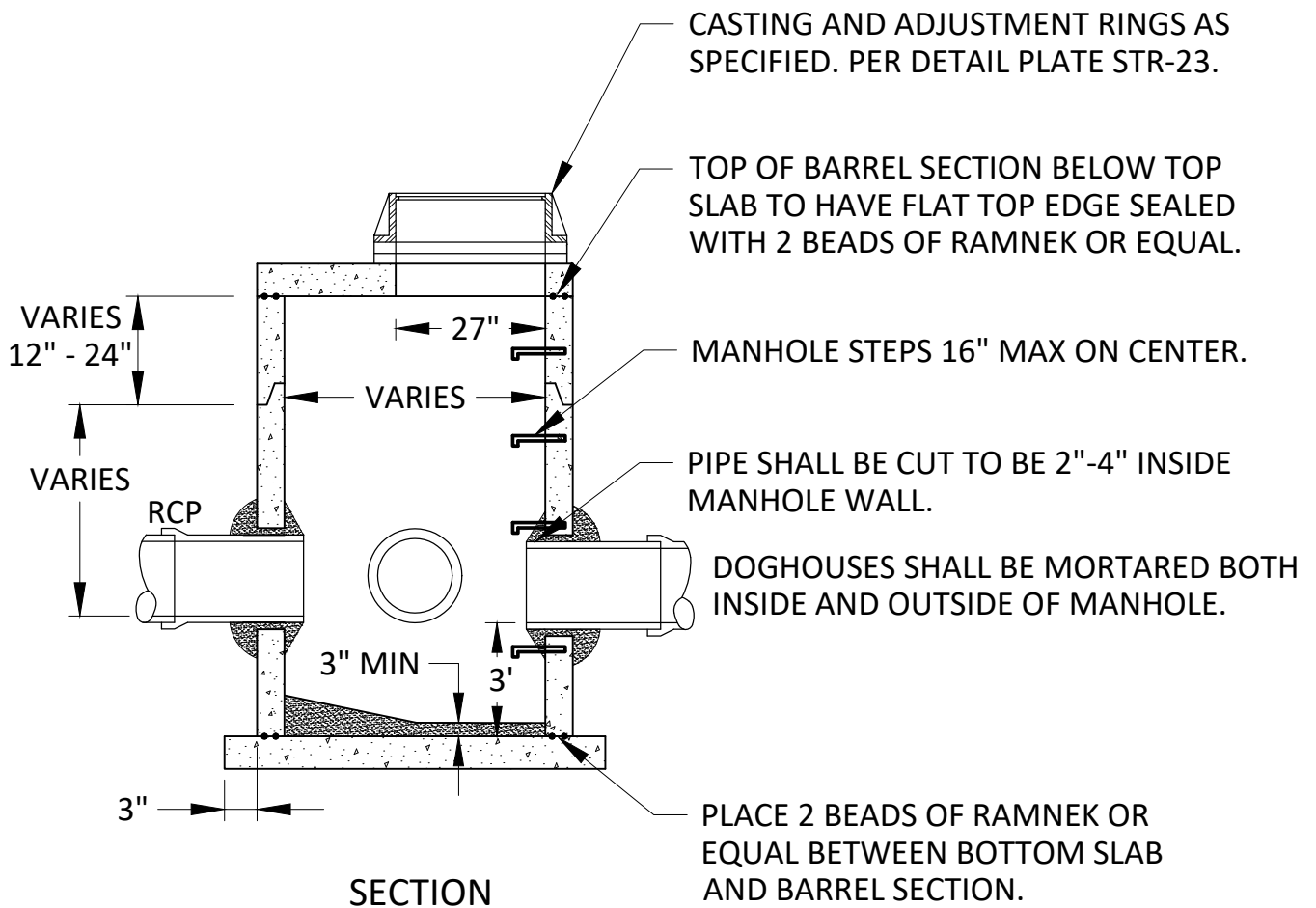
JANUARY 2024

PLATE NO.
STO-3



MORTAR BOTTOM OF MANHOLE TO 1/2 DIAMETER AT PIPE AND SLOPE MORTAR 2" TOWARD INVERT.

PLAN



SECTION



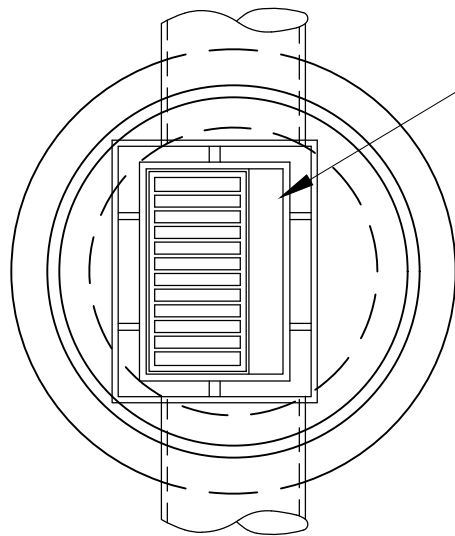
**Cottage
Grove**
Where Pride and Prosperity Meet

STANDARD DETAILS

STORM SEWER JUNCTION MANHOLE
WITH REINFORCED TOP SLAB AND SUMP
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STO-4



PLAN

24"X36" SLAB OPENING FOR CASTING SPECIFIED

DIMENSION FROM BACK OF CURB TO CENTER OF PIPE:

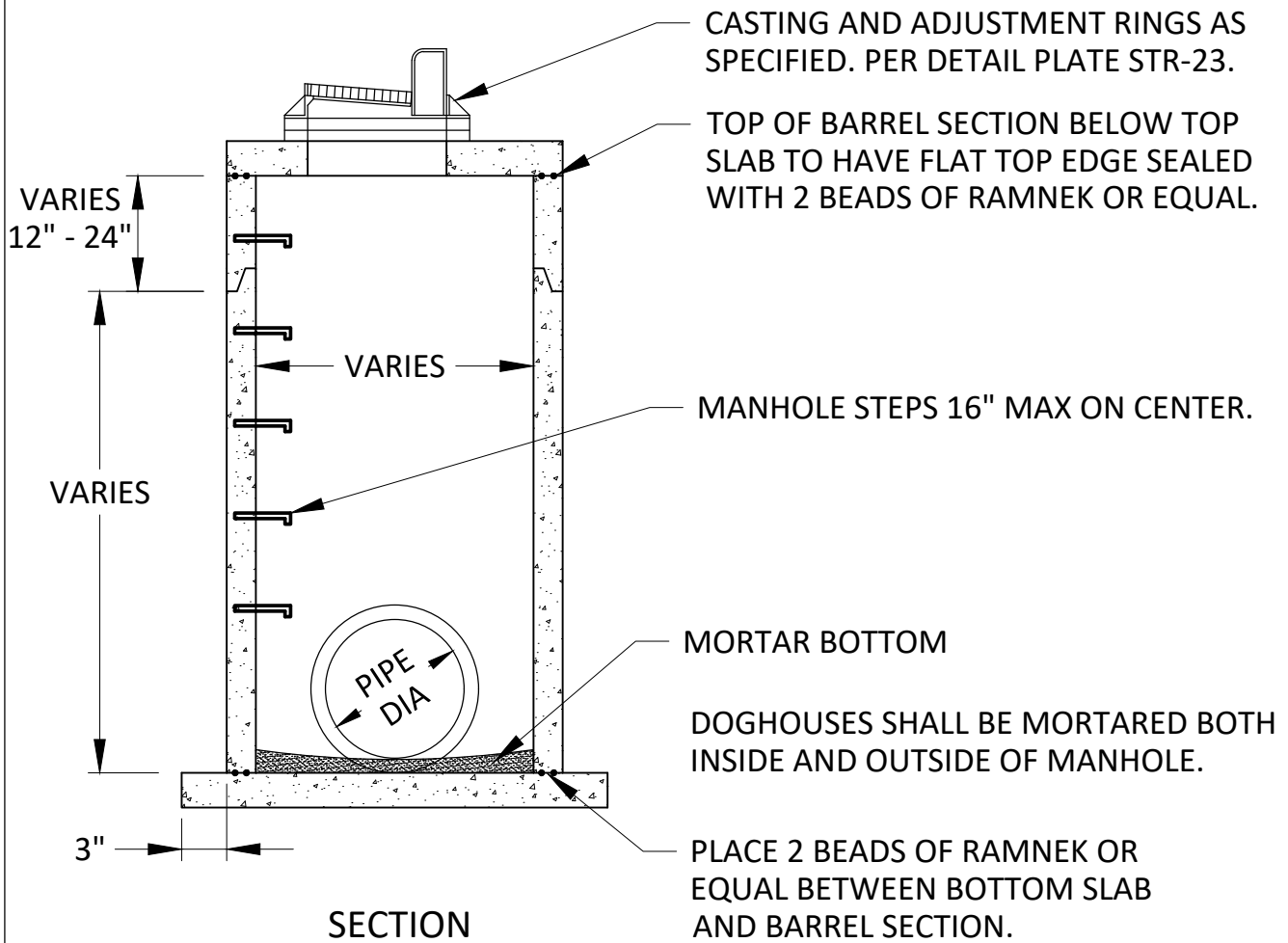
4' DIA. MH - 9" IN FROM BACK OF CURB

5' DIA. MH - 3" IN FROM BACK OF CURB

6' DIA. MH - 3" BEHIND BACK OF CURB

7' DIA. MH - 9" BEHIND BACK OF CURB

8' DIA. MH - 15" BEHIND BACK OF CURB



SECTION

CASTING AND ADJUSTMENT RINGS AS SPECIFIED. PER DETAIL PLATE STR-23.

TOP OF BARREL SECTION BELOW TOP SLAB TO HAVE FLAT TOP EDGE SEALED WITH 2 BEADS OF RAMNEK OR EQUAL.

MANHOLE STEPS 16" MAX ON CENTER.

MORTAR BOTTOM

DOGHOUSES SHALL BE MORTARED BOTH INSIDE AND OUTSIDE OF MANHOLE.

PLACE 2 BEADS OF RAMNEK OR EQUAL BETWEEN BOTTOM SLAB AND BARREL SECTION.



**Cottage
Grove**

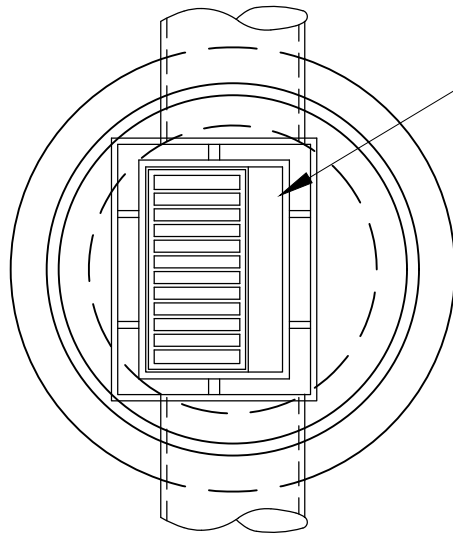
Where Pride and Prosperity Meet

**STANDARD DETAILS
CATCH BASIN MANHOLE**

COTTAGE GROVE, MINNESOTA

JANUARY 2024

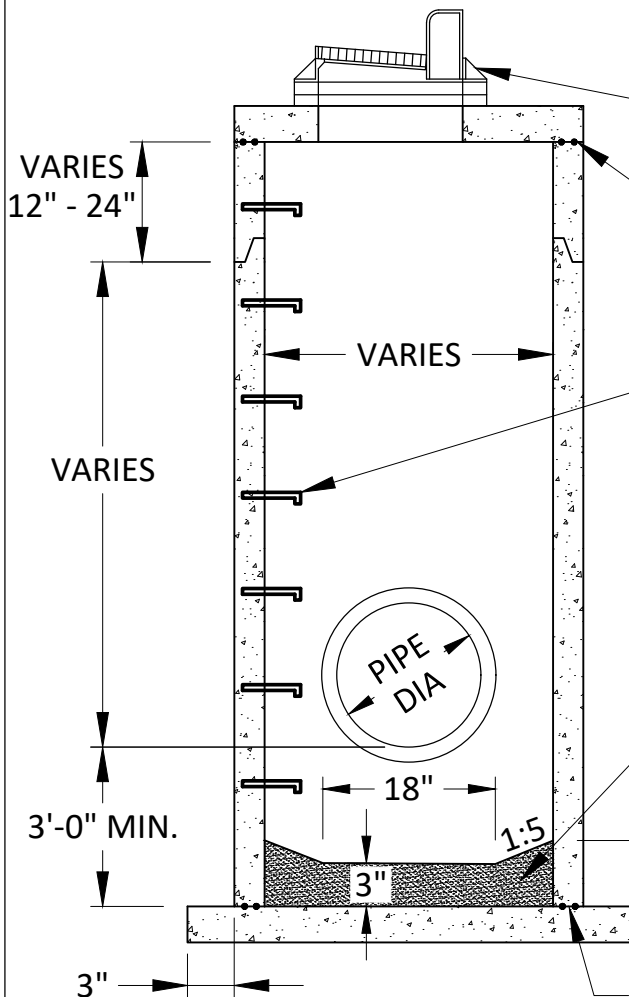
PLATE NO.
STO-5



PLAN

24"X36" SLAB OPENING FOR CASTING SPECIFIED

DIMENSION FROM BACK OF CURB TO CENTER OF PIPE:
 4' DIA. MH - 9" IN FROM BACK OF CURB
 5' DIA. MH - 3" IN FROM BACK OF CURB
 6' DIA. MH - 3" BEHIND BACK OF CURB
 7' DIA. MH - 9" BEHIND BACK OF CURB
 8' DIA. MH - 15" BEHIND BACK OF CURB



SECTION

CASTING AND ADJUSTMENT RINGS AS SPECIFIED. PER DETAIL PLATE STR-23.

TOP OF BARREL SECTION BELOW TOP SLAB TO HAVE FLAT TOP EDGE SEALED WITH 2 BEADS OF RAMNEK OR EQUAL.

MANHOLE STEPS 16" MAX ON CENTER.

DOGHOUSES SHALL BE MORTARED BOTH INSIDE AND OUTSIDE OF MANHOLE.

MORTAR BOTTOM

* A

4' DIA. STRUCTURE	6"
5' DIA. STRUCTURE	8"
6' DIA. STRUCTURE	9"

PLACE 2 BEADS OF RAMNEK OR EQUAL BETWEEN BOTTOM SLAB AND BARREL SECTION.



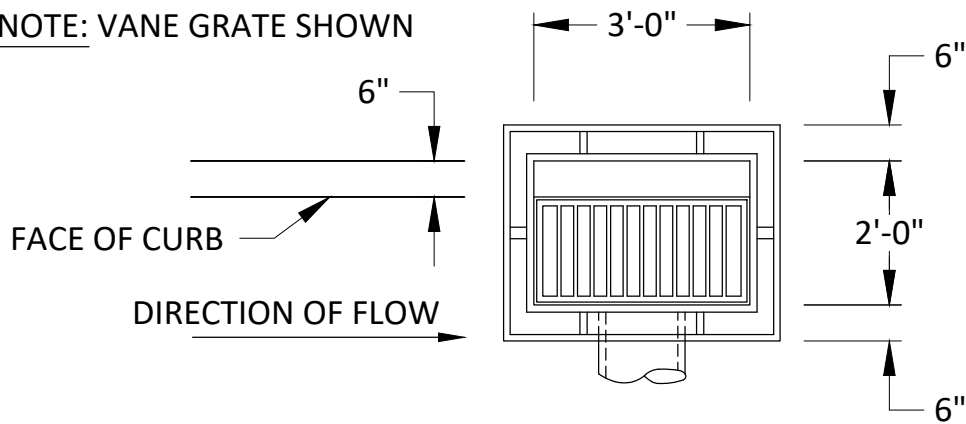
**Cottage
Grove**
Where Pride and Prosperity Meet

STANDARD DETAILS
 CATCH BASIN MANHOLE WITH SUMP
 COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
 STO-6

NOTE: VANE GRATE SHOWN

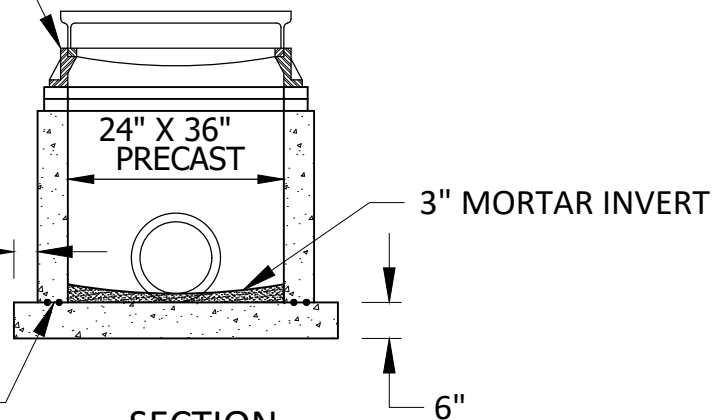


PLAN

CASTING AND ADJUSTMENT
RINGS AS SPECIFIED.
PER DETAIL PLATE STR-23.

DOGHOUSES SHALL BE
MORTARED ON BOTH THE
INSIDE AND OUTSIDE.

PLACE 2 BEADS OF RAMNEK OR
EQUAL BETWEEN BOTTOM SLAB
AND BARREL SECTION.



SECTION



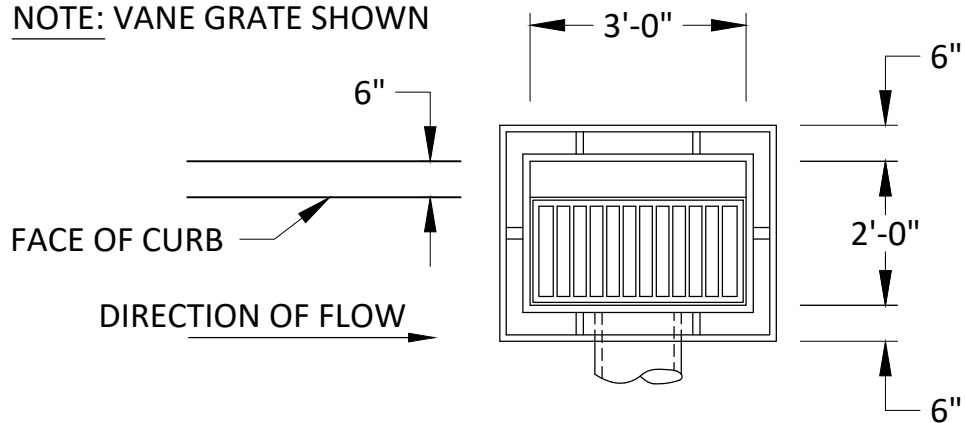
STANDARD DETAILS
CATCH BASIN

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STO-7

NOTE: VANE GRATE SHOWN

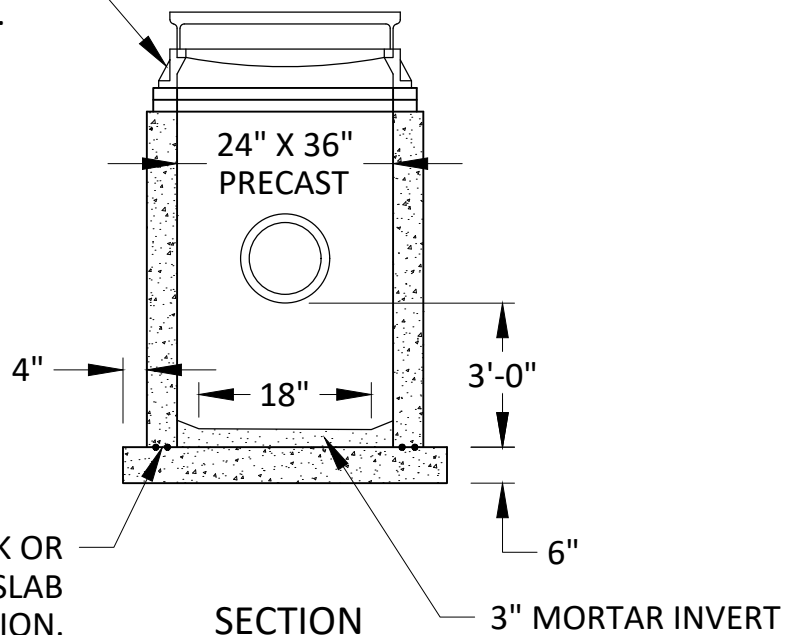


PLAN

CASTING AND ADJUSTMENT
RINGS AS SPECIFIED.
PER DETAIL PLATE STR-23.

DOGHOUSES SHALL BE
MORTARED ON BOTH THE
INSIDE AND OUTSIDE.

PLACE 2 BEADS OF RAMNEK OR
EQUAL BETWEEN BOTTOM SLAB
AND BARREL SECTION.



SECTION

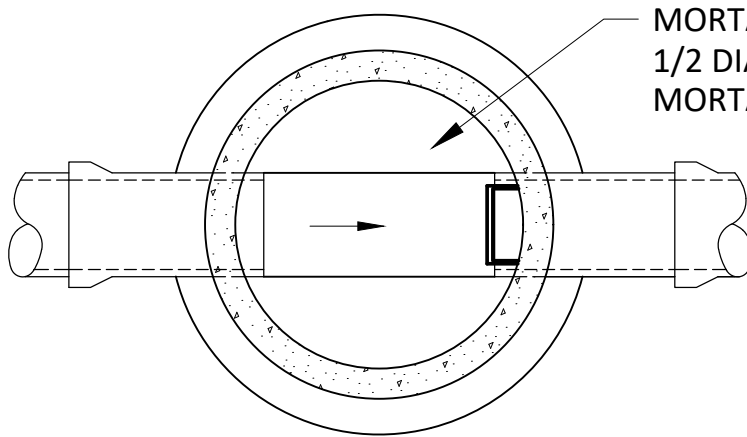


STANDARD DETAILS
CATCH BASIN WITH SUMP

COTTAGE GROVE, MINNESOTA

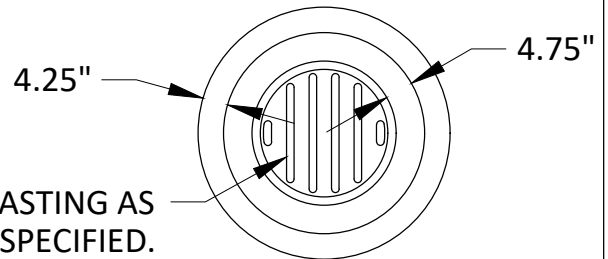
JANUARY 2024

PLATE NO.
STO-8



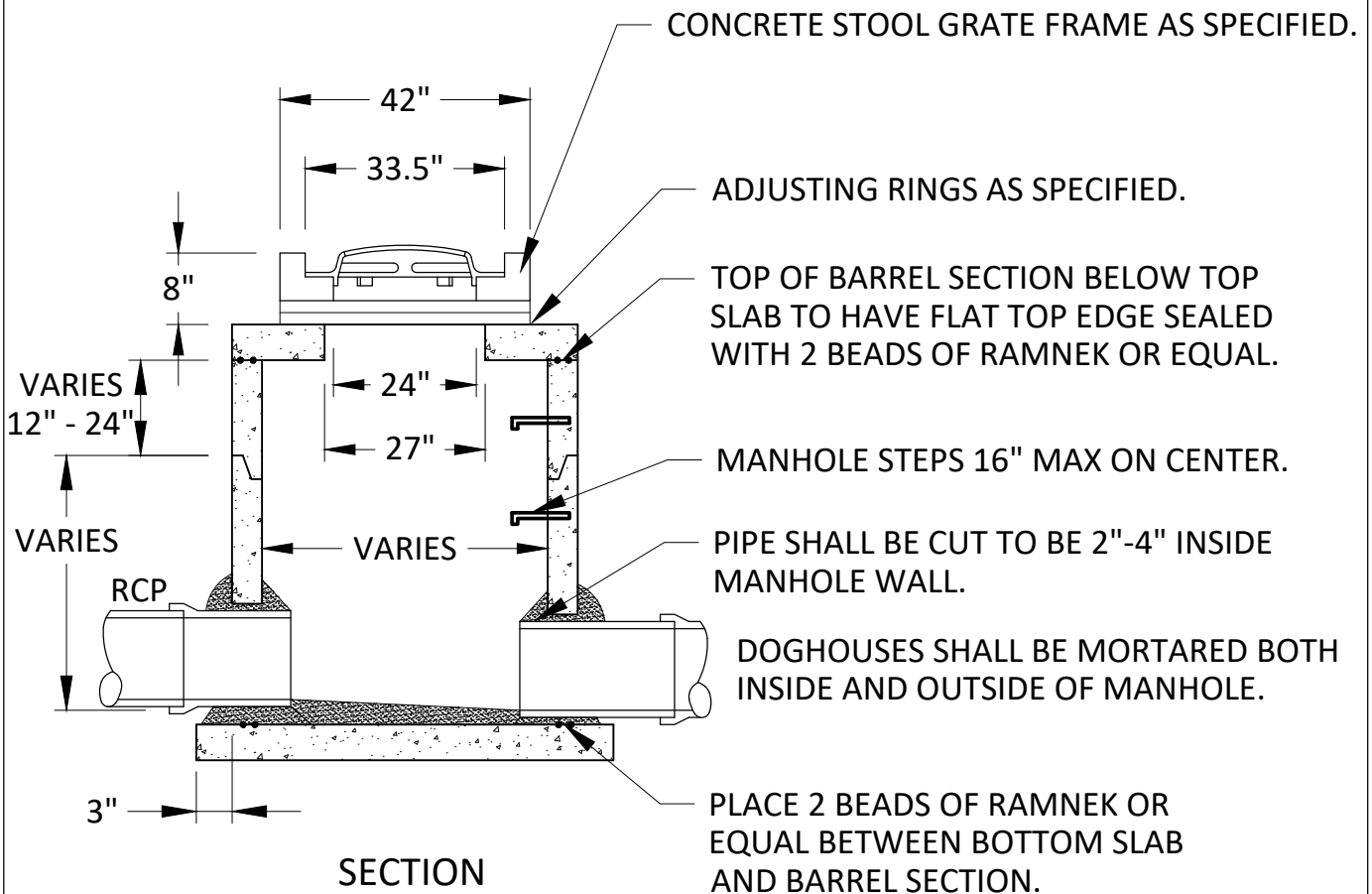
MORTAR BOTTOM OF MANHOLE TO
1/2 DIAMETER AT PIPE AND SLOPE
MORTAR 2" TOWARD INVERT.

PLAN



CASTING AS
SPECIFIED.

TOP VIEW - GRATE FRAME



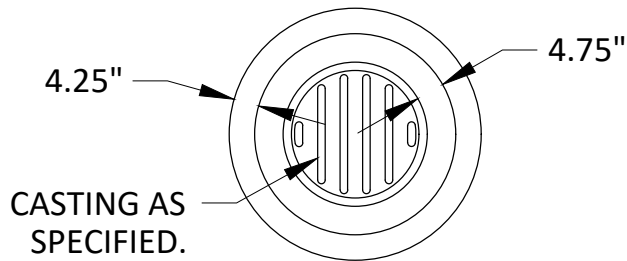
SECTION



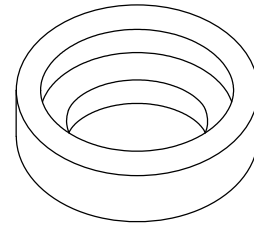
STANDARD DETAILS
OFF STREET CATCH BASIN
WITH CONCRETE STOOL GRATE FRAME
COTTAGE GROVE, MINNESOTA

JANUARY 2024

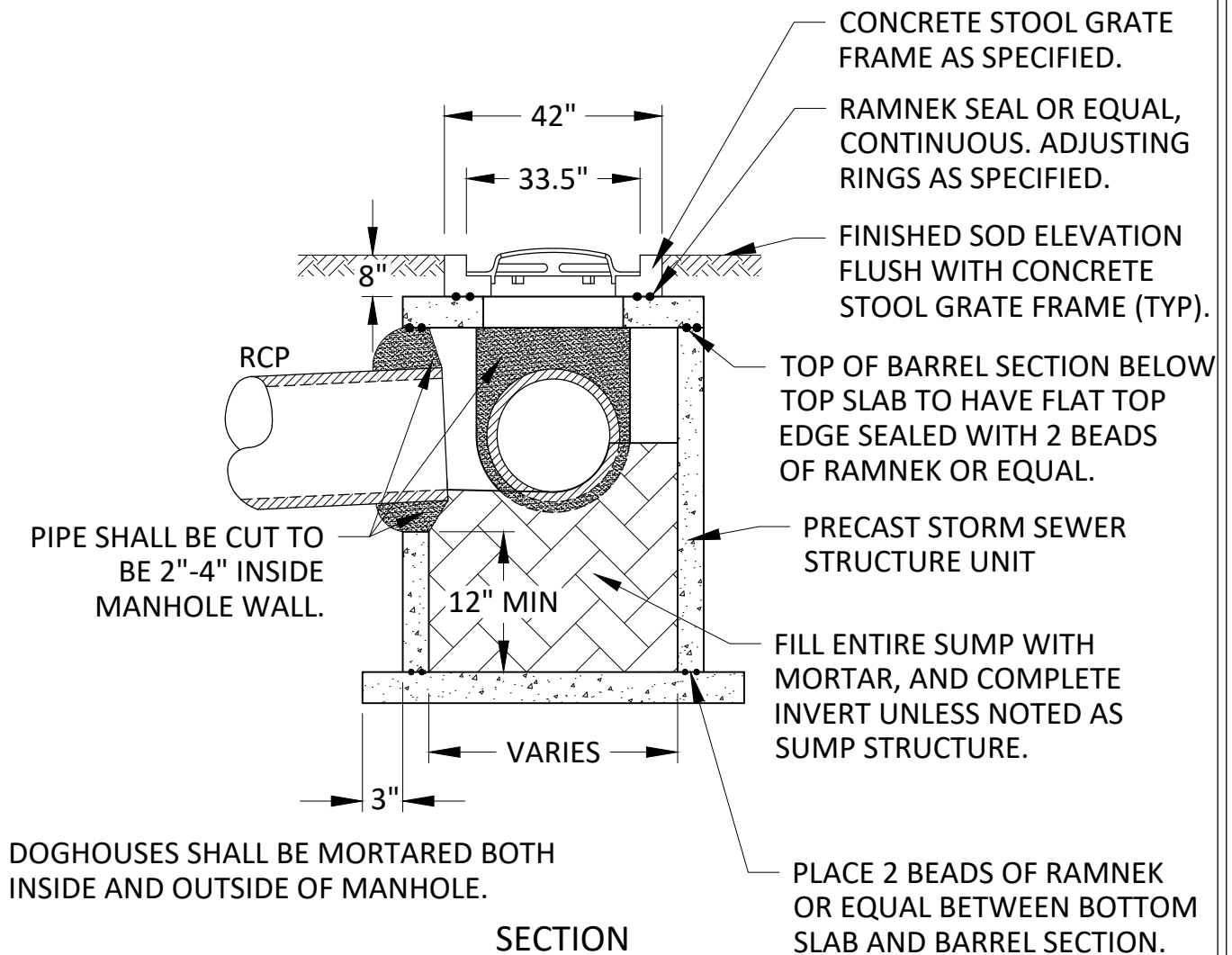
PLATE NO.
STO-9



TOP VIEW - GRATE FRAME



ISOMETRIC



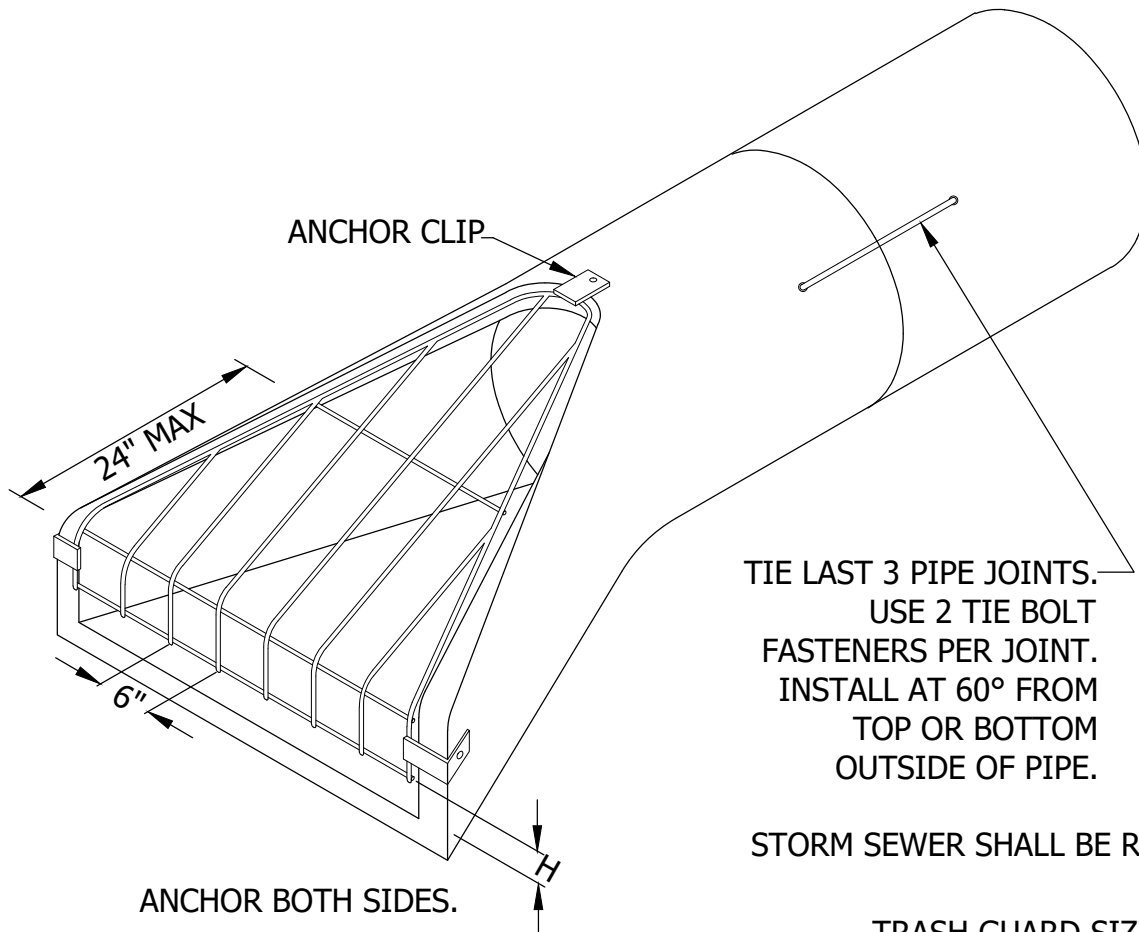
SECTION



STANDARD DETAILS
SHALLOW OFF STREET CATCH BASIN
WITH CONCRETE STOOL GRATE FRAME
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STO-10



TIE LAST 3 PIPE JOINTS.
USE 2 TIE BOLT
FASTENERS PER JOINT.
INSTALL AT 60° FROM
TOP OR BOTTOM
OUTSIDE OF PIPE.

STORM SEWER SHALL BE RCP.

ISOMETRIC

PIPE SIZE	TRASH GUARD SIZING		
	BARS	H'	BOLTS
12"-18"	3/4"Ø	3"-4"	5/8"
21"-42"	1"Ø	4"-6"	3/4"
48"-72"	1 1/4"Ø	6"-8"	1"

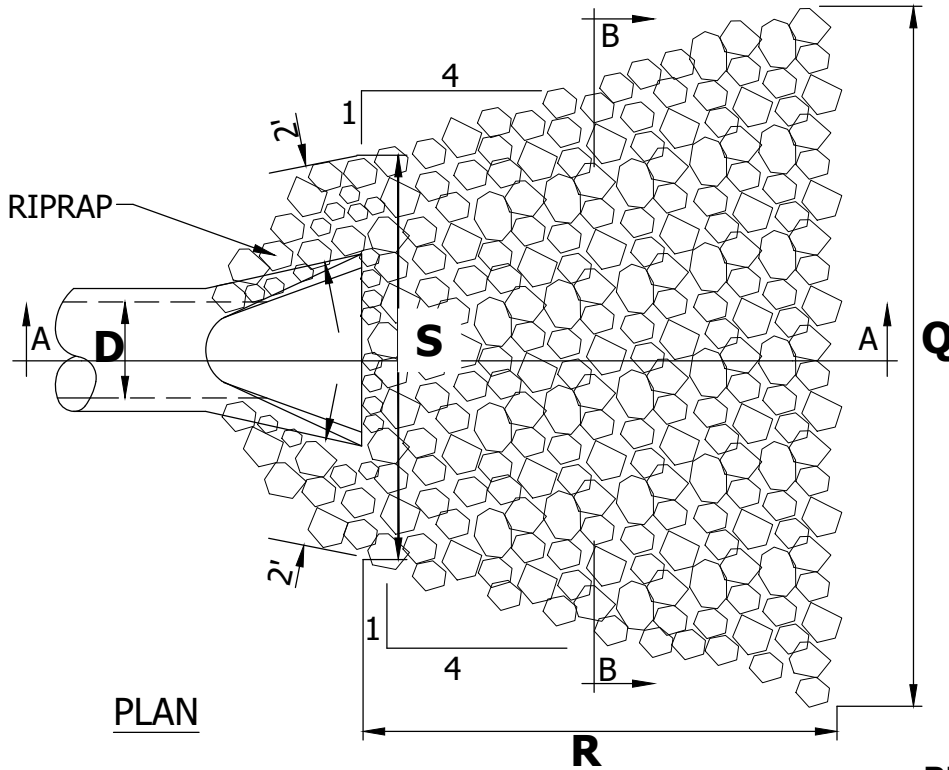
SEE CITY PLATE NO. STO-12 AND STO-13 FOR RIPRAP PLACEMENT.



STANDARD DETAILS
FLARED END SECTION AND
TRASH GAURD
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STO-11



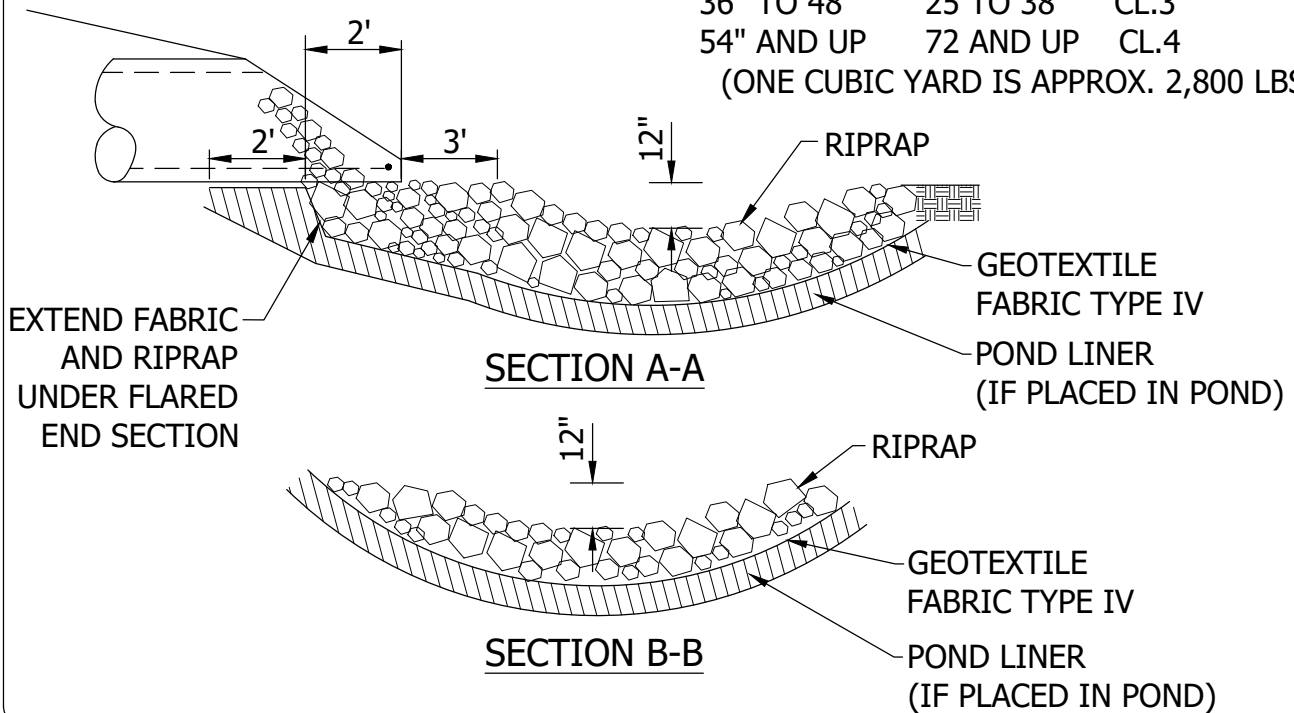
RIPRAP AREA SIZES

D	Q	R	S
12"	11'	15'	7'
24"	15'	15'	9'
36"	19'	15'	11'
48"	20'	16'	12'
54"	25'	22'	13'

RIPRAP REQUIREMENTS

D	CY	CLASS	DEPTH
12" TO 24"	15 TO 20	CL.3	3'
27" TO 33"	20 TO 25	CL.3	3'
36" TO 48"	25 TO 38	CL.3	3'
54" AND UP	72 AND UP	CL.4	4'

(ONE CUBIC YARD IS APPROX. 2,800 LBS.)



**Cottage
Grove**

Where Pride and Prosperity Meet

STANDARD DETAILS

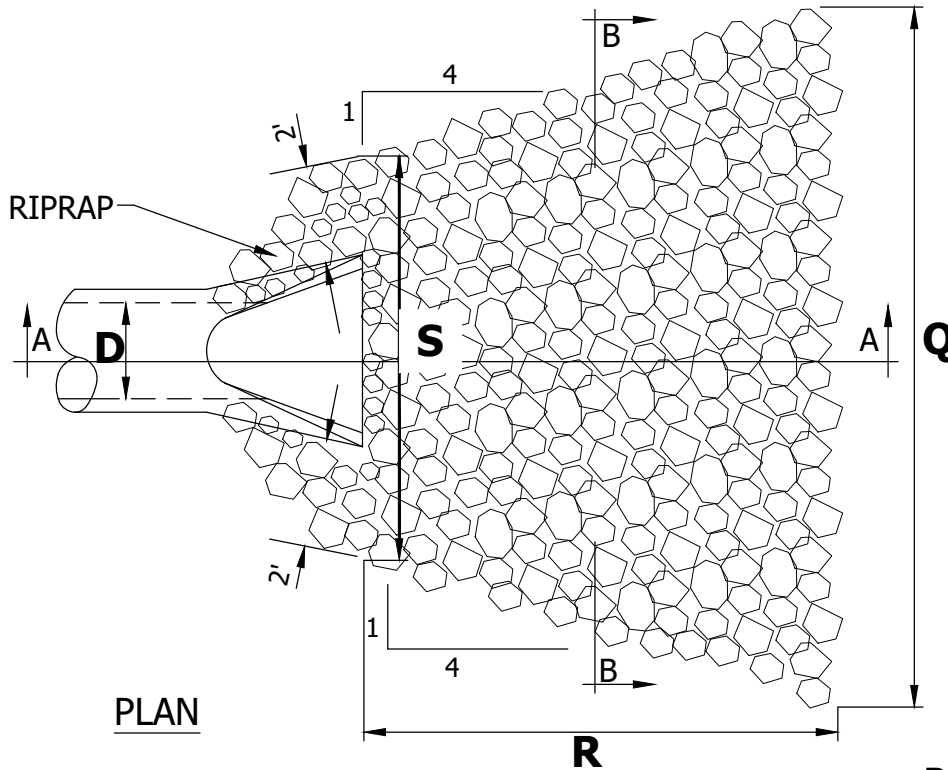
RIPRAP AT FLARED END SECTION

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.

STO-12



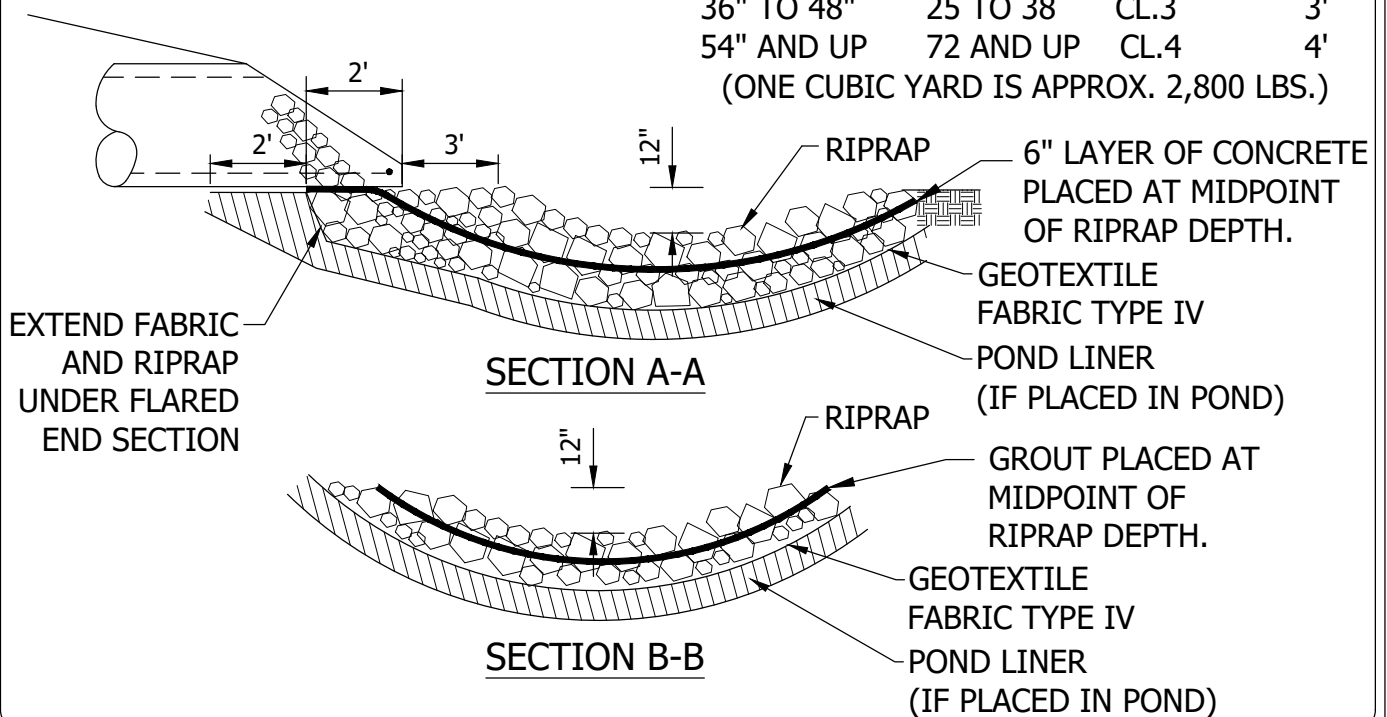
RIPRAP AREA SIZES

D	Q	R	S
12"	11'	15'	7'
24"	15'	15'	9'
36"	19'	15'	11'
48"	20'	16'	12'
54"	25'	22'	13'

RIPRAP REQUIREMENTS

D	CY	CLASS	DEPTH
12" TO 24"	15 TO 20	CL.3	3'
27" TO 33"	20 TO 25	CL.3	3'
36" TO 48"	25 TO 38	CL.3	3'
54" AND UP	72 AND UP	CL.4	4'

(ONE CUBIC YARD IS APPROX. 2,800 LBS.)



**Cottage
Grove**

Where Pride and Prosperity Meet

STANDARD DETAILS

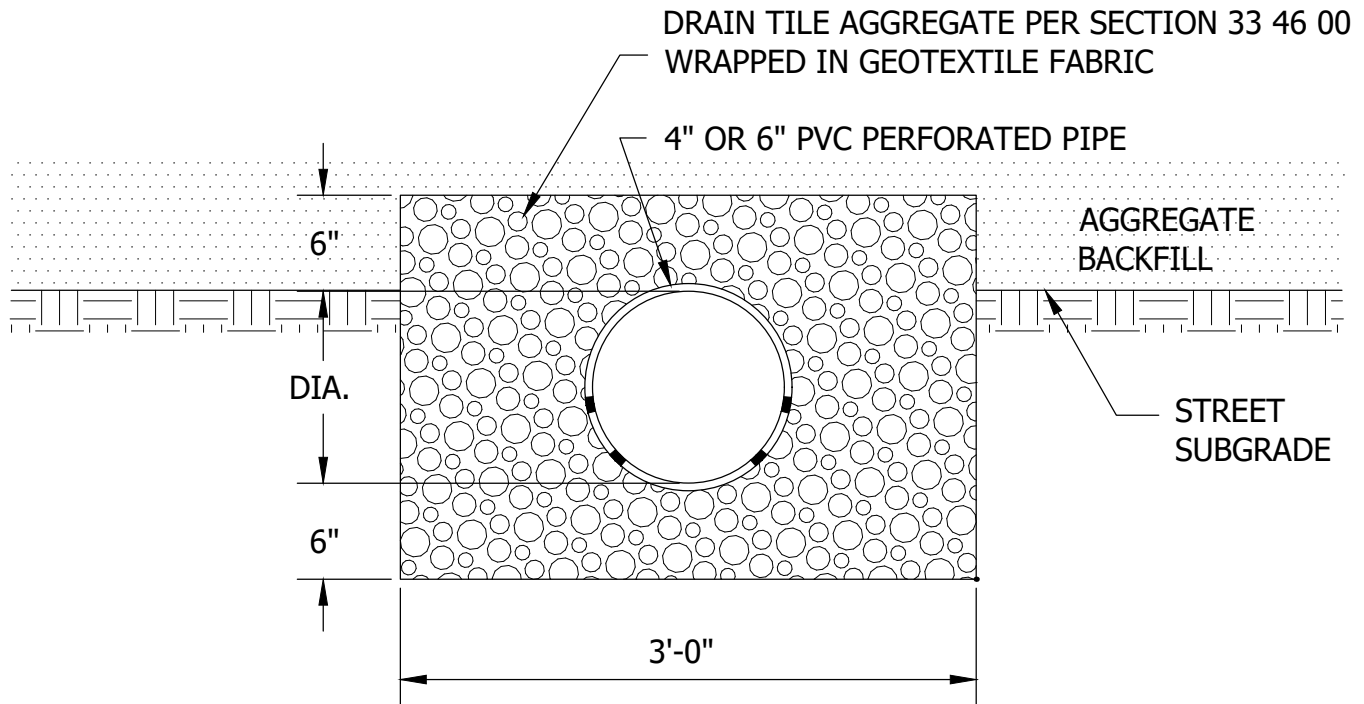
GROUTED RIPRAP AT FLARED END SECTION

COTTAGE GROVE, MINNESOTA

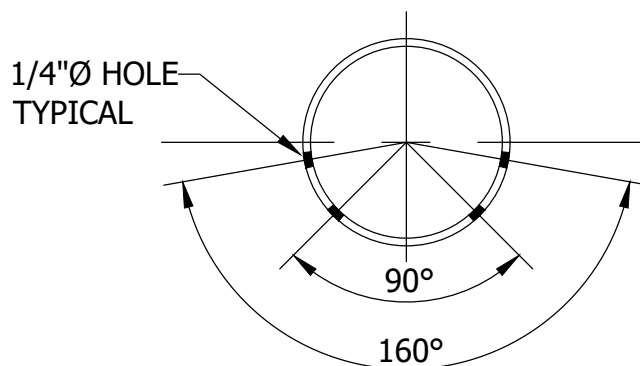
JANUARY 2024

PLATE NO.

STO-13



TRENCH DETAIL



PIPE DETAIL

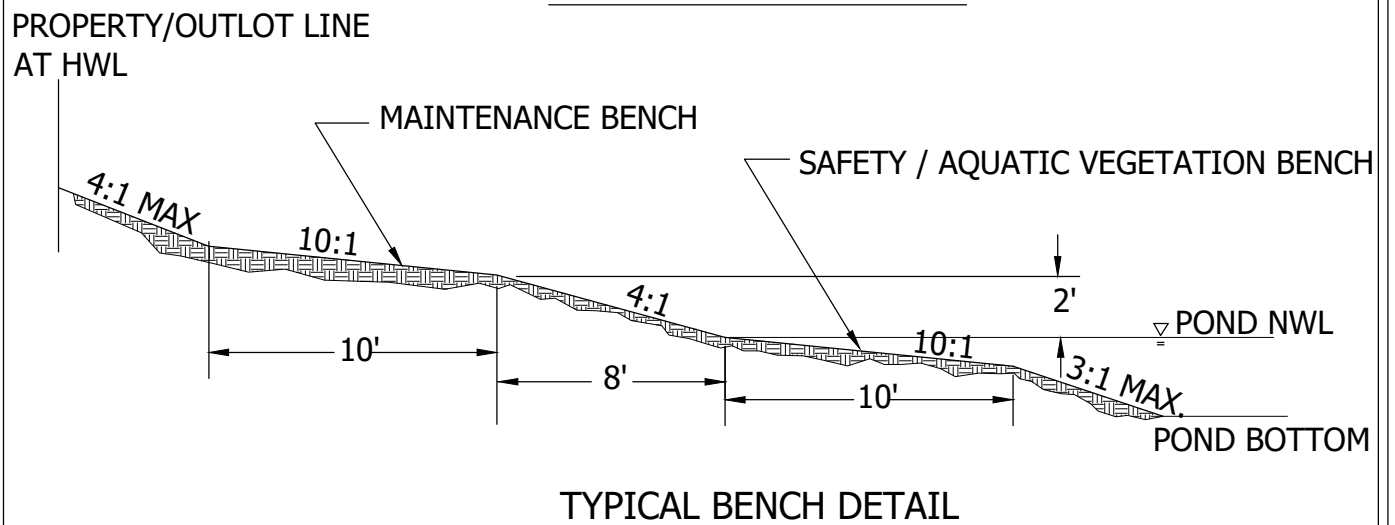
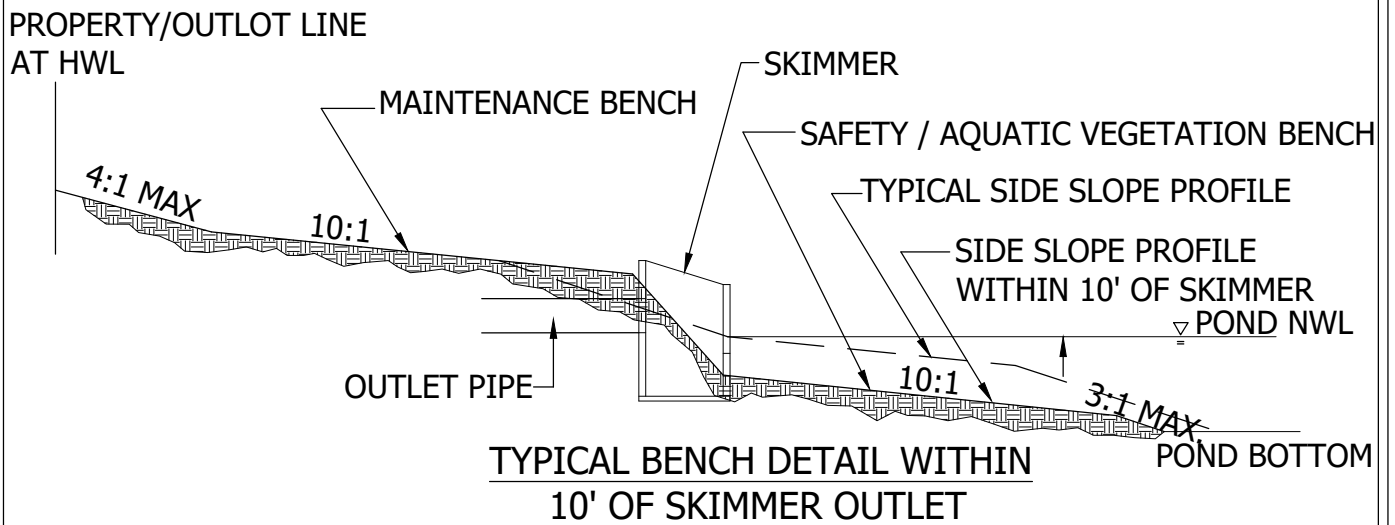


STANDARD DETAILS
PVC PERFORATED PIPE

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STO-14

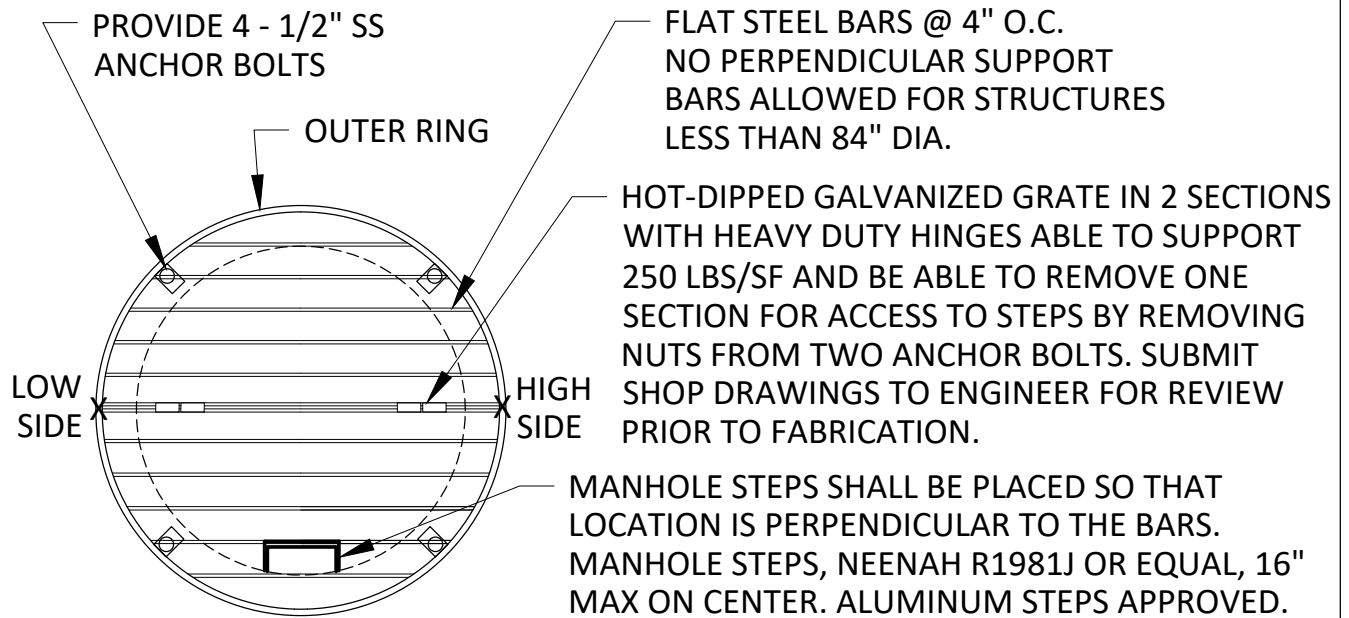


STANDARD DETAILS
TYPICAL BENCH DETAIL

COTTAGE GROVE, MINNESOTA

JANUARY 2024

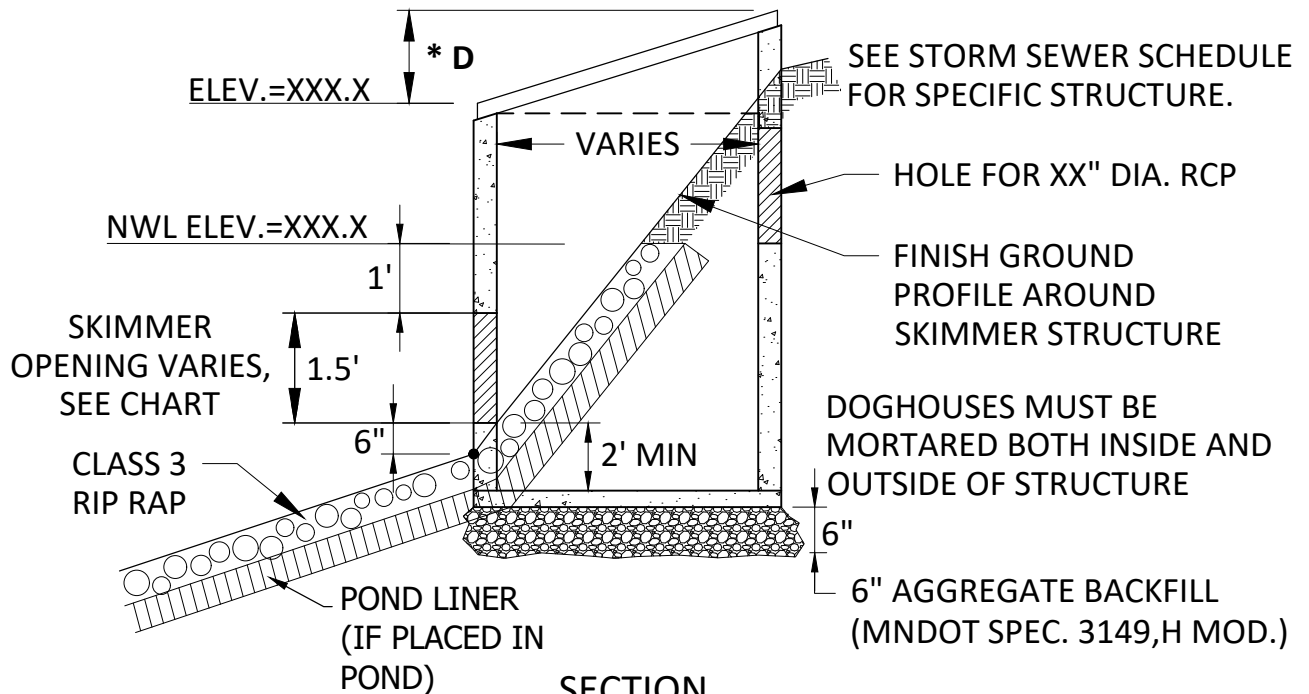
PLATE NO.
STO-15



GRATE DETAIL

MANHOLE DIAMETER	SKIMMER OPENING
4'	3'x1.5'
5'	4.5'x1.5'
6'	6'x1.5'

DIAMETER	* D (TOP OF STRUCTURE SLOPE)
48" DIA	9" OR 18"
>48" DIA	12" OR 24"



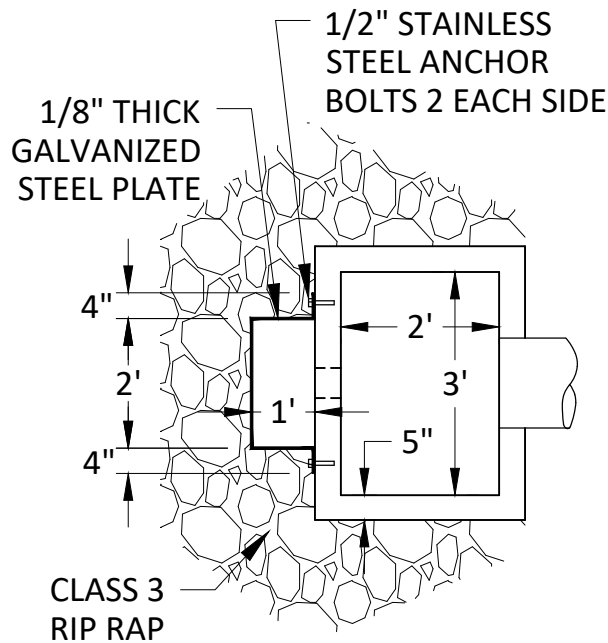
SECTION



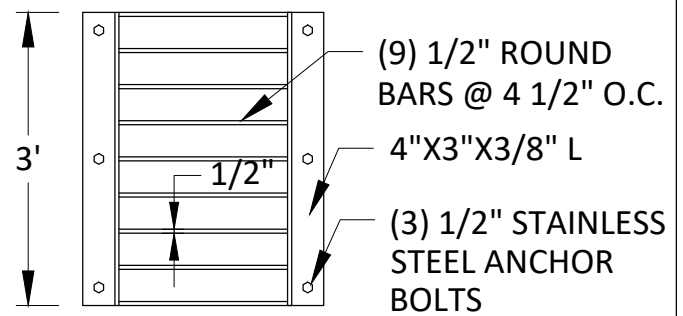
STANDARD DETAILS
STANDARD SKIMMER STRUCTURE
COTTAGE GROVE, MINNESOTA

JANUARY 2024

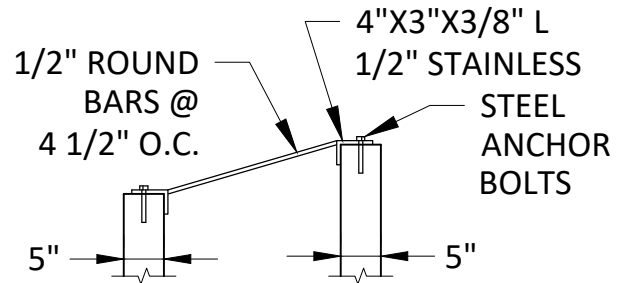
PLATE NO.
STO-16



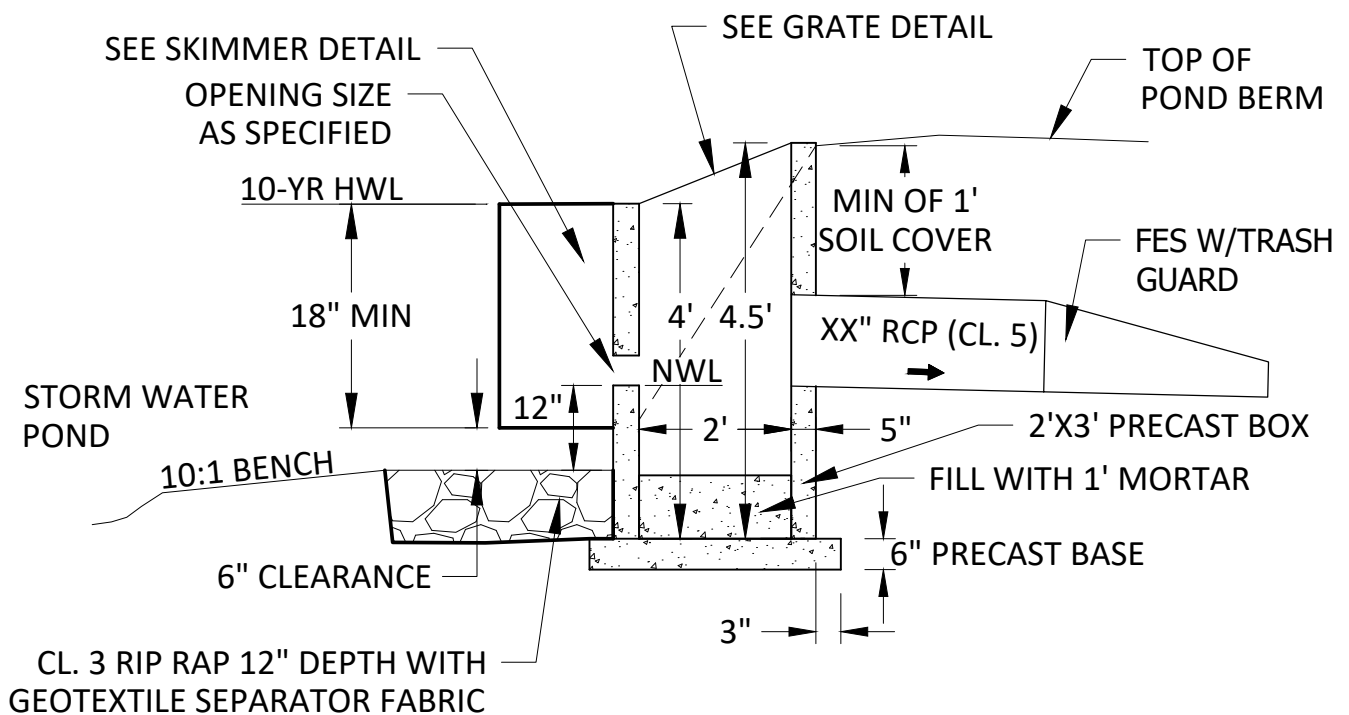
SKIMMER DETAIL



PLAN



GRATE DETAIL



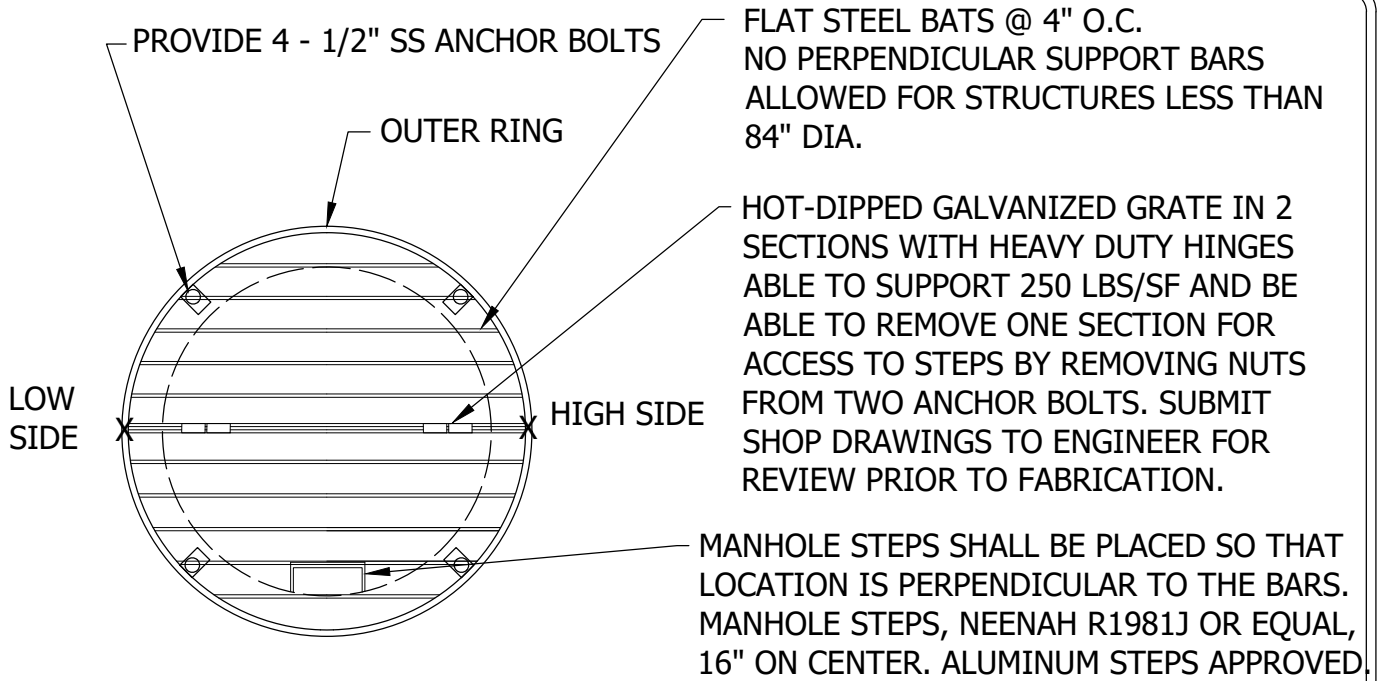
SECTION



STANDARD DETAILS
POND OUTLET SKIMMER STRUCTURE
COTTAGE GROVE, MINNESOTA

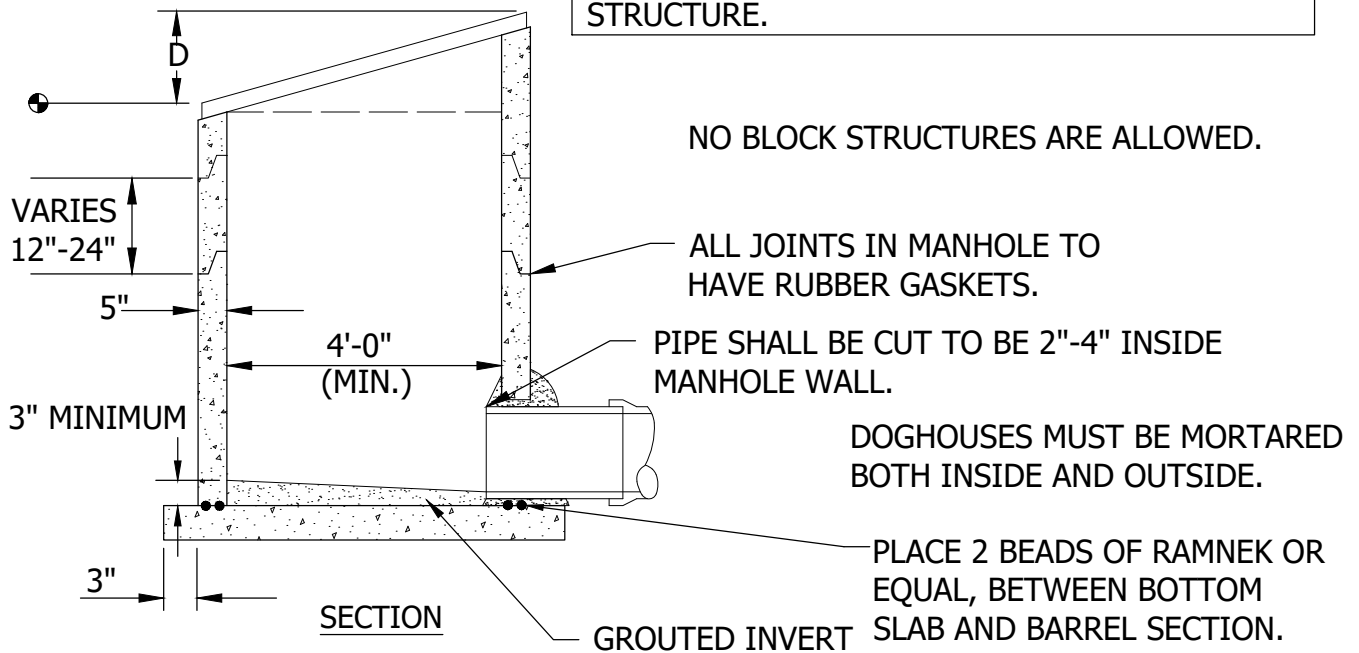
JANUARY 2024

PLATE NO.
STO-17



GRATE DETAIL

<u>DIAMETER</u>	<u>TOP OF STRUCTURE SLOPE (D)</u>
48" DIA.	9" OR 18"
>48" DIA.	12" OR 24"
SEE STORM SEWER SCHEDULE FOR SPECIFIC STRUCTURE.	



NO BLOCK STRUCTURES ARE ALLOWED.

ALL JOINTS IN MANHOLE TO HAVE RUBBER GASKETS.

PIPE SHALL BE CUT TO BE 2"-4" INSIDE MANHOLE WALL.

DOGHOUSES MUST BE MORTARED BOTH INSIDE AND OUTSIDE.

PLACE 2 BEADS OF RAMNEK OR EQUAL, BETWEEN BOTTOM SLAB AND BARREL SECTION.

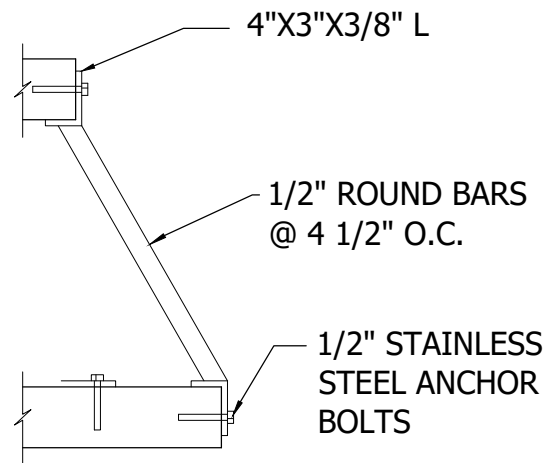
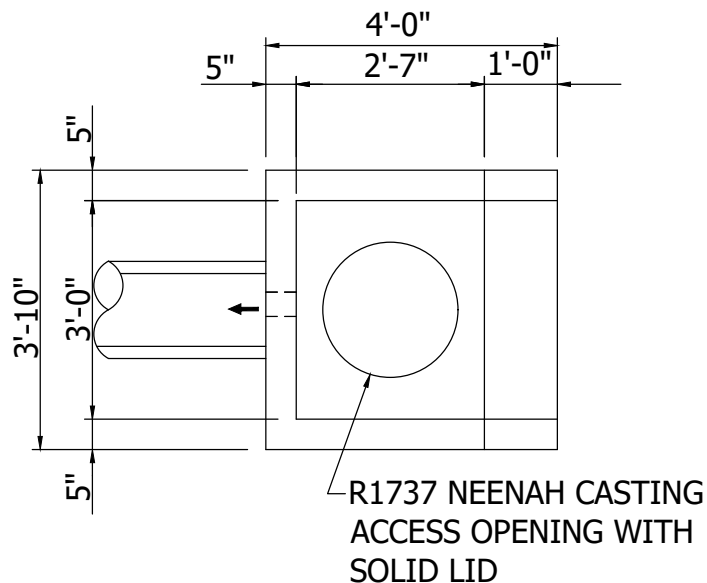


STANDARD DETAILS
STANDARD OVERFLOW STRUCTURE

COTTAGE GROVE, MINNESOTA

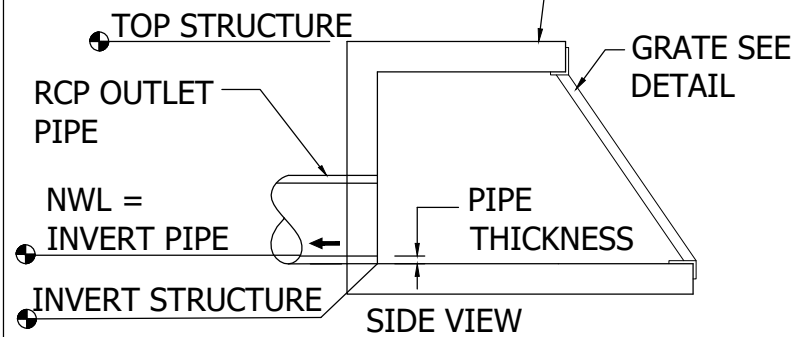
JANUARY 2024

PLATE NO.
STO-18



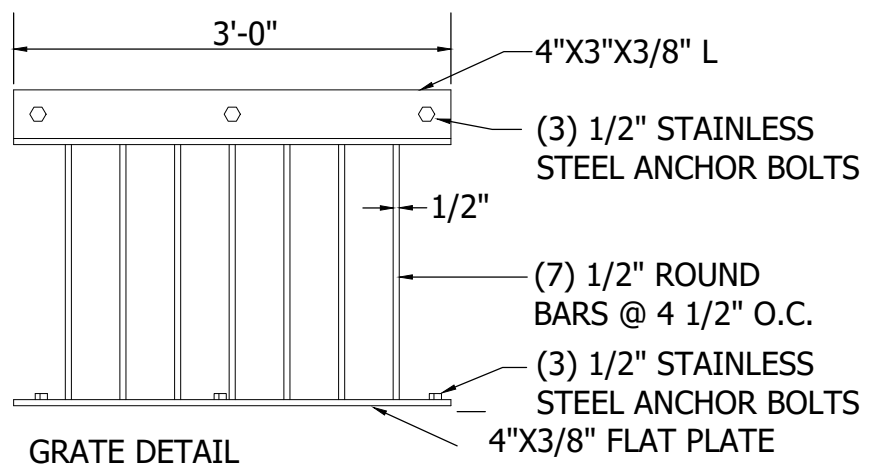
TOP VIEW

790-2 OR R1737 NEENAH CASTING ACCESS OPENING WITH SOLID LID



OUTLET STRUCTURE NOTES:

1. OUTLET STRUCTURE SHALL BE REINFORCED PRECAST CONCRETE.
2. GRATING SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
3. ALL ANCHOR BOLTS SHALL BE 1/2"Ø S.S. EXP. ANCHORS W/ 4" MIN. EMBEDMENT.
4. MAXIMUM SIZE OULET PIPE TO BE 15".



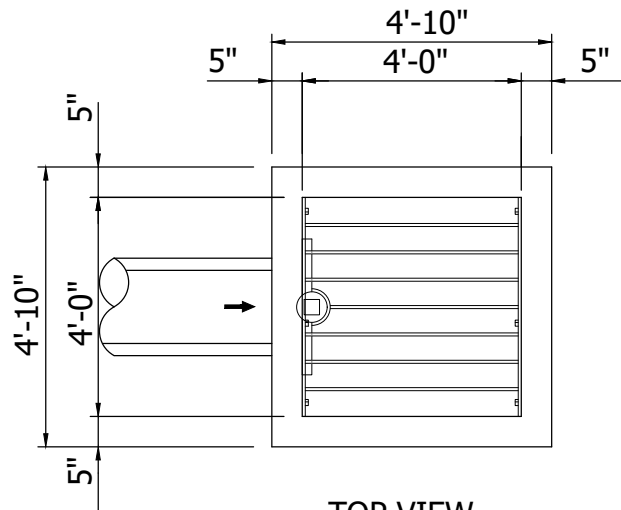
STANDARD DETAILS

OUTLET STRUCTURE

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STO-19

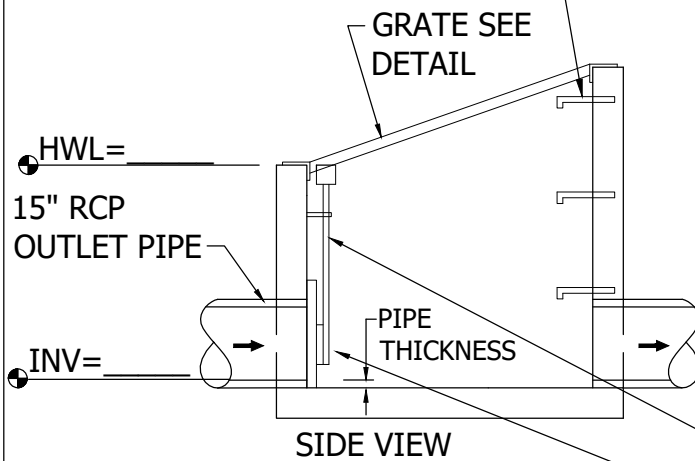
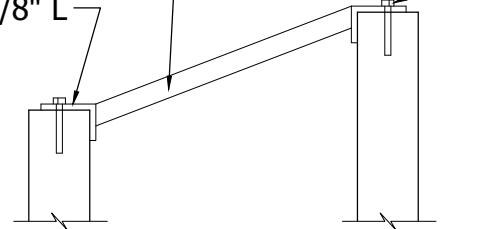


TOP VIEW

MANHOLE STEPS, NEENAH R1981J
OR EQUAL, 16" ON CENTER.
ALUMINUM STEPS APPROVED

1/2" ROUND BARS
@ 4 1/2" O.C.
4"X3"X3/8" L

1/2" STAINLESS
STEEL ANCHOR
BOLTS

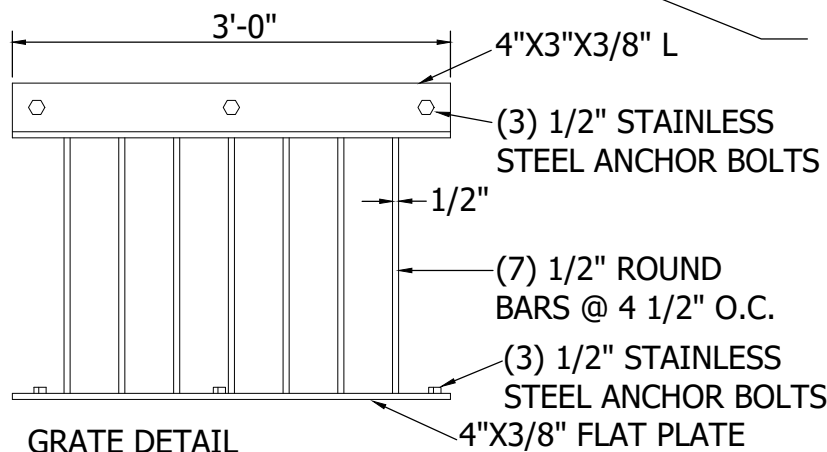


SIDE VIEW

OUTLET STRUCTURE NOTES:

1. OUTLET STRUCTURE SHALL BE REINFORCED PRECAST CONCRETE.
2. GRATING SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
3. ALL ANCHOR BOLTS SHALL BE 1/2" ϕ S.S. EXP. ANCHORS W/ 4" MIN. EMBEDMENT.
4. MAXIMUM SIZE OUTLET PIPE TO BE 15".
5. FOR STRUCTURES CAST IN 2 SECTIONS, MASTIC SHALL BE USED TO PROVIDE A WATERTIGHT SEAL AND SECTIONS SHALL BE SECURED USING WELD PLATES.
6. GRATE MAY BE VARIED WITH APPROVAL FROM ENGINEER
7. ENGINEER TO REVIEW SHOP DRAWINGS BEFORE CONSTRUCTION

SLUICE GATE OPERATING NUT & ROD
SECURE TO WALL W/MOUNTING BRACKET



GRATE DETAIL

SLUICE GATE W/ SPECIFIED ORIFICE

- 12" OPENING N.R. STEM
- 2" SQUARE OPERATING NUT
- 4 1/2" ORIFICE AS SPECIFIED



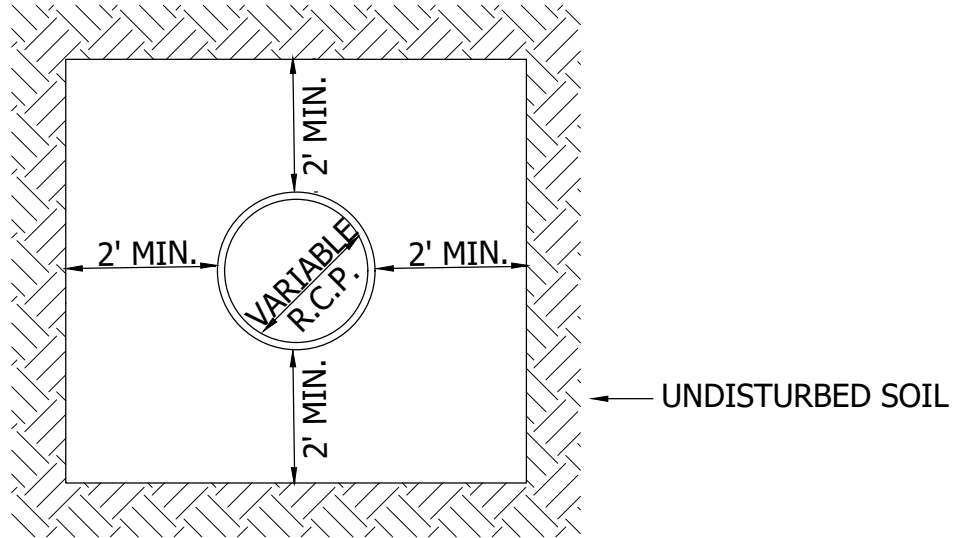
STANDARD DETAILS

OVERFLOW STRUCTURE WITH
SLUICE GATE WITH ORIFICE

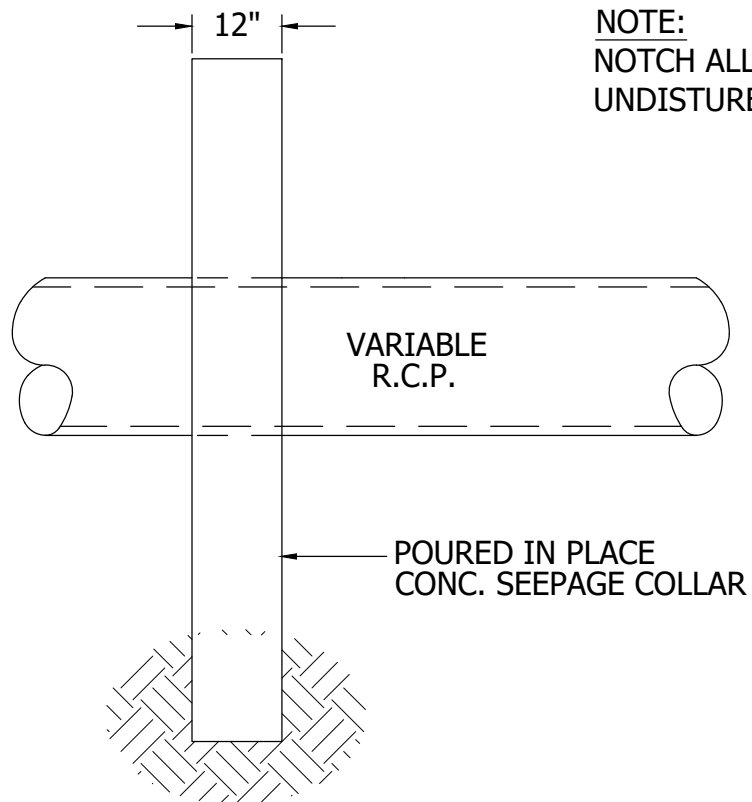
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STO-20

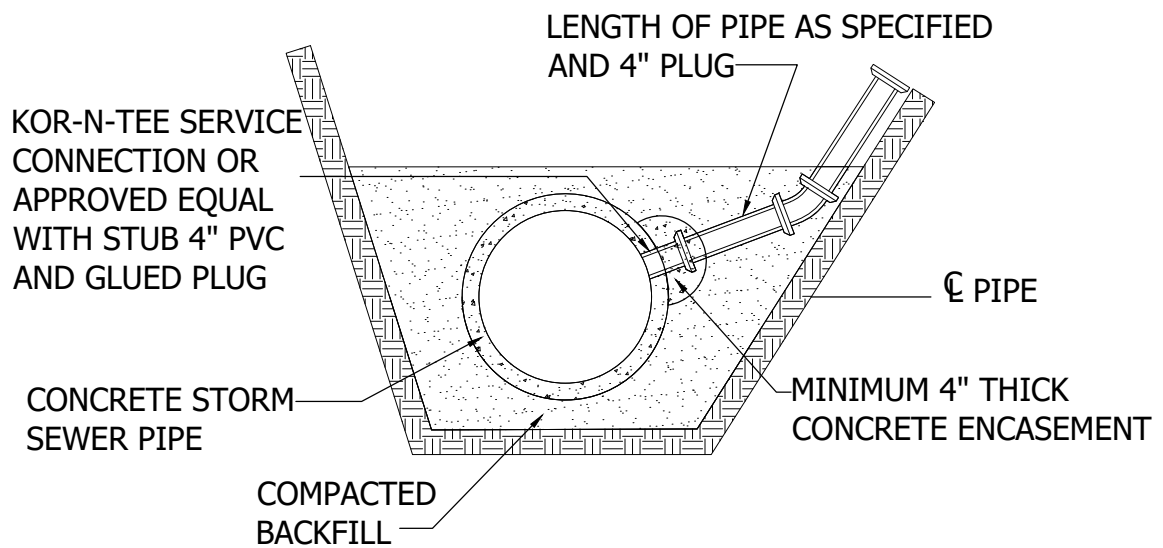


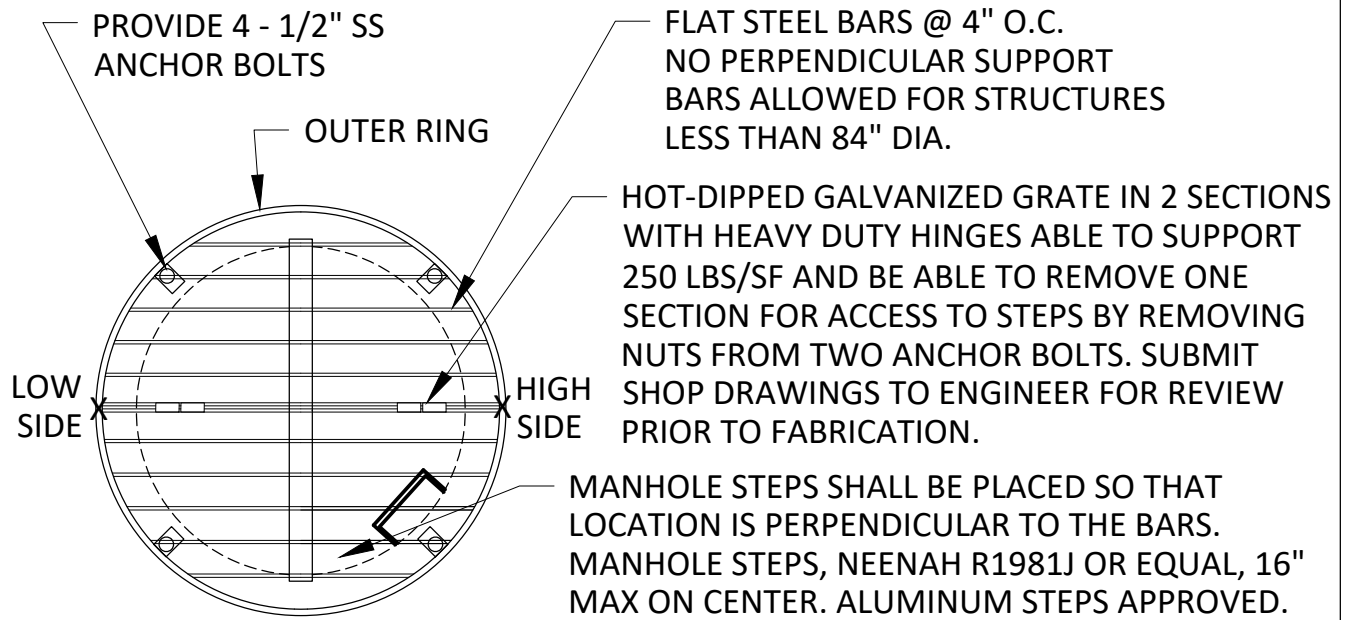
SECTION A-A



NOTE:
NOTCH ALL SIDES INTO
UNDISTURBED SOIL

NOTE:
SERVICE CONNECTIONS TO BE
AT 2 O'CLOCK OR 10 O'CLOCK



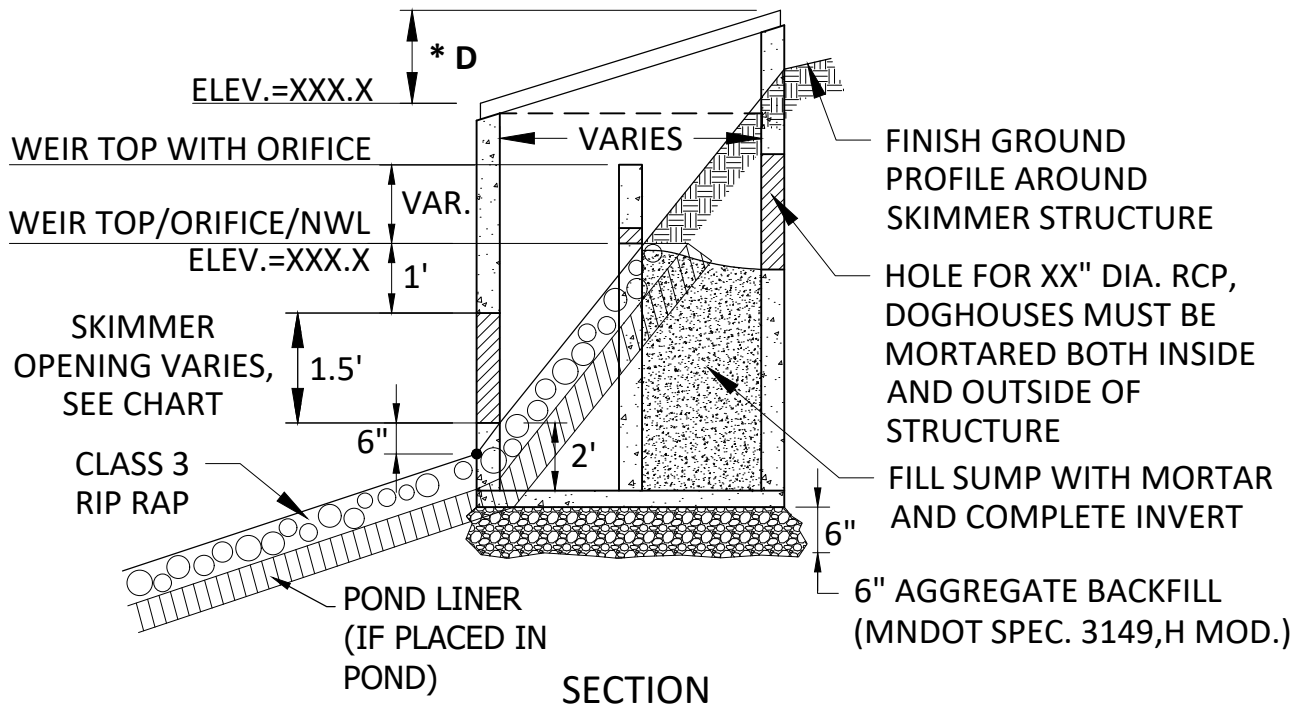


GRATE DETAIL

SEE STORM SEWER SCHEDULE FOR SPECIFIC WEIR WALL.
SEE STORM SEWER SHEETS FOR SPECIFIC STRUCTURE ELEVATIONS.

MANHOLE DIAMETER	SKIMMER OPENING
5'	4.5'x1.5'
6'	6'x1.5'

DIAMETER	* D (TOP OF STRUCTURE SLOPE)
>48" DIA	12" OR 24"

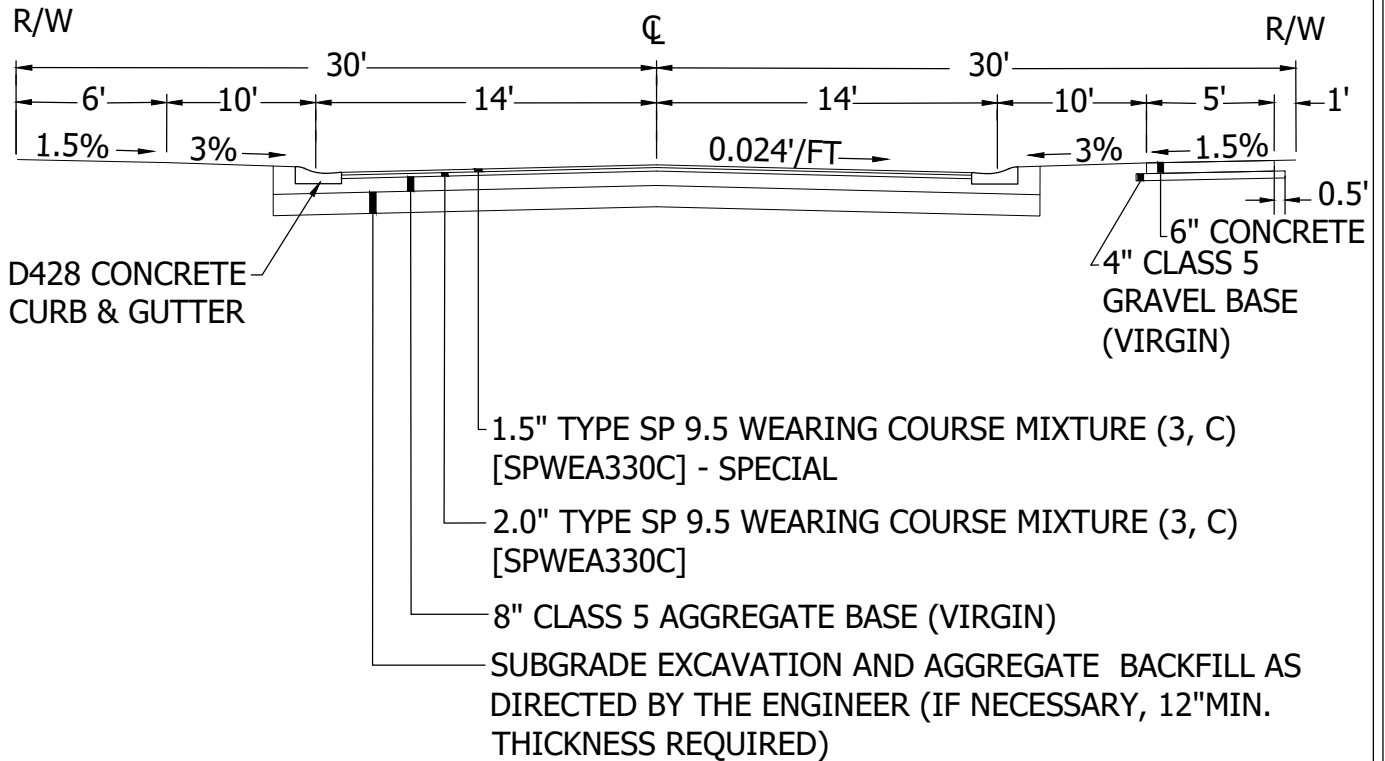


STANDARD DETAILS
STANDARD SKIMMER STRUCTURE
WITH WEIR WALL
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STO - 23

RESIDENTIAL (28' F-F)



NOTES:

1. TOP OF D428 CURB IS 0.03' BELOW DESIGN CL GRADE.
2. R.O.W. TO BE 0.31' ABOVE DESIGN CL ELEVATION.



STANDARD DETAILS

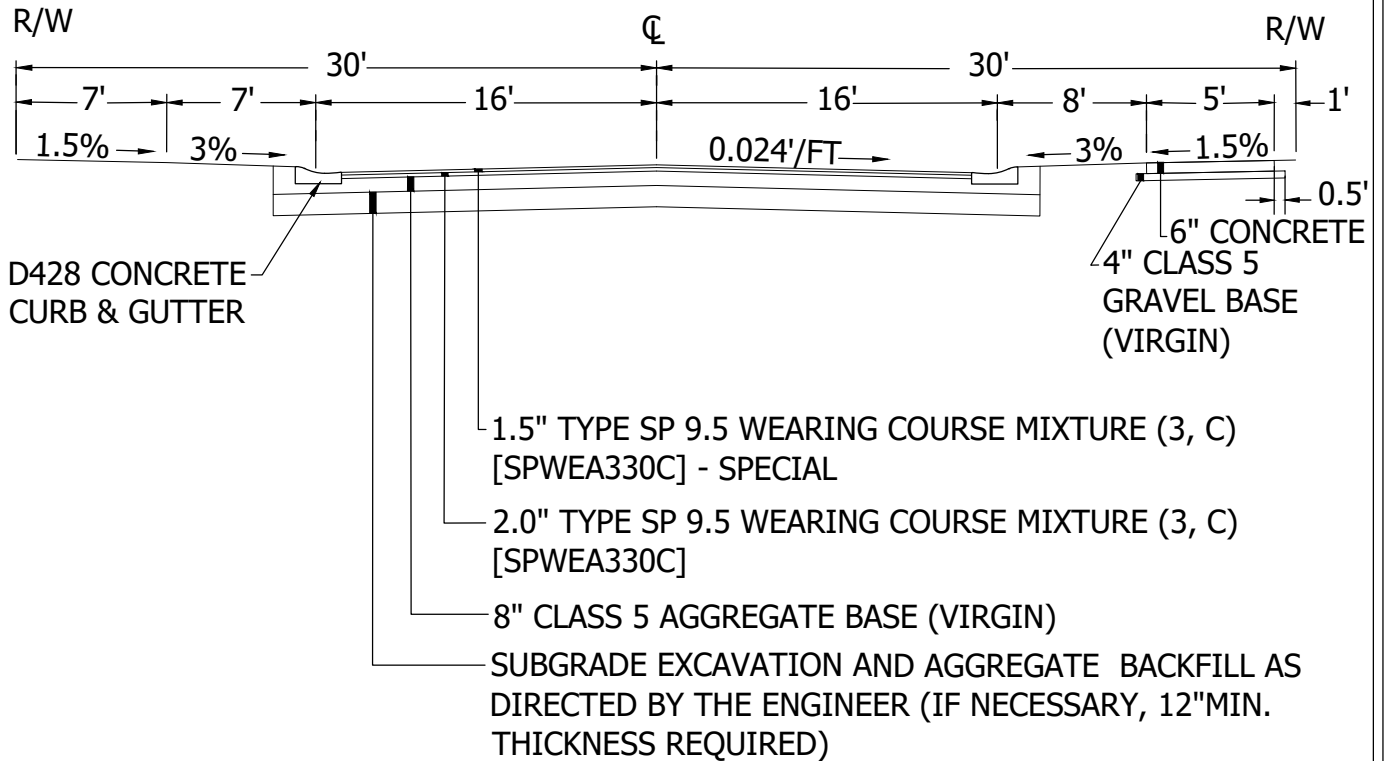
TYPICAL PUBLIC STREET SECTION
RESIDENTIAL (28' F-F)

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-1

RESIDENTIAL (32' F-F)



NOTES:

1. TOP OF D428 CURB IS 0.08 BELOW DESIGN CL GRADE.
2. R.O.W. TO BE 0.19' ABOVE DESIGN CL ELEVATION.



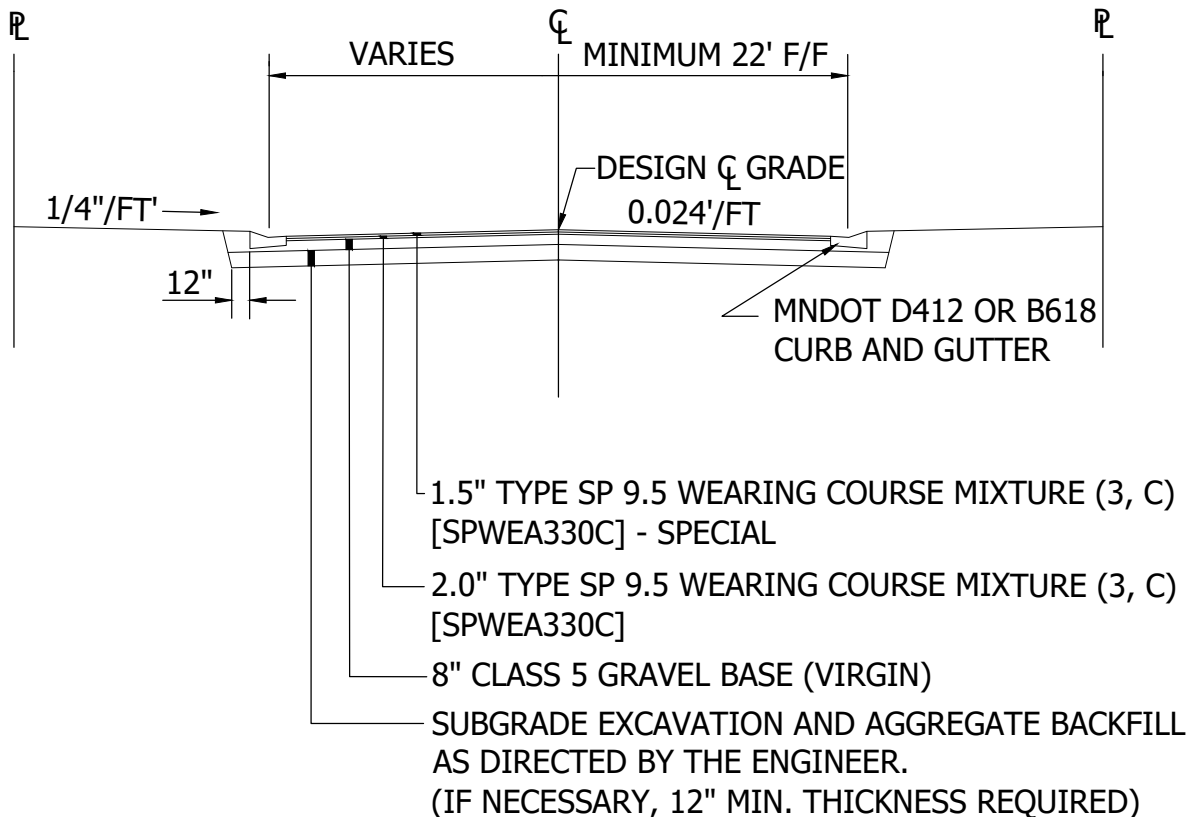
STANDARD DETAILS

TYPICAL PUBLIC STREET SECTION
RESIDENTIAL (32' F-F)

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-2

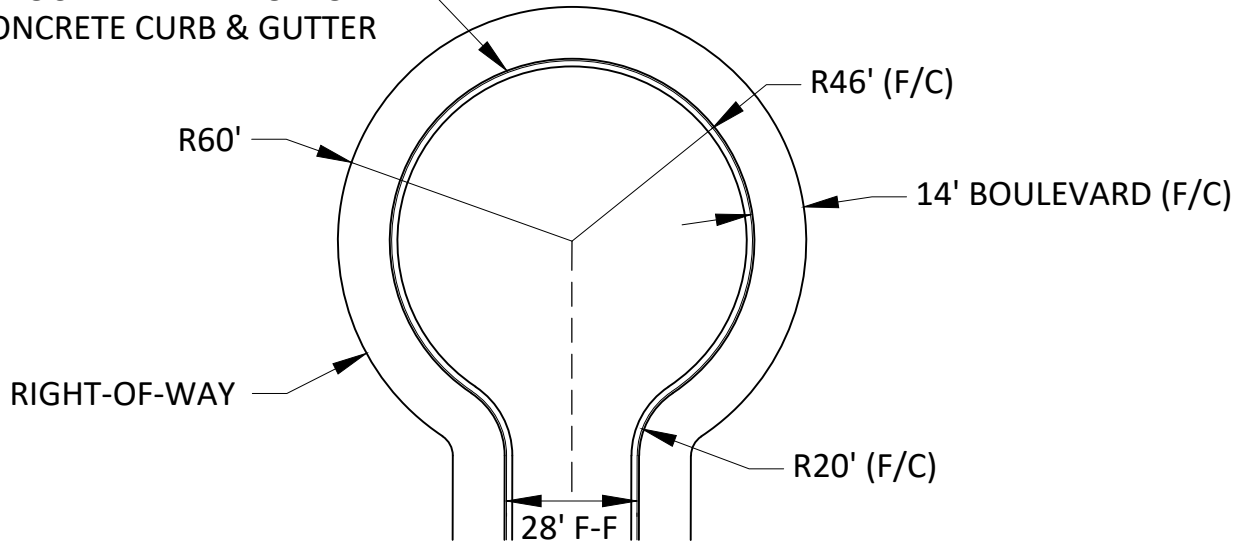


STANDARD DETAILS
TYPICAL PRIVATE STREET
SECTION URBAN
COTTAGE GROVE, MINNESOTA

JANUARY 2024

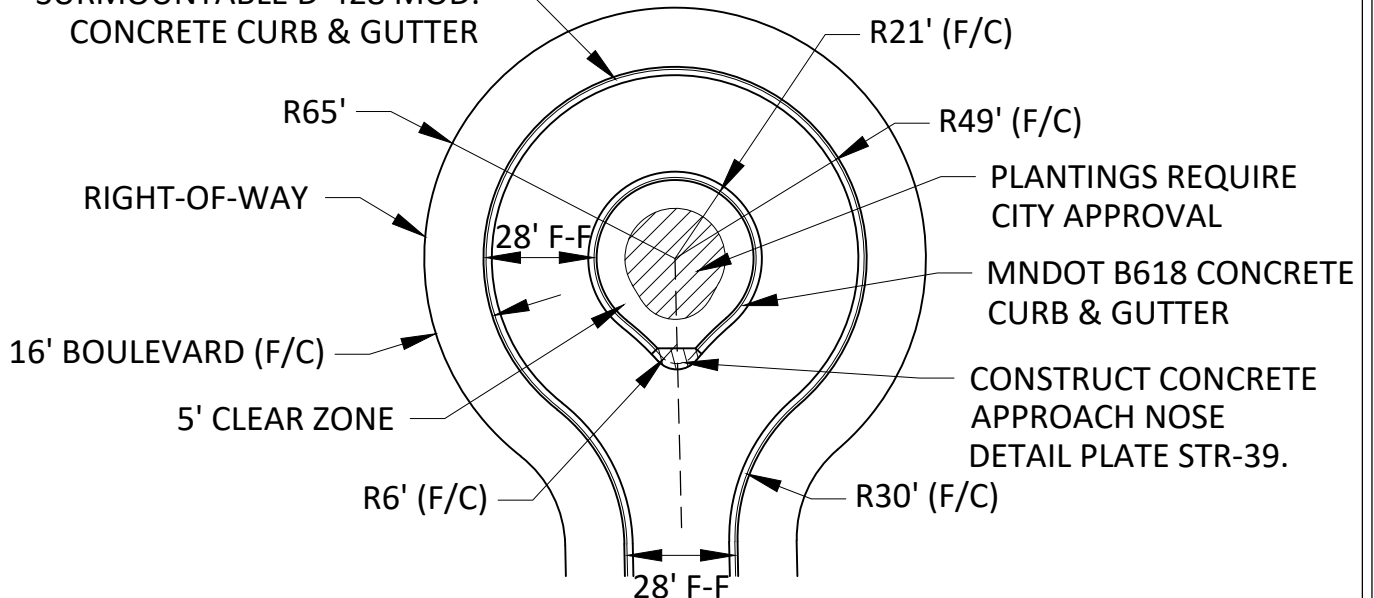
PLATE NO.
STR-3

SURMOUNTABLE D-428 MOD.
CONCRETE CURB & GUTTER



STANDARD CUL-DE-SAC

SURMOUNTABLE D-428 MOD.
CONCRETE CURB & GUTTER



NOTE:
CURB AND GUTTER TO BE B618 (GUTTER OUT).

ISLAND CUL-DE-SAC



STANDARD DETAILS
TYPICAL CUL-DE-SAC SECTIONS
RESIDENTIAL (28' F-F)
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-4

SURMOUNTABLE D-428 MOD.
CONCRETE CURB & GUTTER

R60'

RIGHT-OF-WAY

R46' (F/C)

14' BOULEVARD (F/C)

R20' (F/C)

32' F-F

STANDARD CUL-DE-SAC

SURMOUNTABLE D-428 MOD.
CONCRETE CURB & GUTTER

R65'

RIGHT-OF-WAY

R51' (F/C)

14' BOULEVARD (F/C)

5' CLEAR ZONE

R6' (F/C)

32' F-F

MNDOT B618 CONCRETE
CURB & GUTTER

19' (F/C)

PLANTINGS REQUIRE
CITY APPROVAL

CONSTRUCT CONCRETE
APPROACH NOSE
DETAIL PLATE STR-39.

R30' (F/C)

26'

NOTE:

CURB AND GUTTER TO BE B618 (GUTTER OUT).

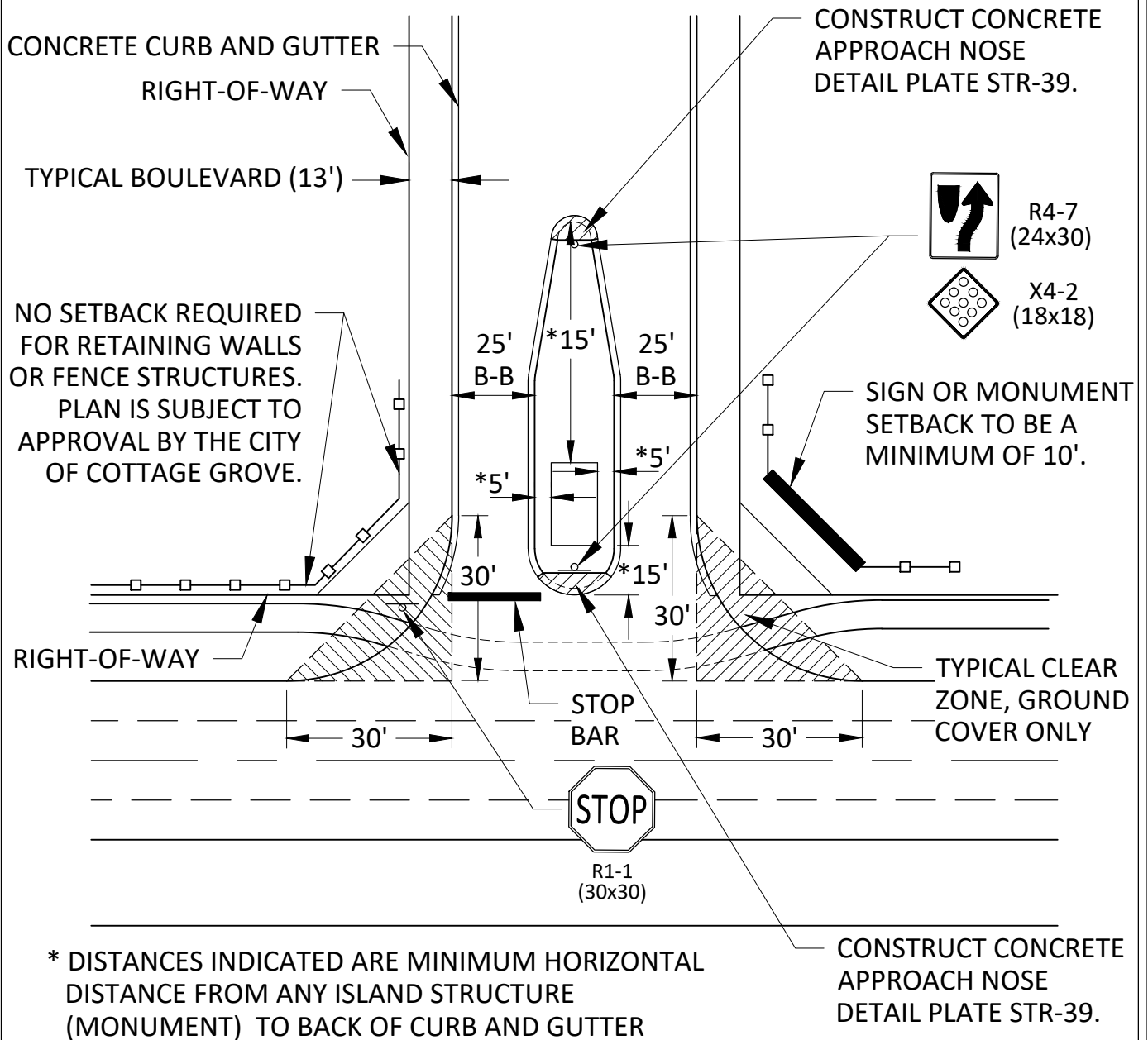
ISLAND CUL-DE-SAC



STANDARD DETAILS
TYPICAL CUL-DE-SAC SECTIONS
RESIDENTIAL (32' F-F)
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-5

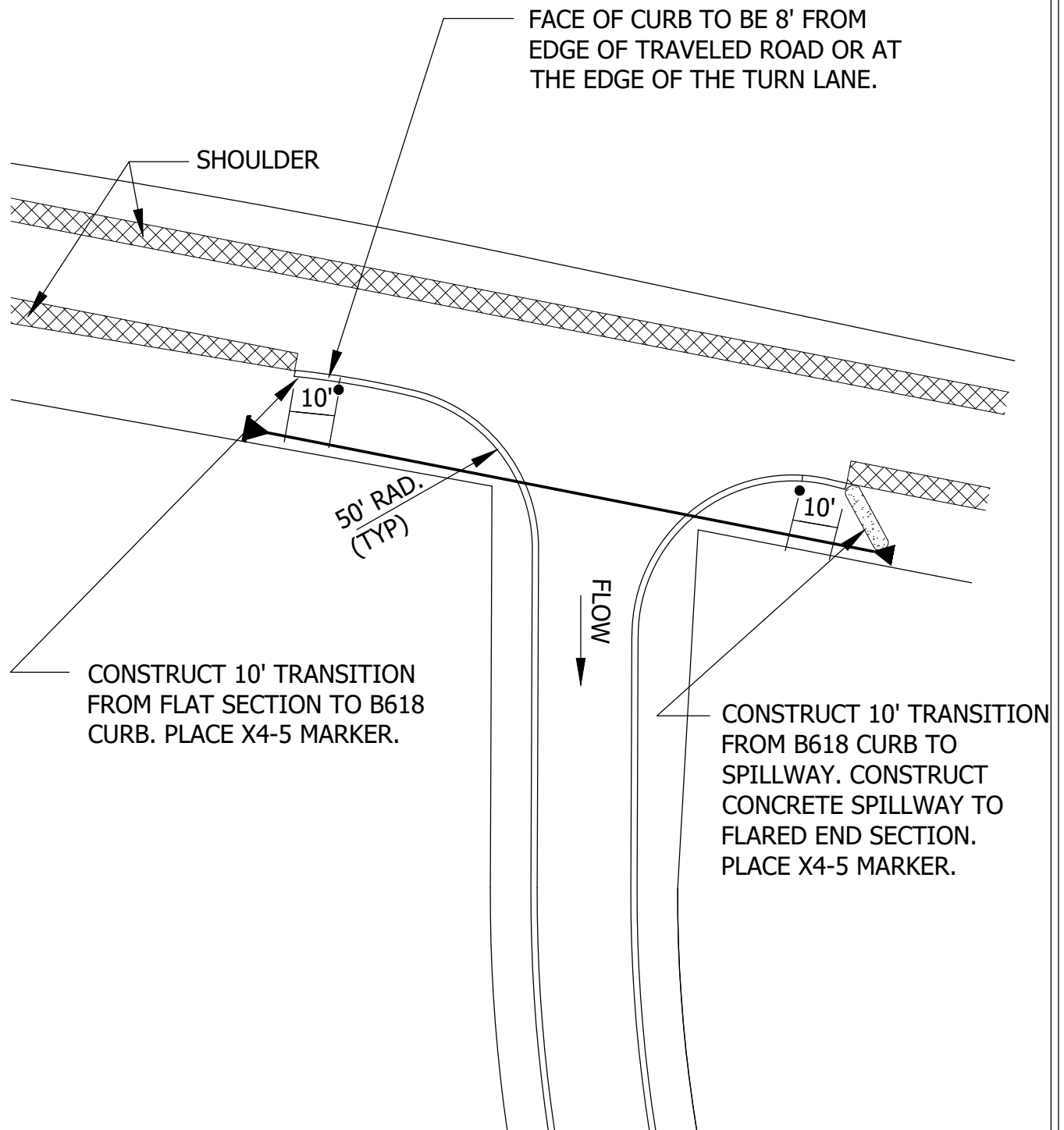


STANDARD DETAILS
ENTRANCE DETAIL

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-6



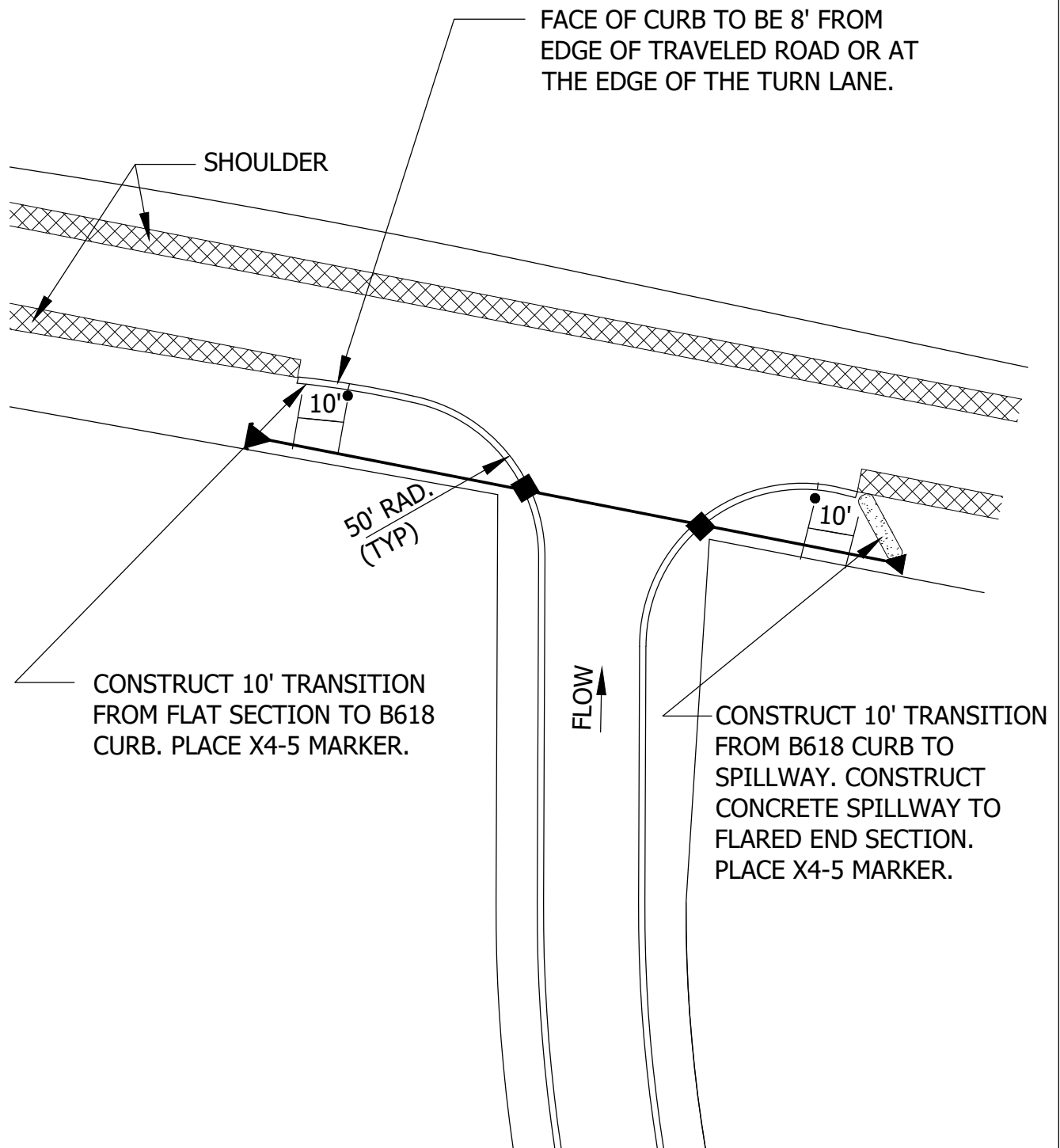
**Cottage
Grove**
Where Pride and Prosperity Meet

STANDARD DETAILS
RURAL ROADWAY STREET
ENTRANCE

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-7



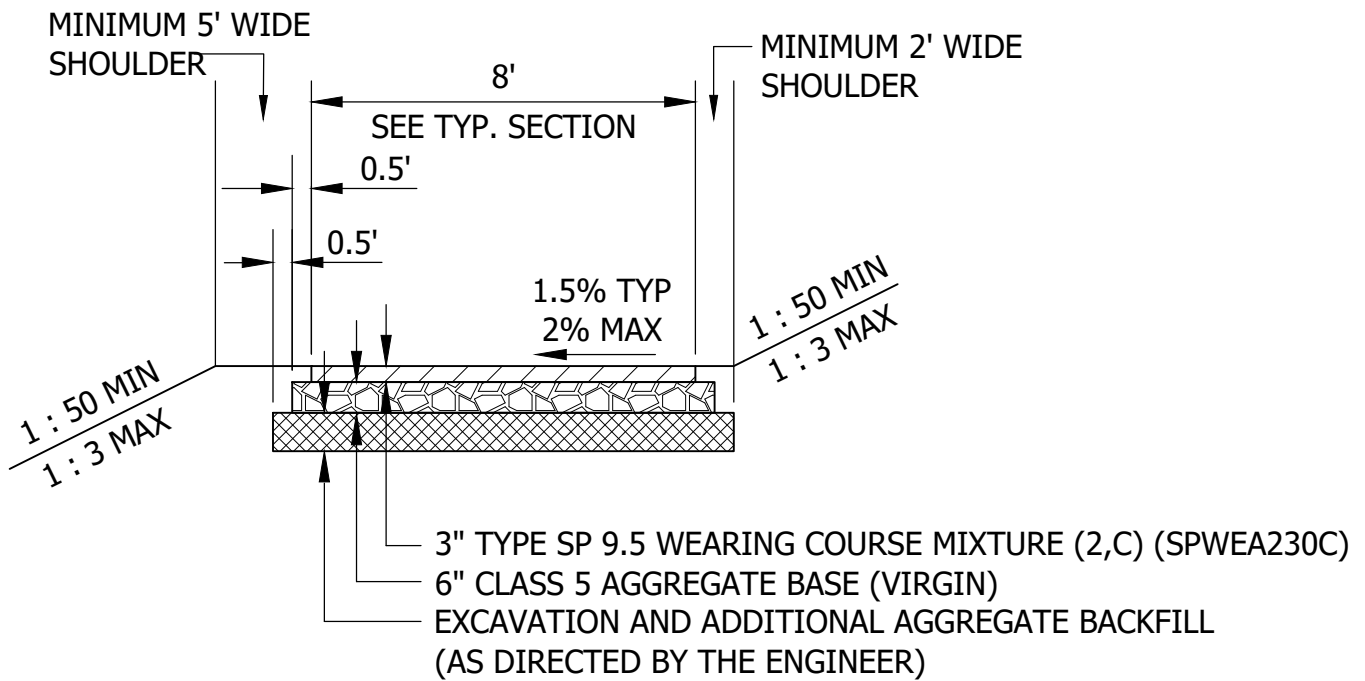
NOTE:
IF CATCHBASINS ARE NOT REQUIRED,
THEN CONCRETE SPILLWAY WILL BE REQUIRED



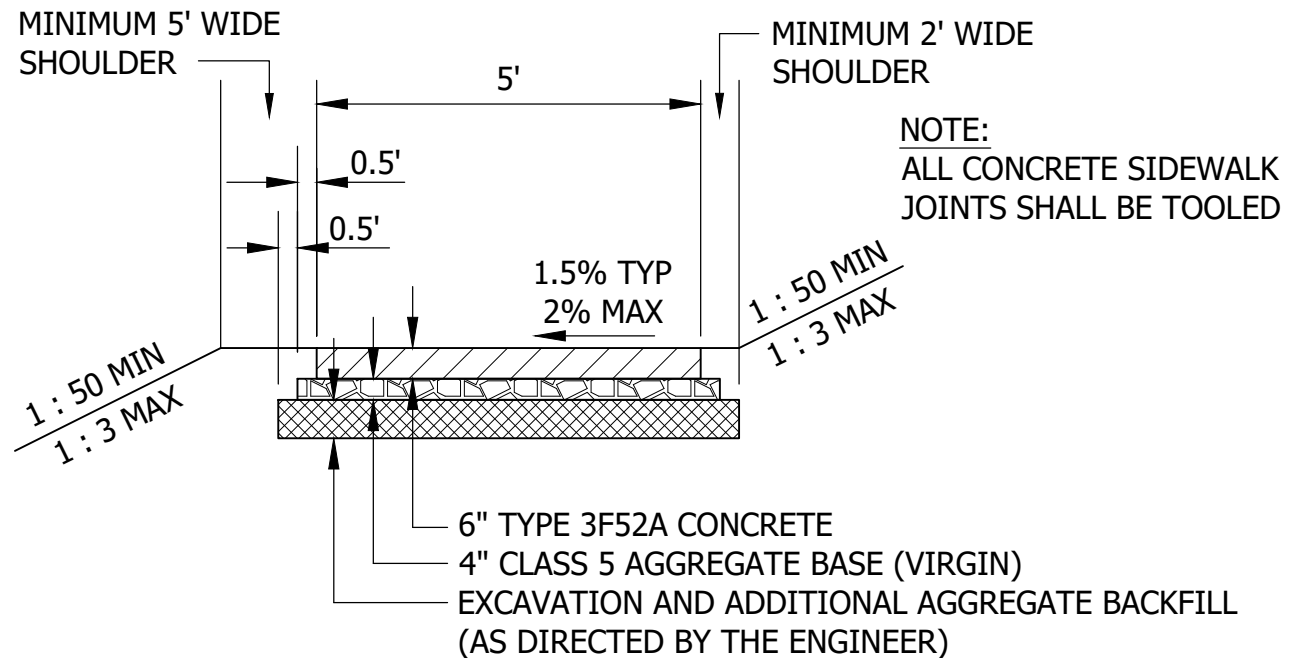
STANDARD DETAILS
RURAL ROADWAY STREET
ENTRANCE WITH CATCHBASINS
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-8



BITUMINOUS TRAIL



CONCRETE SIDEWALK



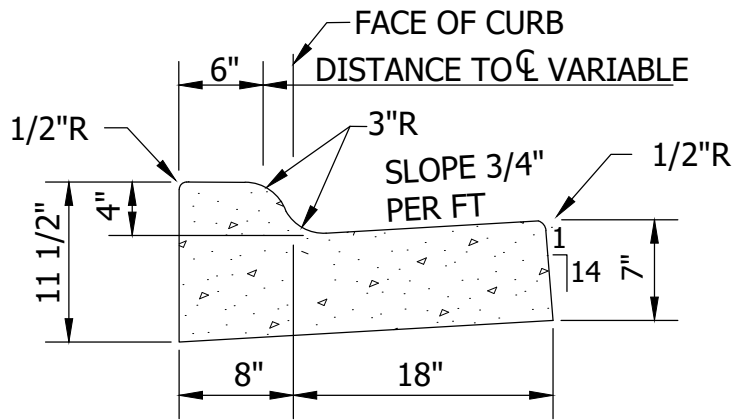
STANDARD DETAILS

TYPICAL BITUMINOUS TRAIL AND
CONCRETE SIDEWALK SECTIONS

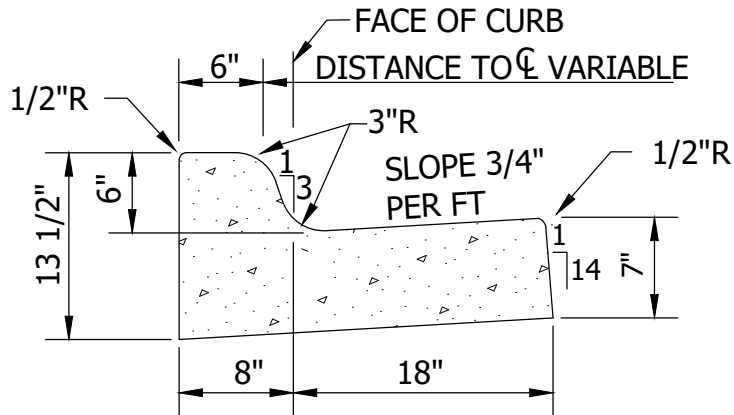
COTTAGE GROVE, MINNESOTA

JANUARY 2024

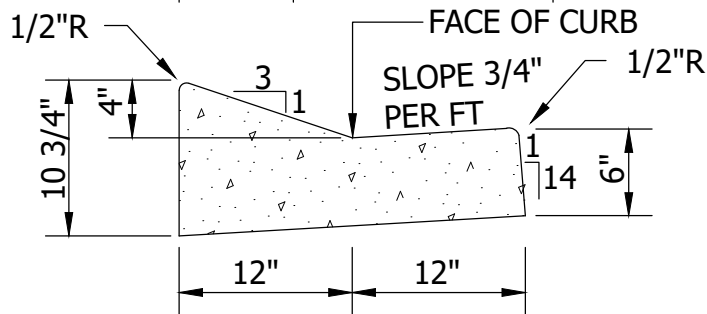
PLATE NO.
STR-9



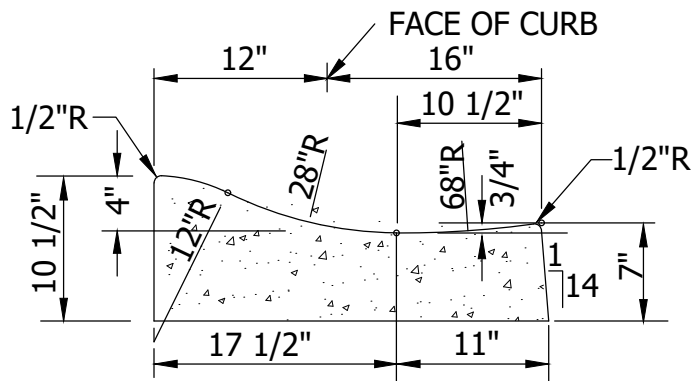
MNDOT B418 MOD



MNDOT B618 MOD



SURMOUNTABLE
D-412 MOD



SURMOUNTABLE
D-428 MOD



STANDARD DETAILS
CURB AND GUTTER

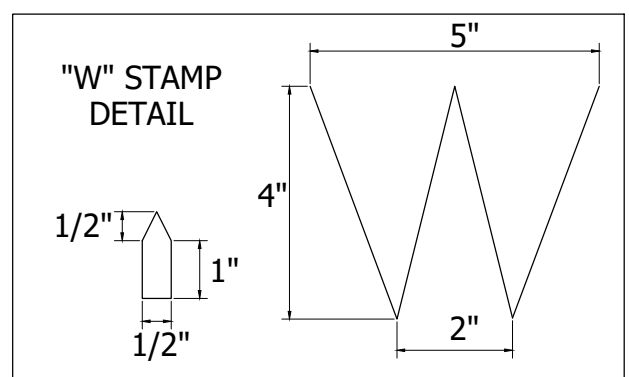
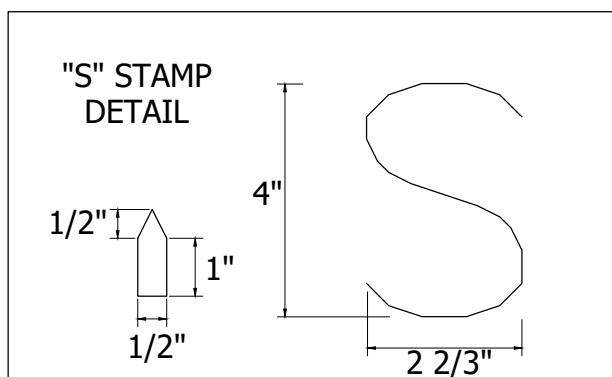
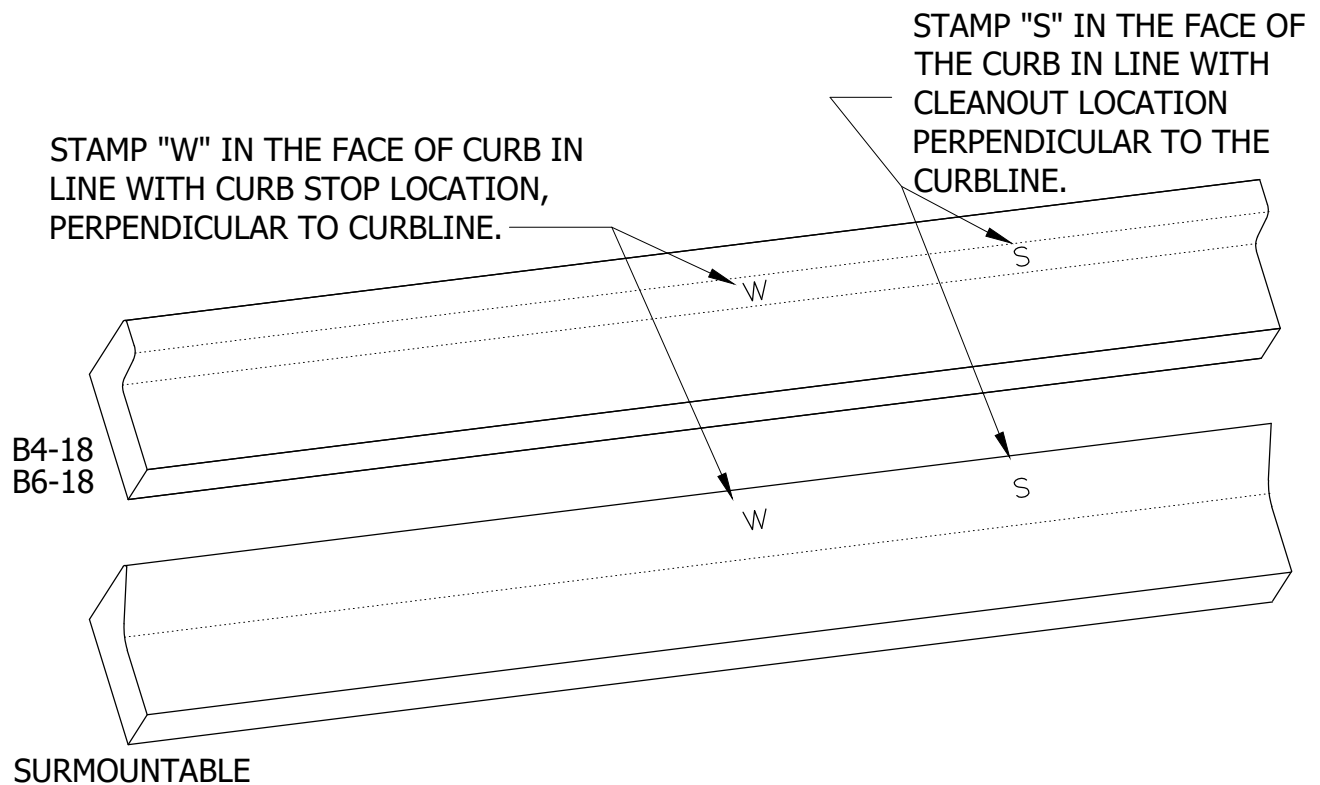
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-10

NOTES:

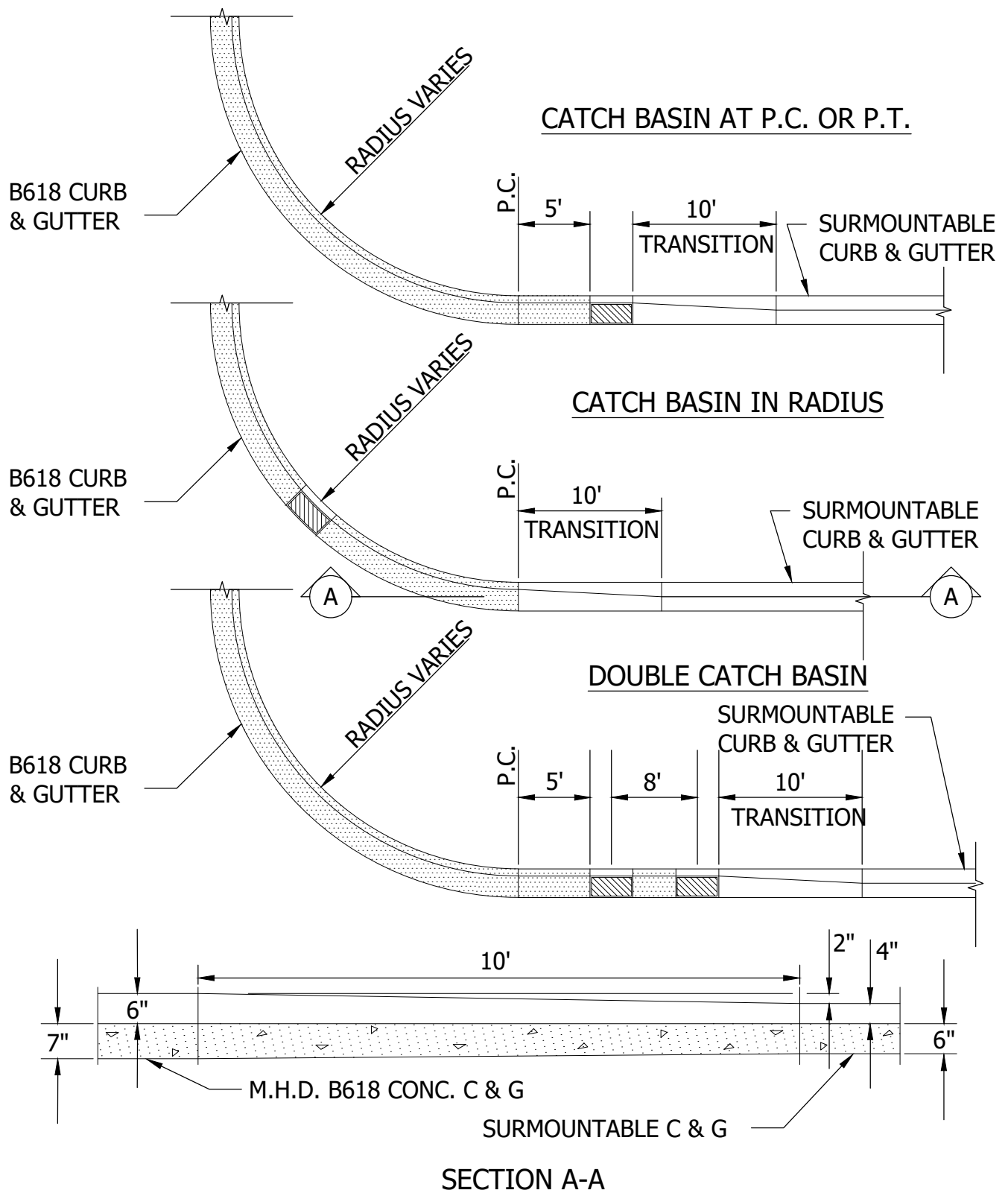
1. ALL NEW AND EXISTING WATER AND SEWER SERVICE LOCATIONS SHALL BE MARKED IN CURB AS SHOWN. STAMPING OF SERVICE LOCATIONS SHALL BE CONSIDERED INCIDENTAL TO THE PRICE OF CURB.
2. CONCRETE CURB PANELS WITH W'S AND S'S NOT PLACED BY SPECIFIED STAMP WILL NOT BE ACCEPTED.



STANDARD DETAILS
WATER AND SEWER SERVICE
LOCATION STAMP IN CURB
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-11

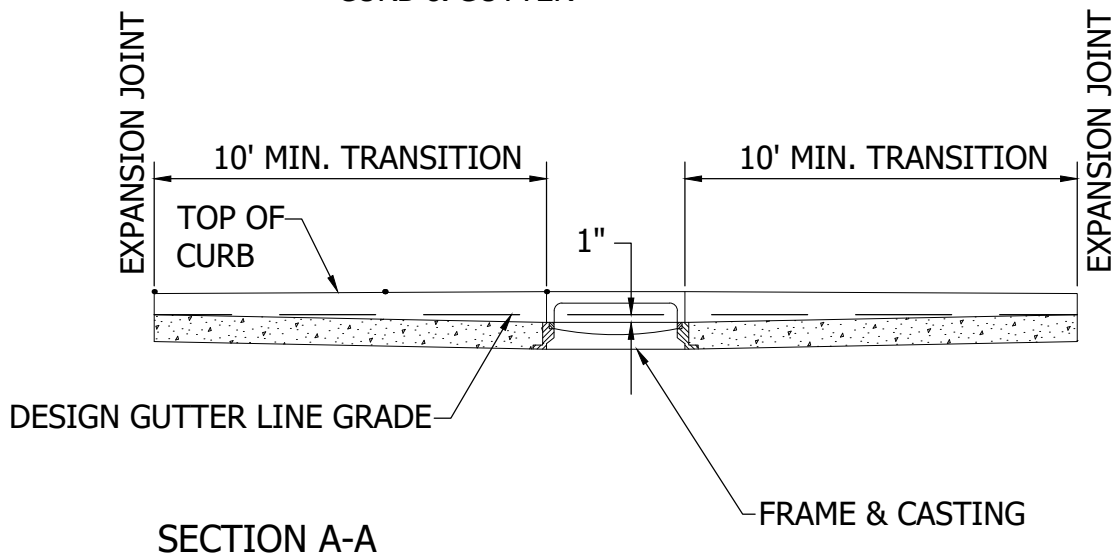
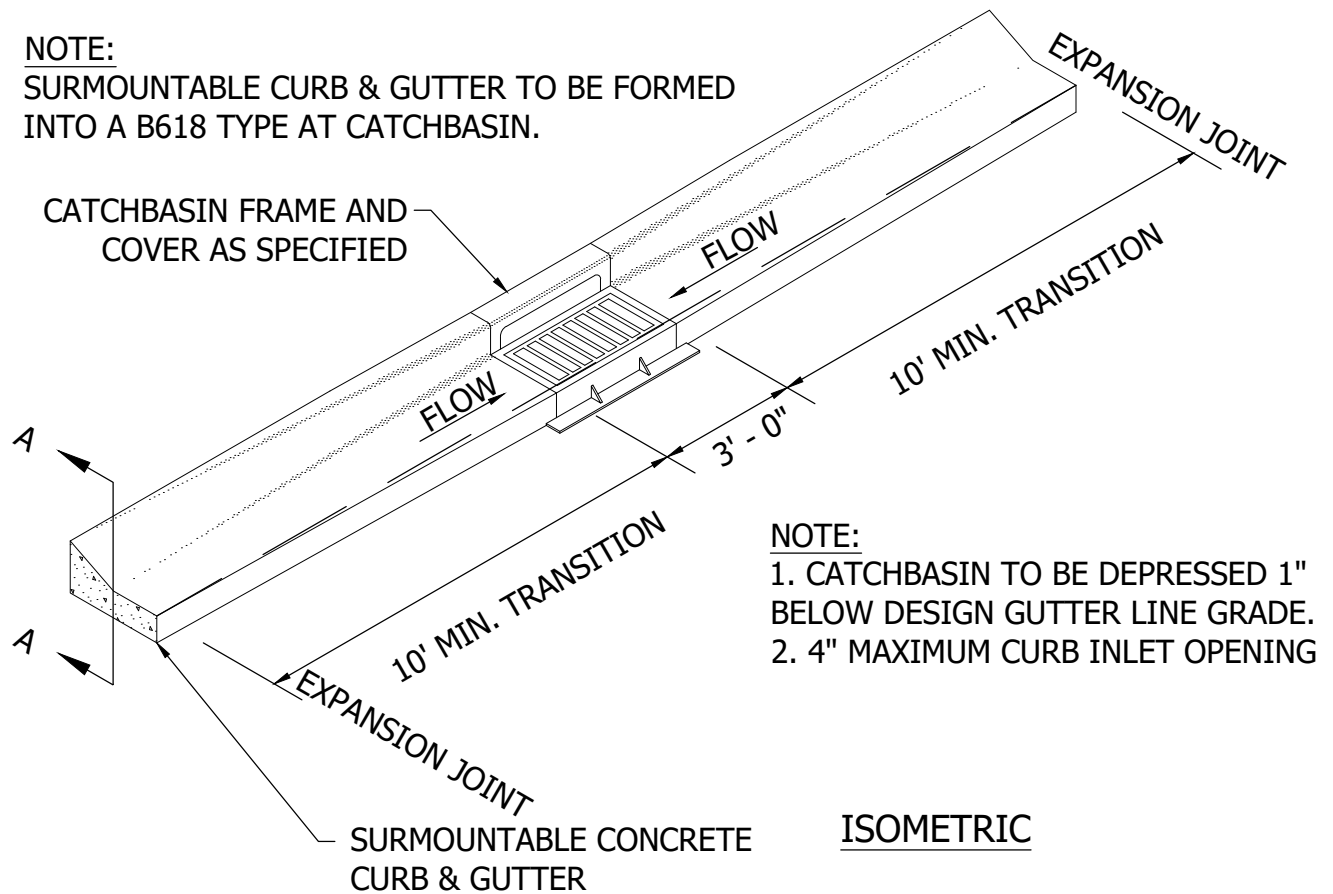


STANDARD DETAILS
CONCRETE CURB AND GUTTER
TRANSITION
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-12

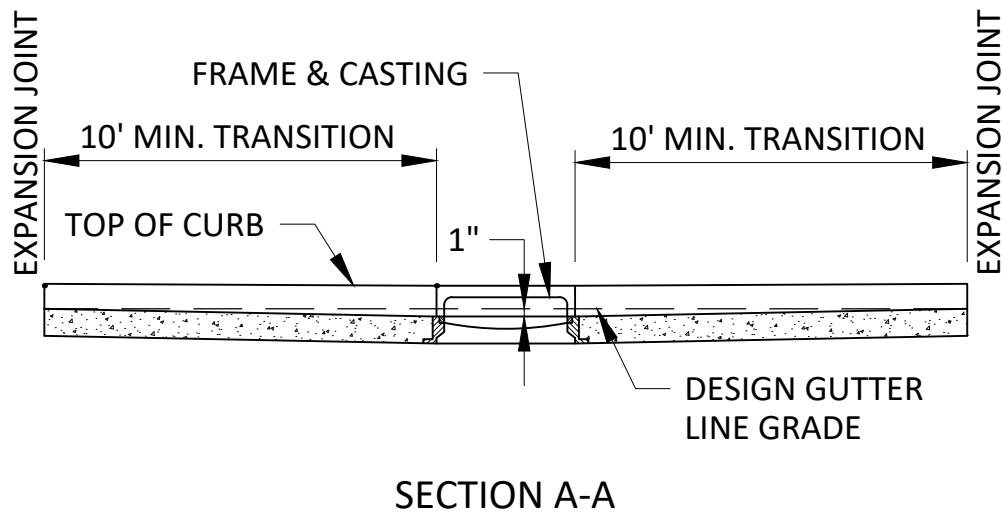
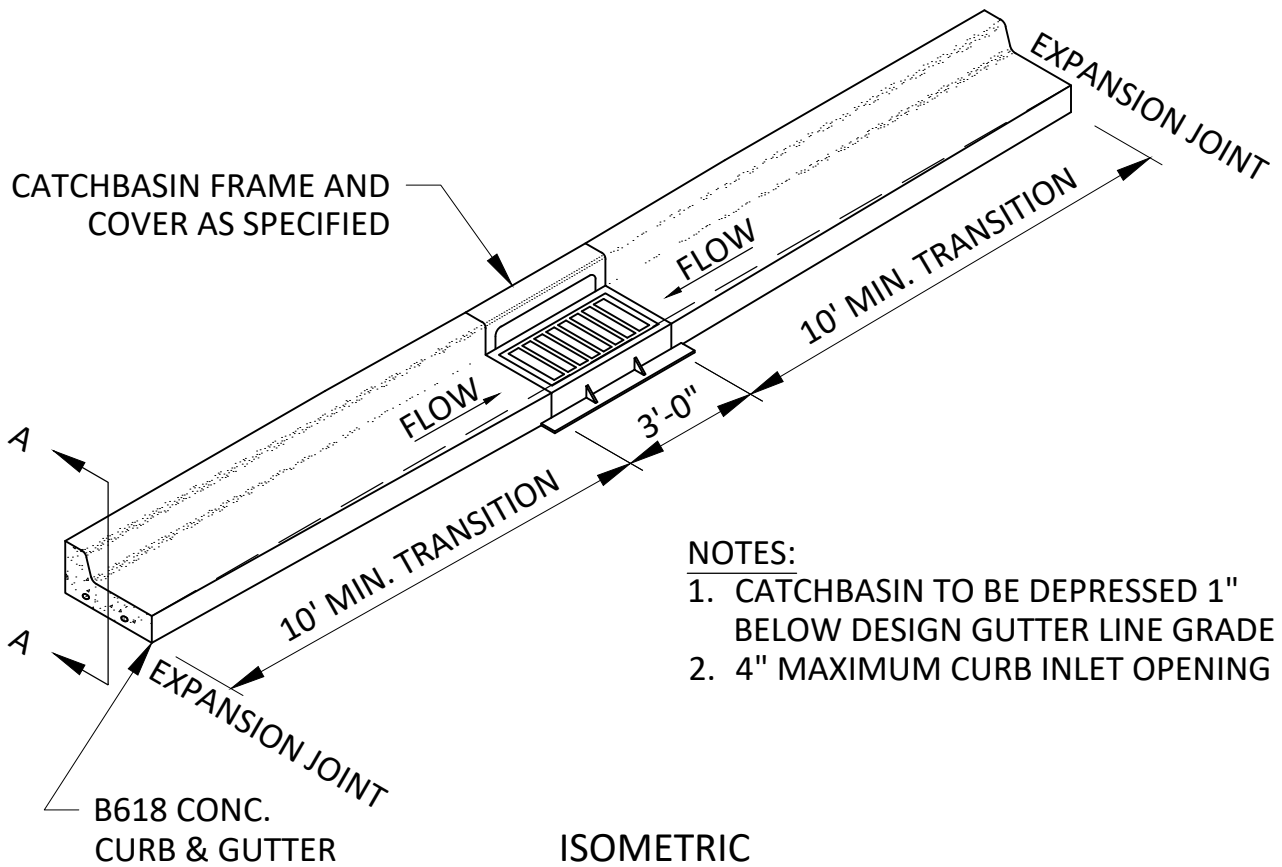
NOTE:
SURMOUNTABLE CURB & GUTTER TO BE FORMED
INTO A B618 TYPE AT CATCHBASIN.



STANDARD DETAILS
SURMOUNTABLE CURB AND GUTTER
CONSTRUCTION AT CATCHBASIN
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-13



STANDARD DETAILS
B618 CURB AND GUTTER
CONSTRUCTION AT CATCHBASIN
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-14

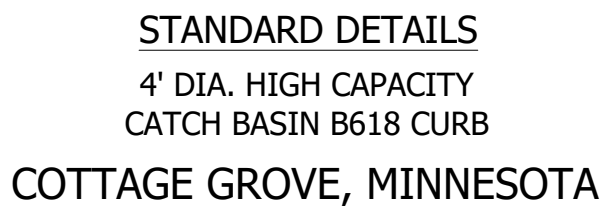
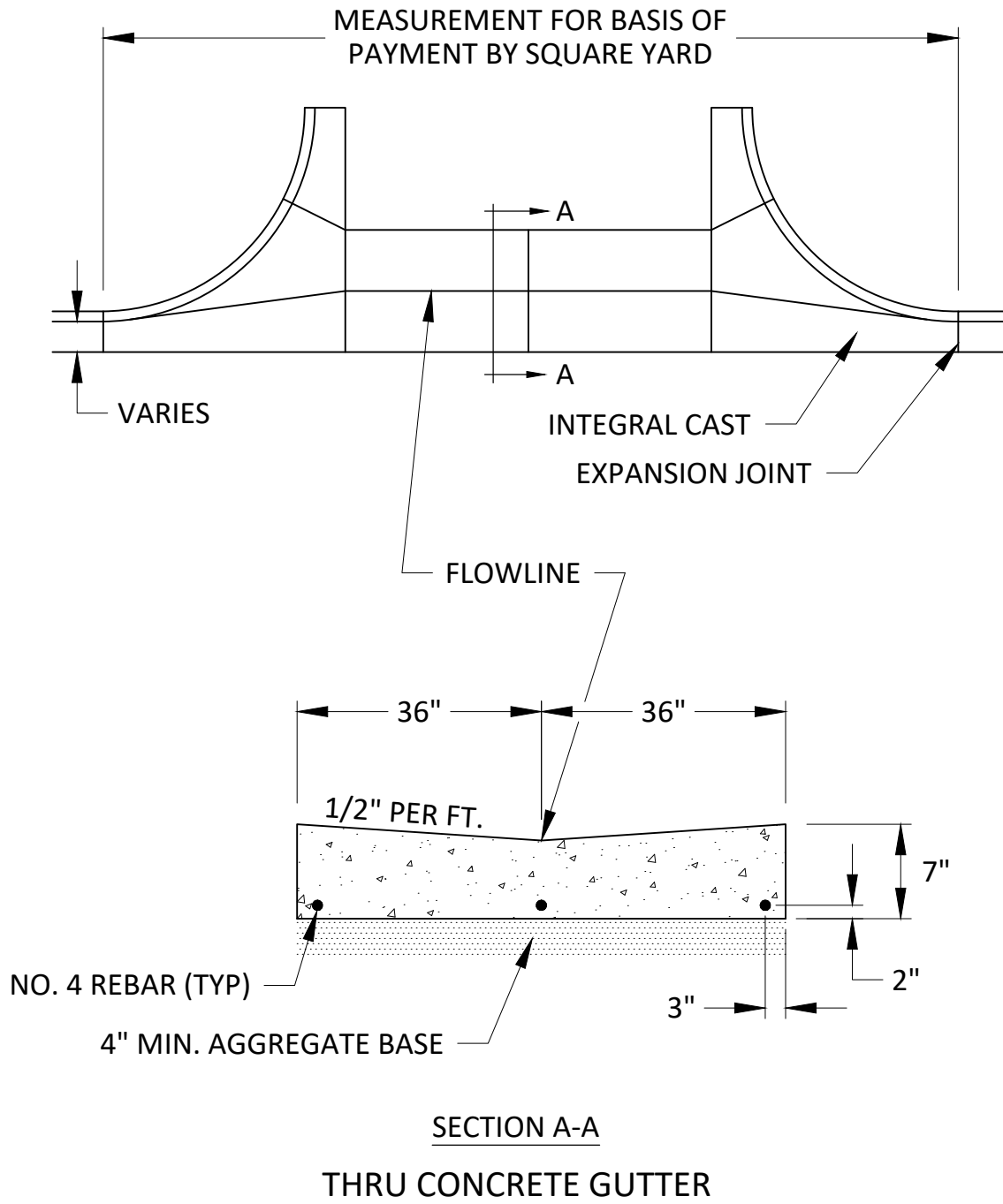


PLATE NO.
STR-15

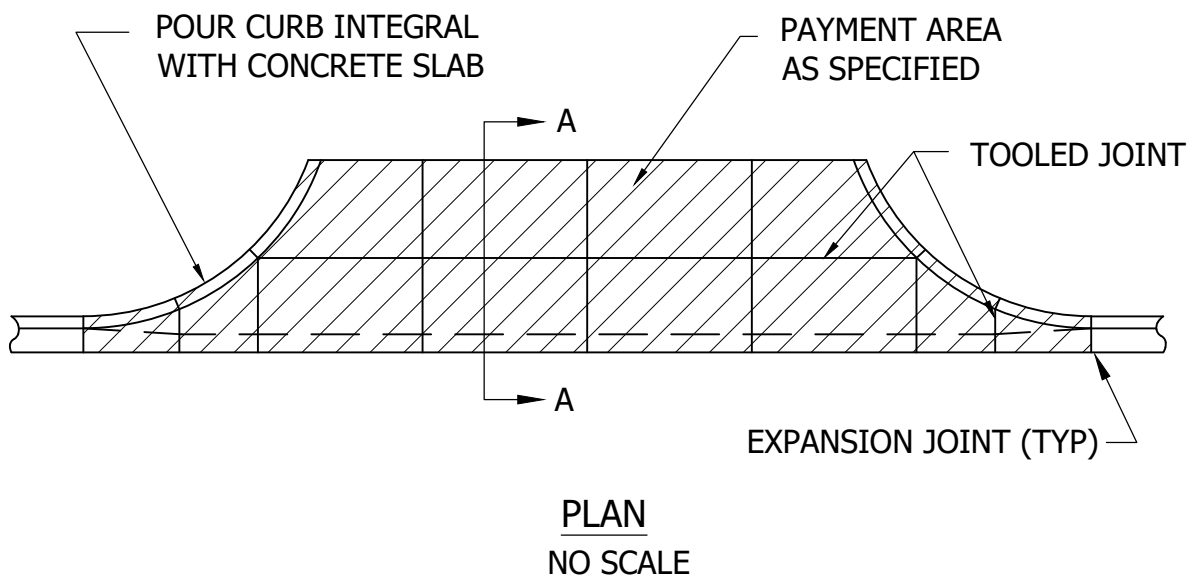
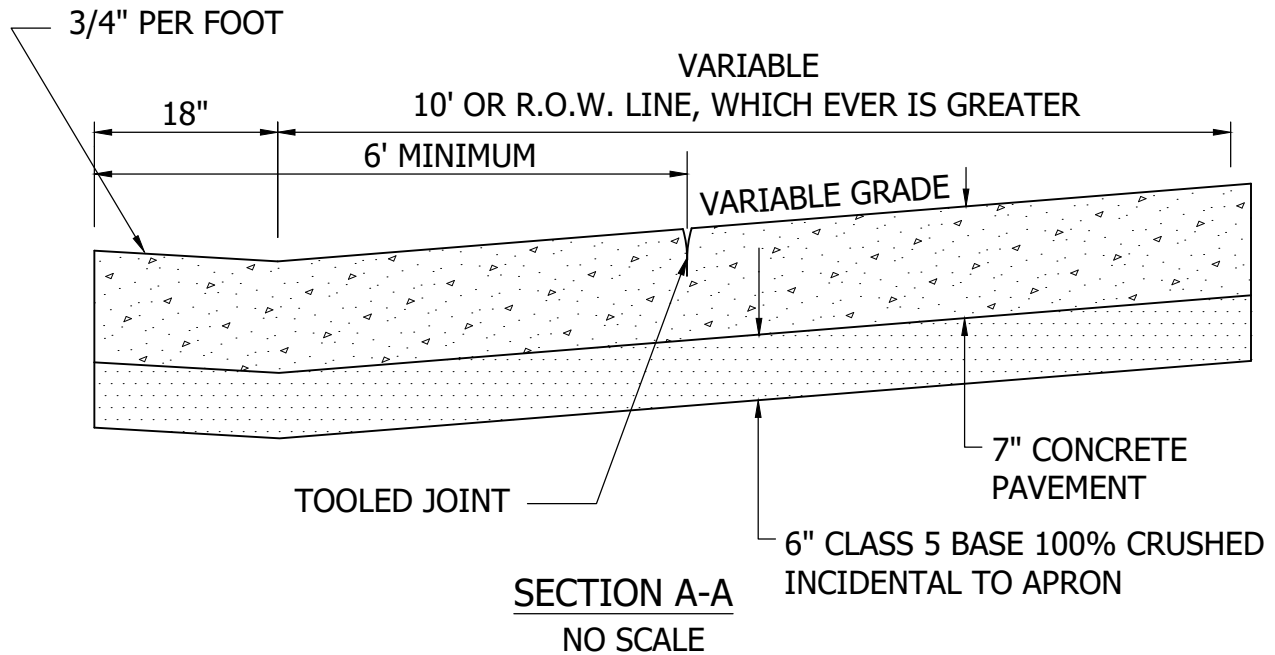


STANDARD DETAILS
CONCRETE VALLEY GUTTER

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-16



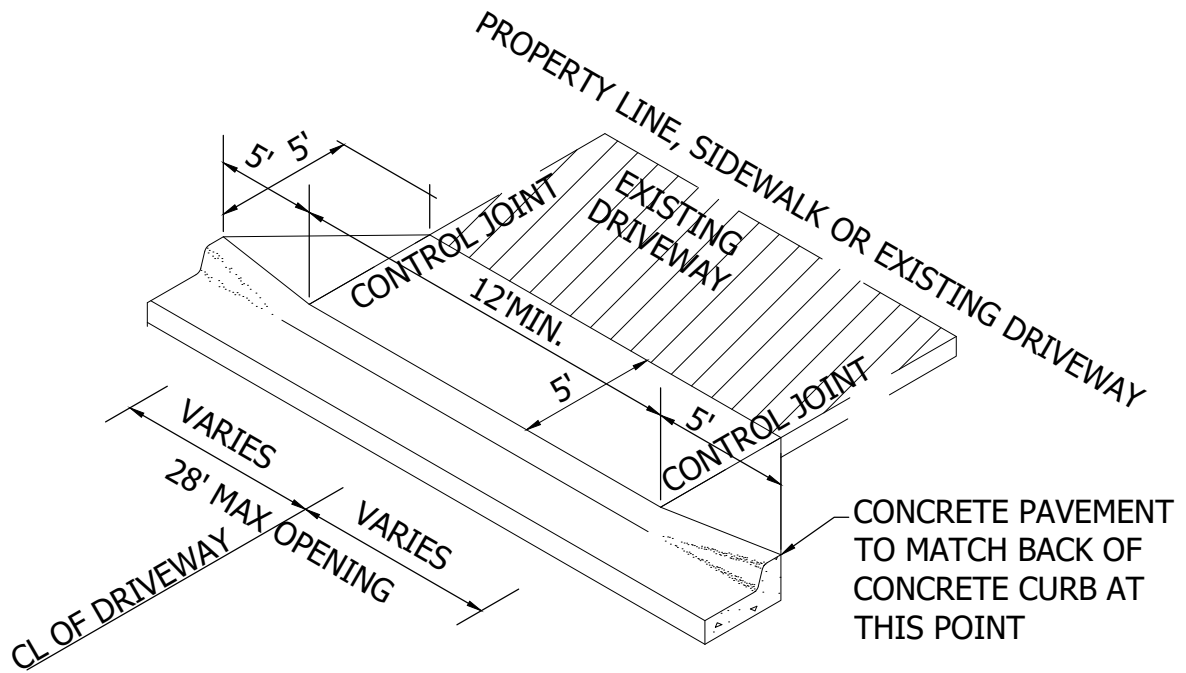
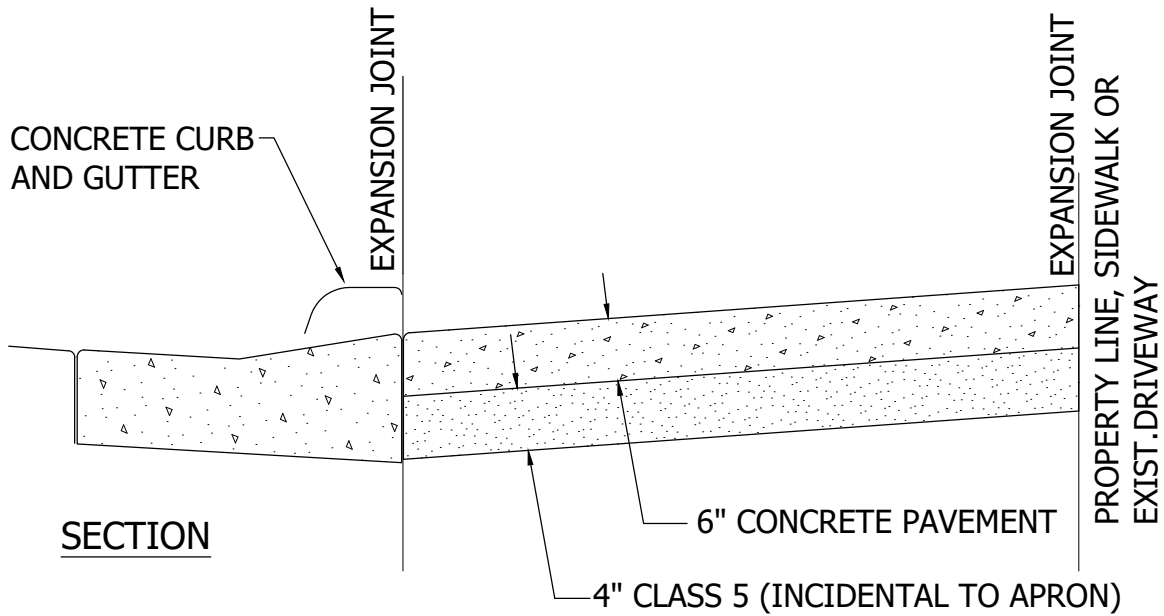
**Cottage
Grove**
Where Pride and Prosperity Meet

STANDARD DETAILS
CONCRETE DRIVEWAY APRON
COMMERCIAL

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-17



NOTE:
CONTROL JOINTS IN CONCRETE CURB
NOT TO EXCEED 10' SPACING
THROUGH DRIVEWAY SECTION.



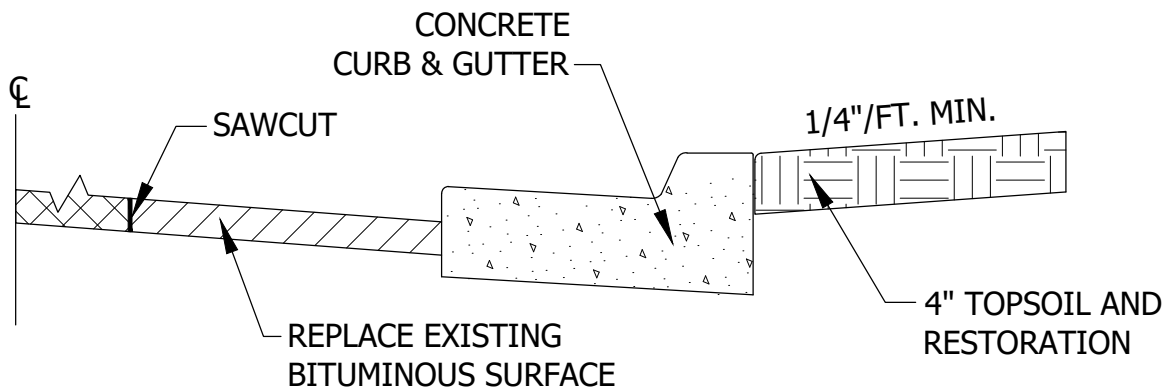
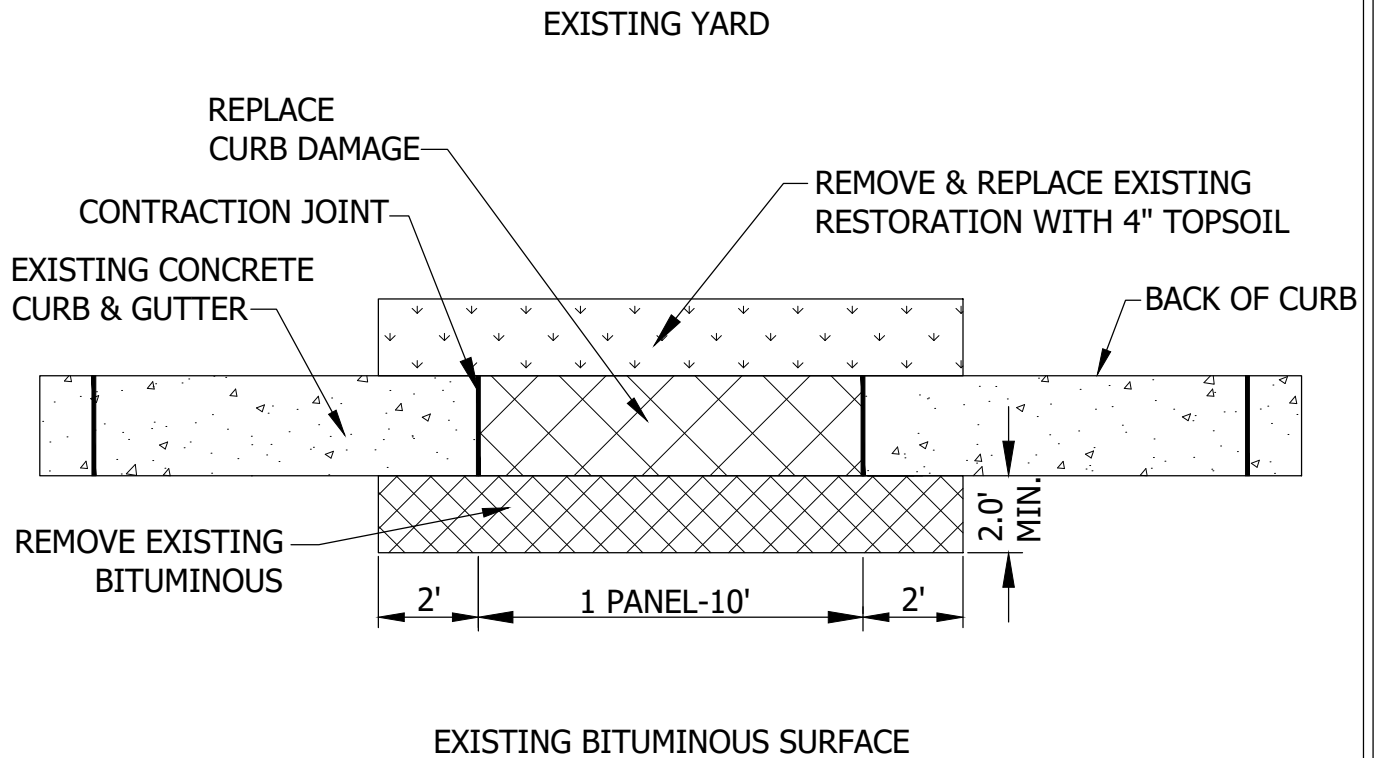
**Cottage
Grove**
Where Pride and Prosperity Meet

STANDARD DETAILS
CONCRETE DRIVEWAY APRON
RESIDENTIAL

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-18



SECTION

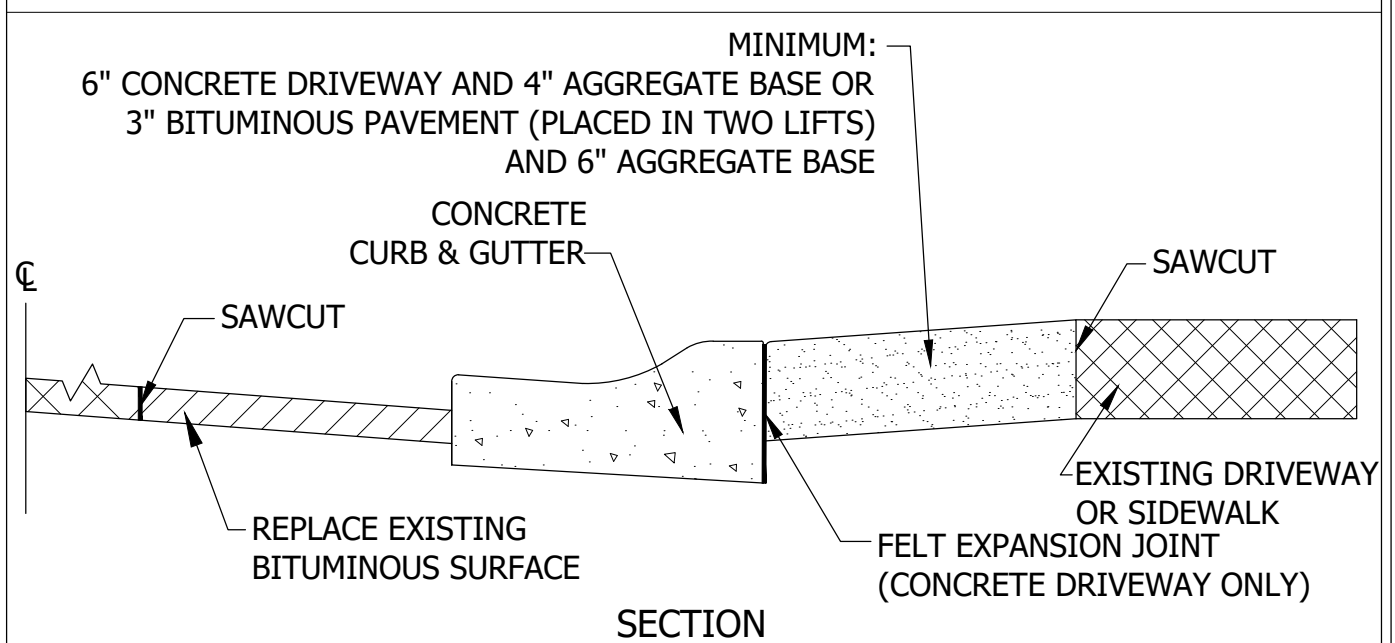
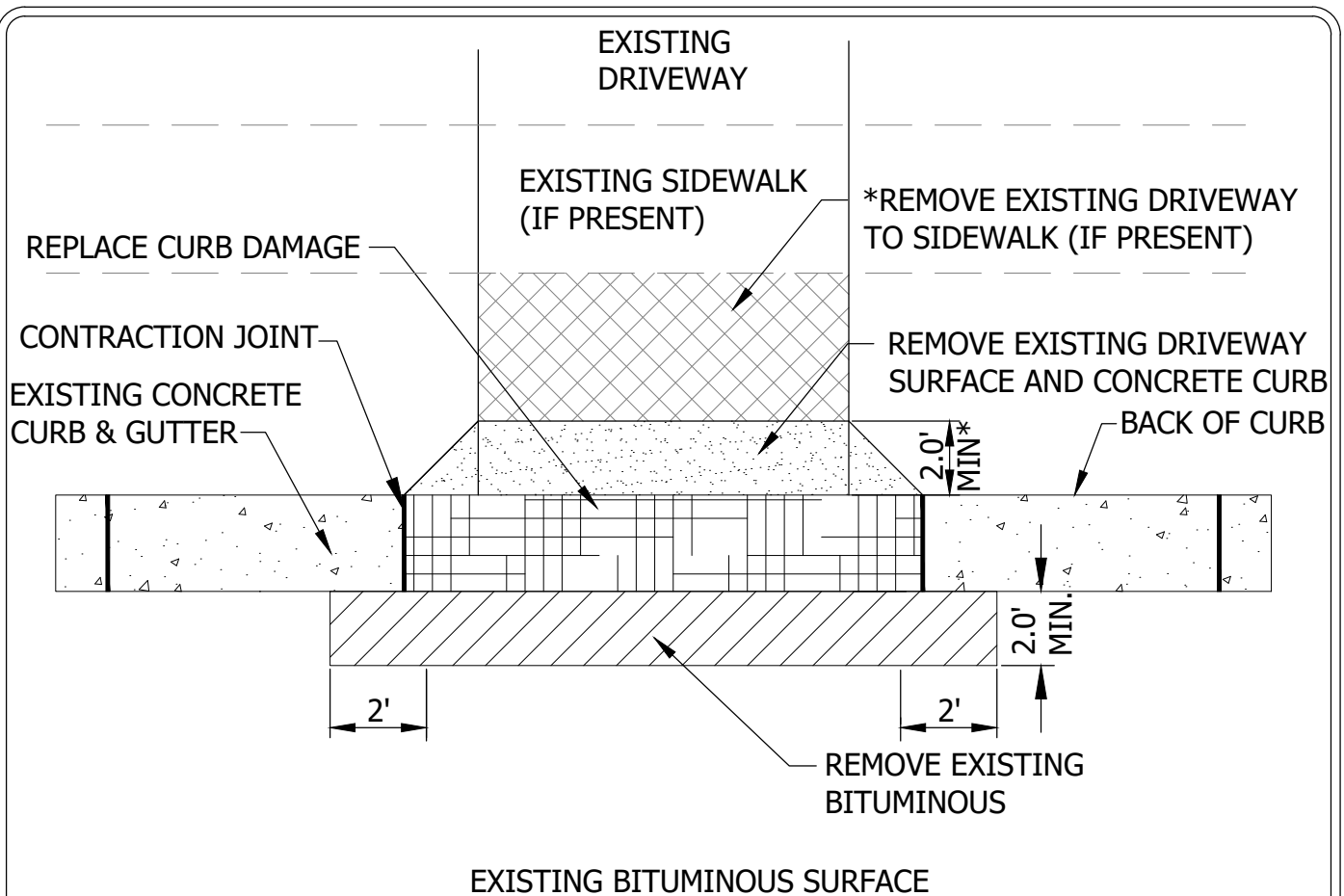


STANDARD DETAILS CONCRETE CURB REPLACEMENT

COTTAGE GROVE, MINNESOTA

JANUARY 2024

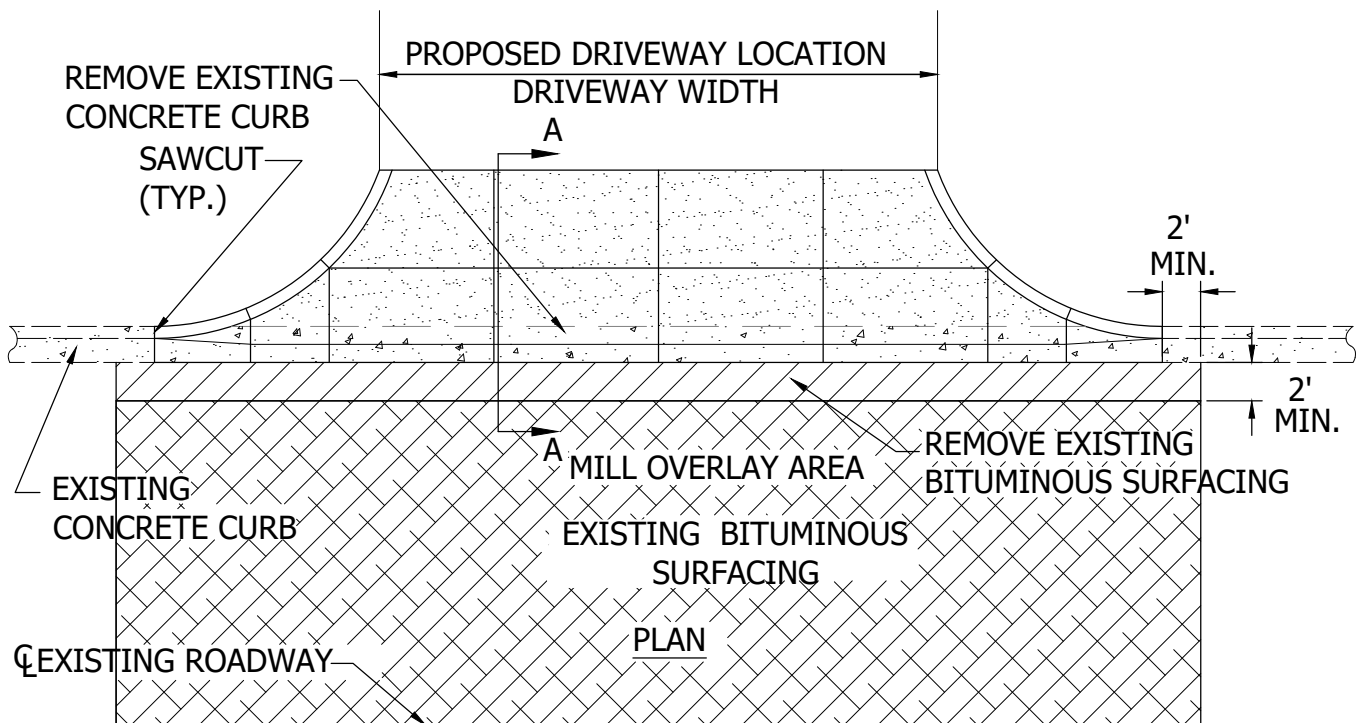
PLATE NO.
STR-19



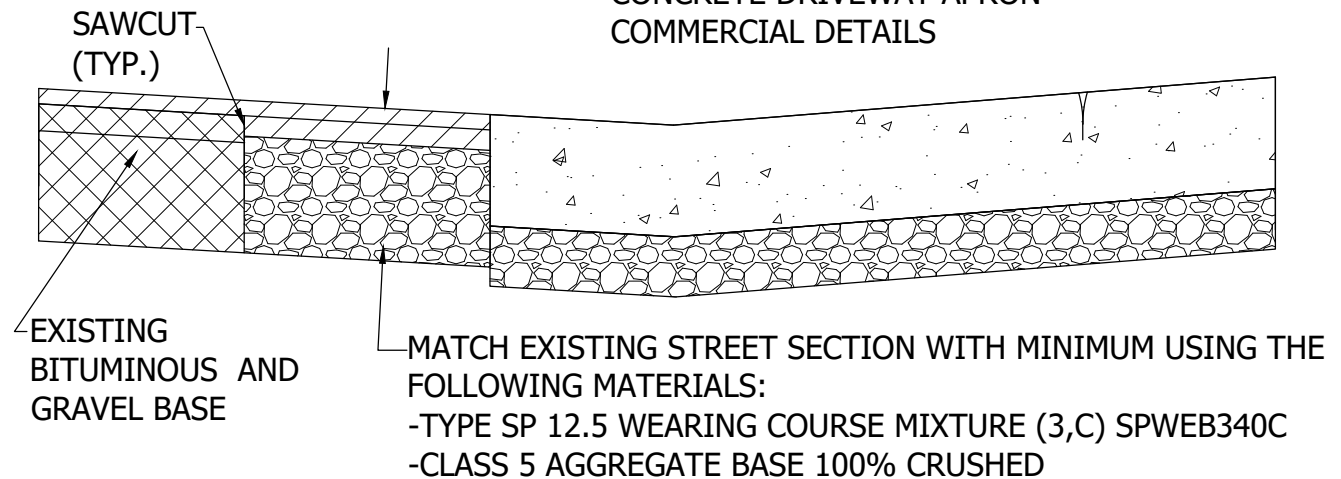
STANDARD DETAILS
CONCRETE CURB REPLACEMENT AT
DRIVEWAY LOCATION
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-20



SEE DETAIL PLATE STR-17 FOR
CONCRETE DRIVEWAY APRON
COMMERCIAL DETAILS



NOTES:

1. CITY RIGHT-OF-WAY PERMIT IS REQUIRED PRIOR TO CONSTRUCTION.
2. FOR MATERIAL SPECIFICATION, REFER TO RIGHT-OF-WAY PERMIT.



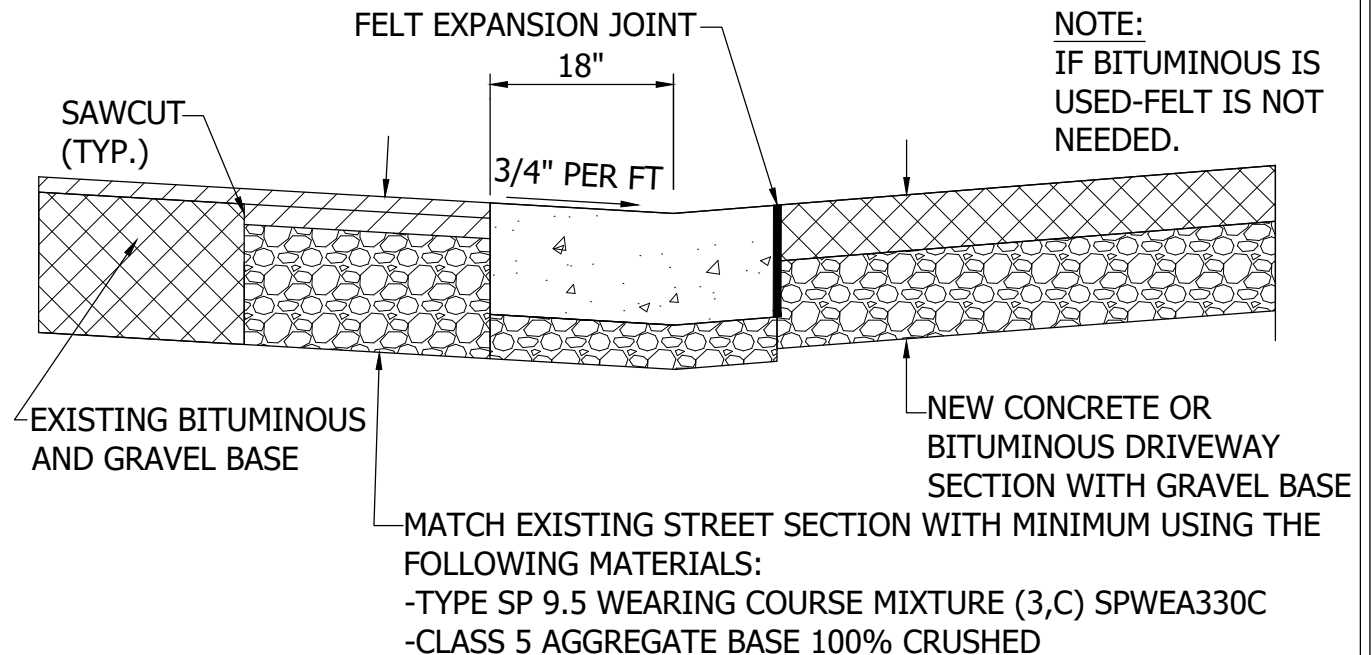
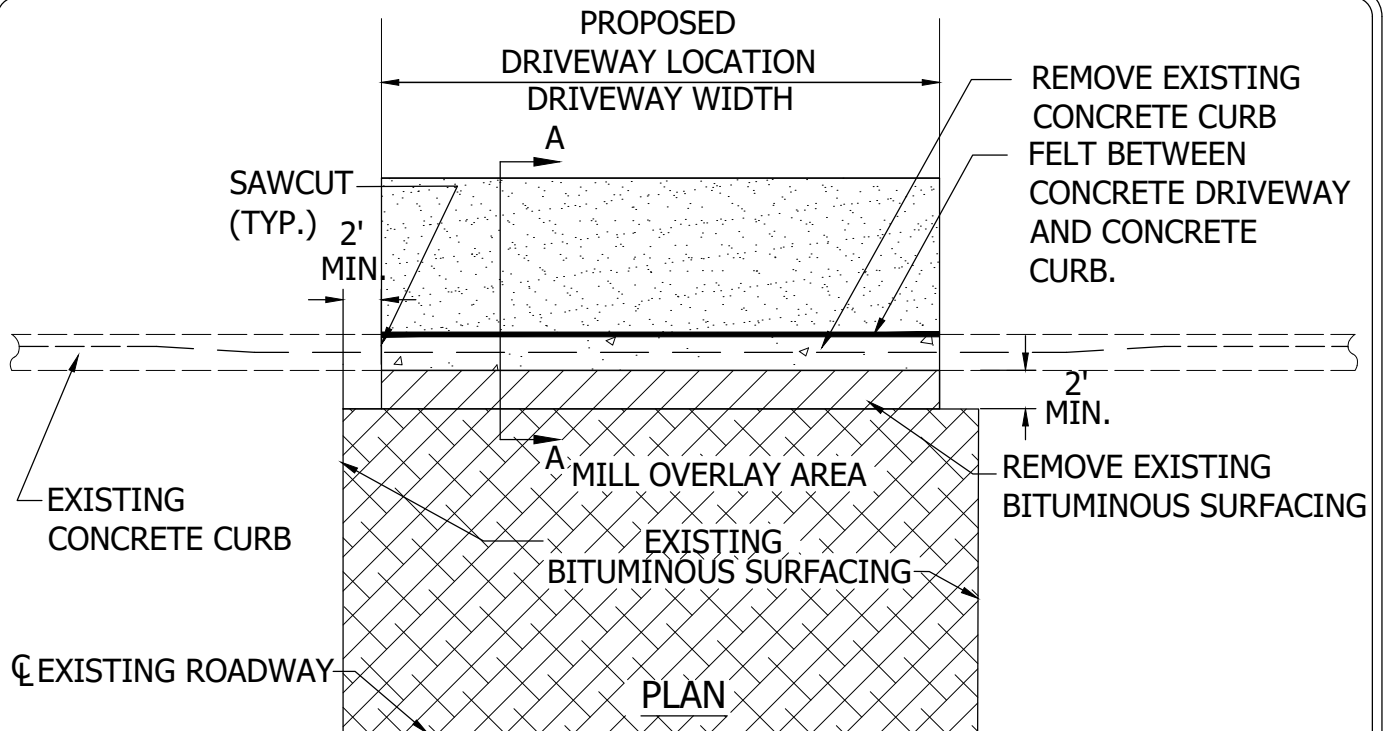
STANDARD DETAILS

CONCRETE COMMERCIAL DRIVEWAY APRON OR
CURB AND GUTTER CONNECT TO EXISTING STREET

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-21



NOTES:

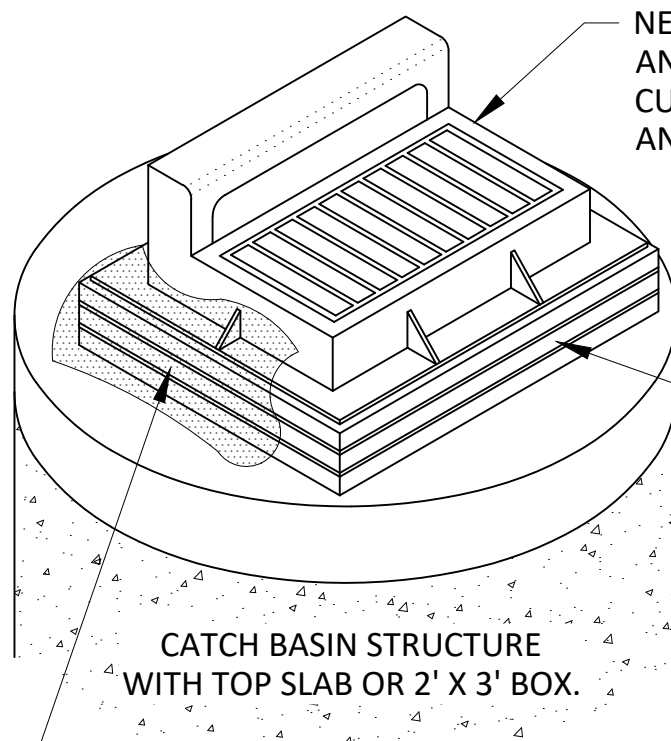
1. CITY RIGHT-OF-WAY PERMIT IS REQUIRED PRIOR TO CONSTRUCTION.
2. FOR MATERIAL SPECIFICATION, REFER TO RIGHT-OF-WAY PERMIT.



STANDARD DETAILS
RESIDENTIAL DRIVEWAY
CONNECT TO EXISTING STREET
COTTAGE GROVE, MINNESOTA

JANUARY 2024

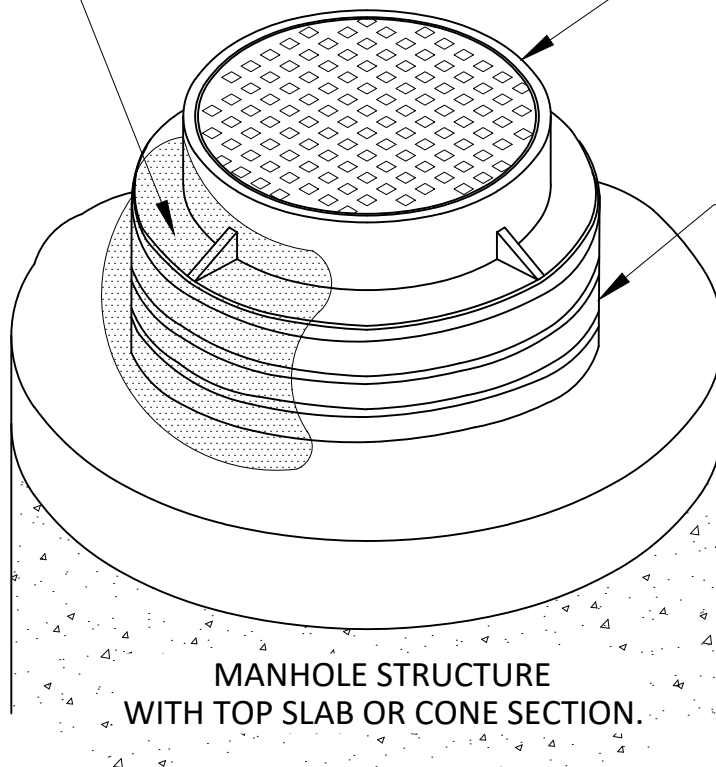
PLATE NO.
STR-22



NEENAH R-3067-VB CATCH BASIN FRAME AND GRATE. SHALL BE FURNISHED WITH CURB INLET BOX AND 3" DIA FRONT FACE AND 4" MAX OPENING.

HIGH DENSITY POLYETHYLENE (HDPE) ADJUSTMENT RINGS. MIN HEIGHT 3", MAX HEIGHT 12".

FILTER FABRIC



NEENAH R1642B MANHOLE FRAME AND COVER. SHALL BE FURNISHED WITH 2 CONCEALED PICK HOLES AND STAMPED "SANITARY SEWER" OR "STORM SEWER".

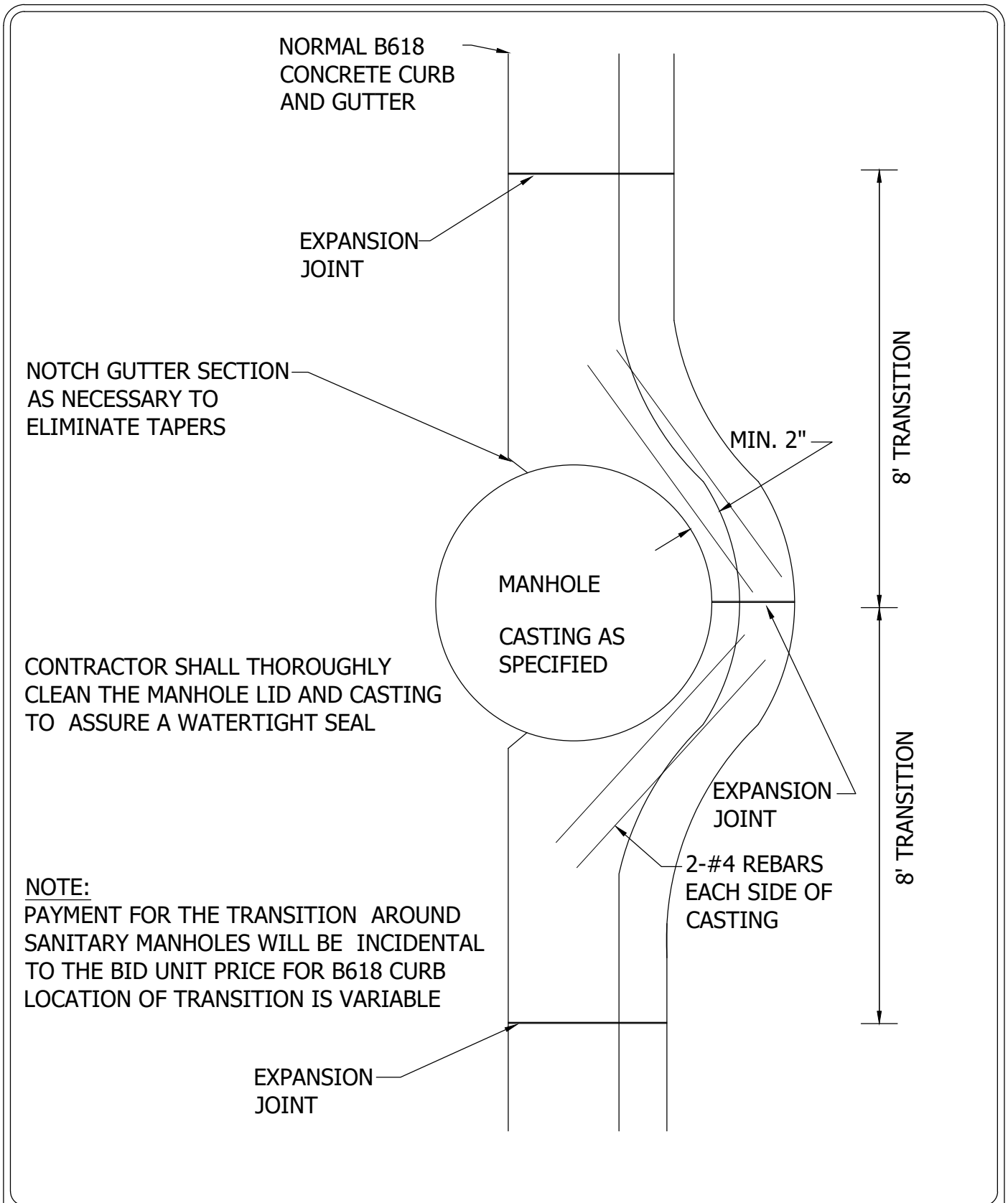
HIGH DENSITY POLYETHYLENE (HDPE) ADJUSTMENT RINGS. MIN HEIGHT 3", MAX HEIGHT 12".



STANDARD DETAILS
CATCHBASIN AND MANHOLE
ADJUSTMENT
COTTAGE GROVE, MINNESOTA

JANUARY 2024

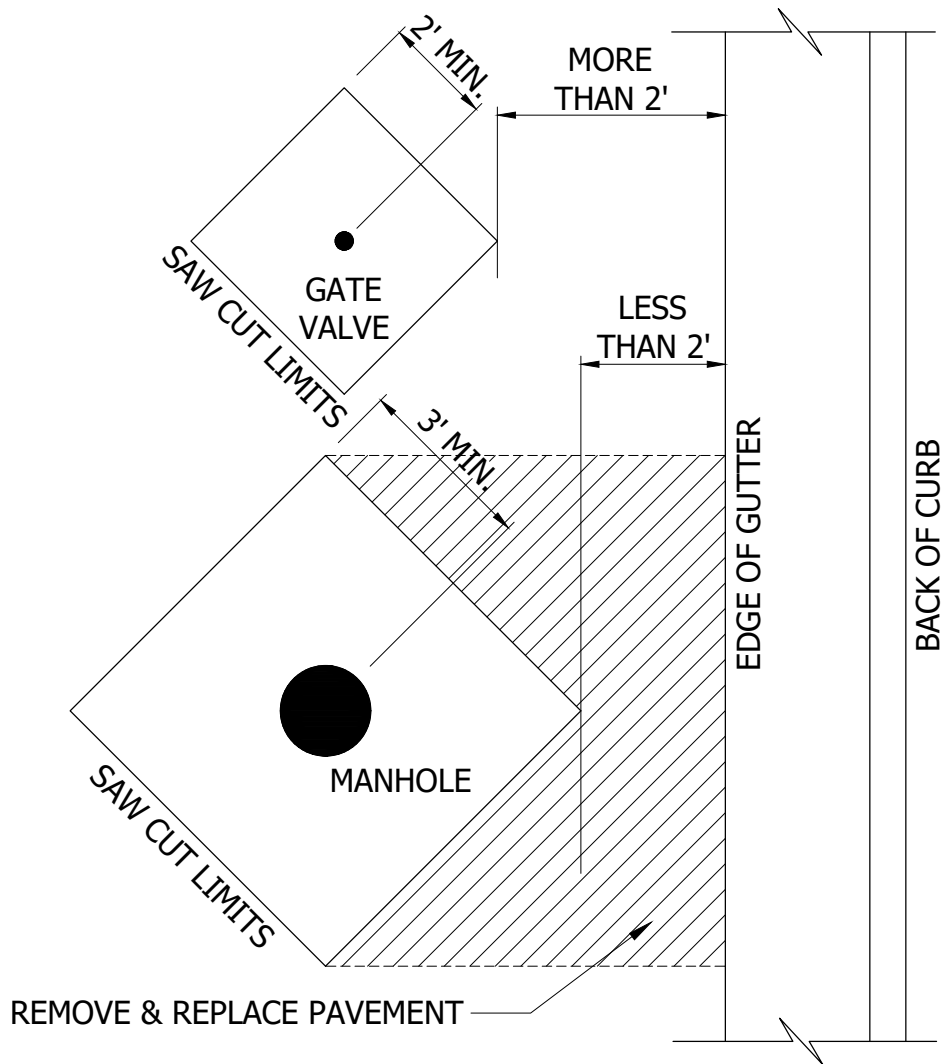
PLATE NO.
STR-23



STANDARD DETAILS
MANHOLE CASTING IN B618
CURB AND GUTTER
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-24



**Cottage
Grove**
Where Pride and Prosperity Meet

STANDARD DETAILS

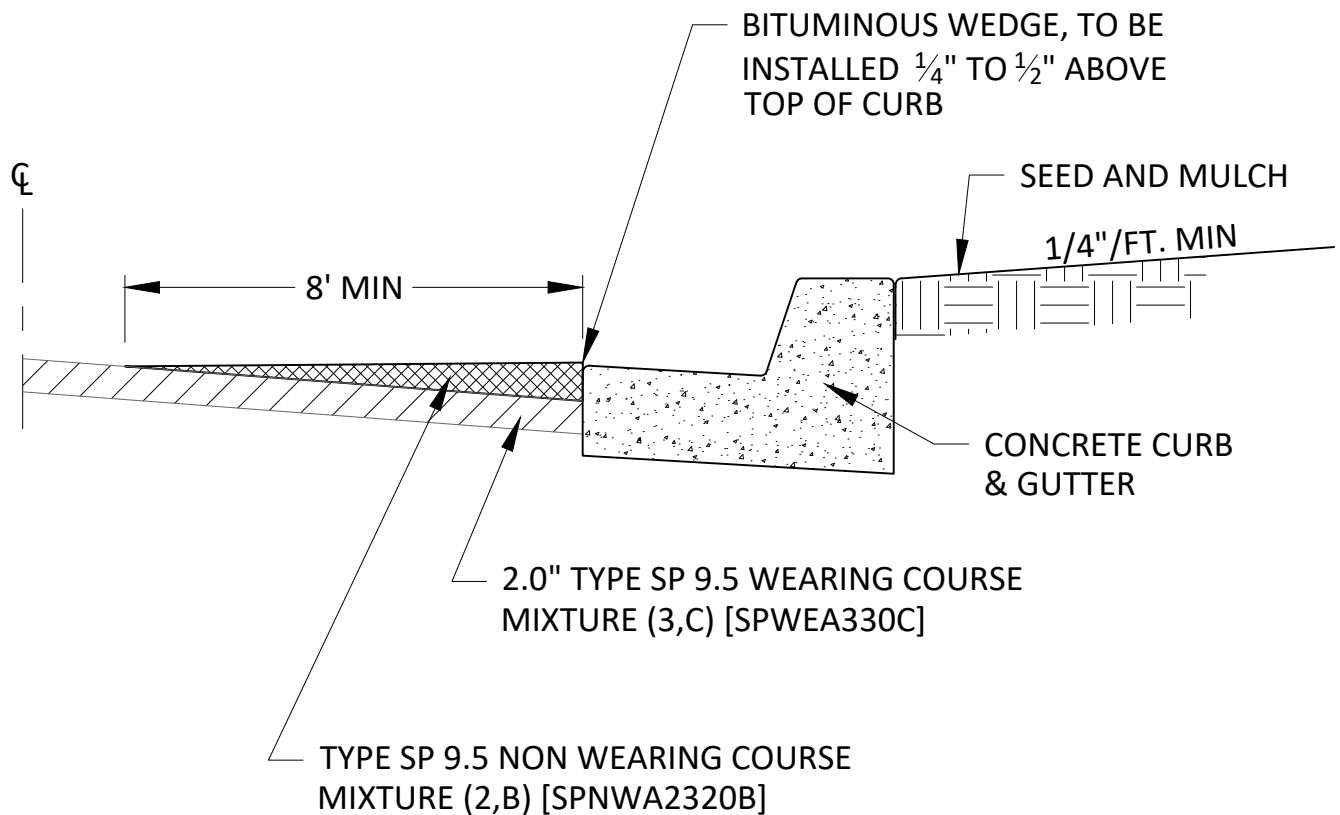
STRUCTURE ADJUSTMENT PATCH
(BITUMINOUS OR CONCRETE)

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.

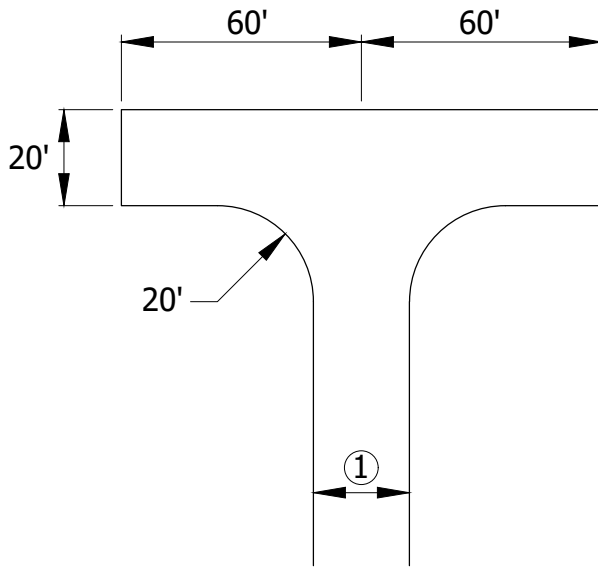
STR-25



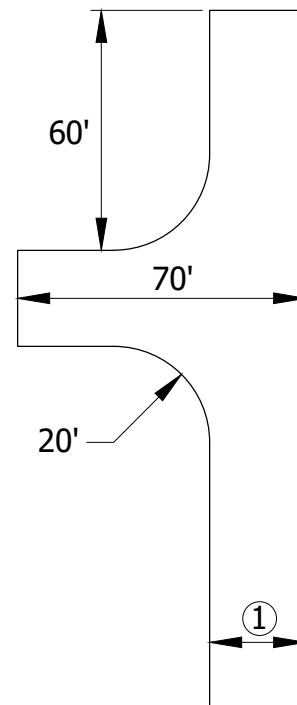
STANDARD DETAILS
CONCRETE CURB PROTECTION
BITUMINOUS WEDGE
COTTAGE GROVE, MINNESOTA

JANUARY 2024

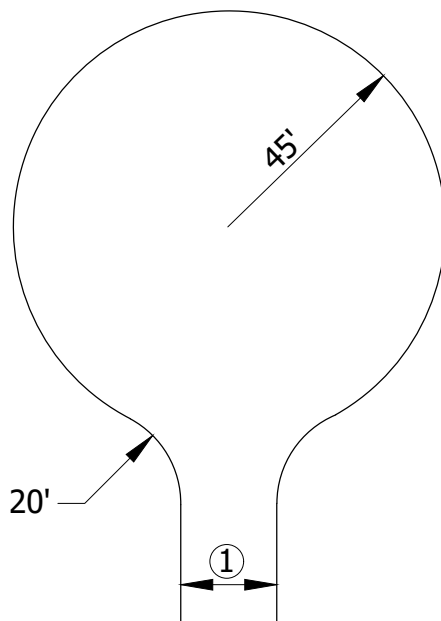
PLATE NO.
STR-26



"T" TYPE



HAMMERHEAD
OR BRANCH
TYPE



CUL-DE-SAC

NOTE:

① MATCH EXISTING STREET WIDTH.



**Cottage
Grove**

Where Pride and Prosperity Meet

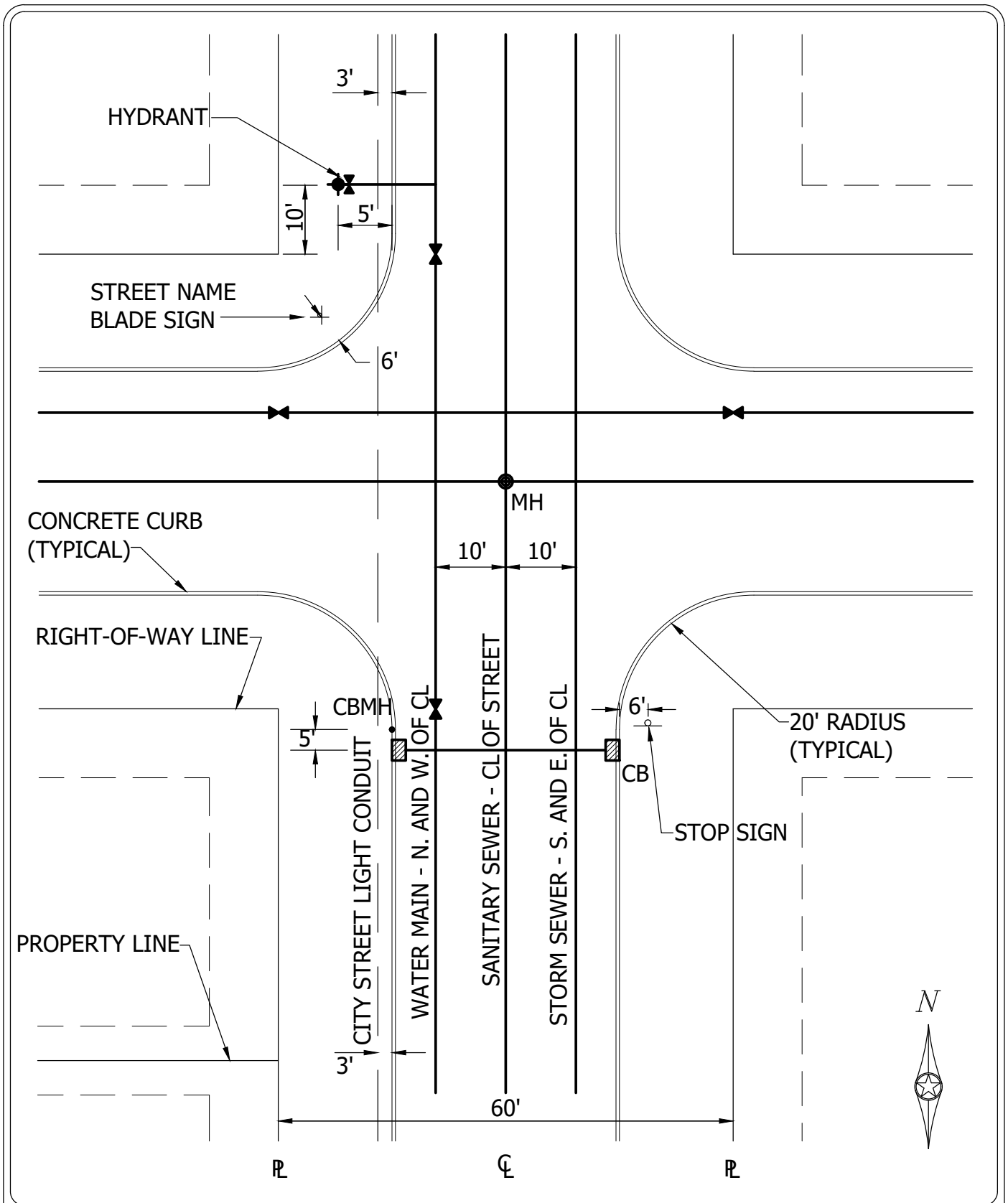
STANDARD DETAILS
TEMPORARY TURNAROUND

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.

STR-27



**Cottage
Grove**

Where Pride and Prosperity Meet

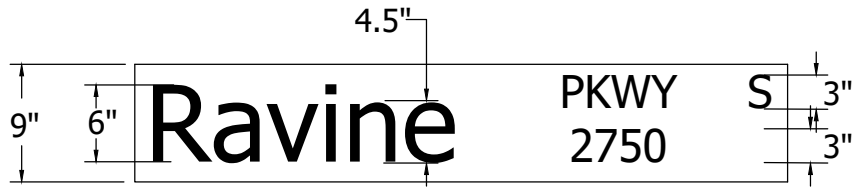
STANDARD DETAILS
TYPICAL UTILITY LOCATIONS

COTTAGE GROVE, MINNESOTA

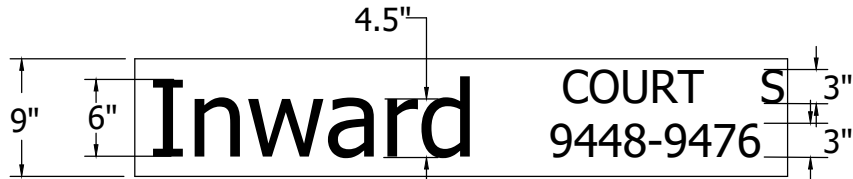
JANUARY 2024

PLATE NO.

STR-28



PUBLIC - THROUGH STREET



PUBLIC - CUL-DE-SAC

STANDARD CONSTRUCTION NOTES FOR STREET NAME SIGNS

1. ALL STREET SIGNS SHALL BE 3M DIAMOND GRADE DG3 DOUBLE-FACED EXTRUDED BLADES.
2. FIRST LETTER OF SUFFIX SHALL BE UPPERCASE WITH ALL REMAINING LETTERS TO BE LOWERCASE
3. ADDRESS NUMBERS FOR STREET NAME BLADES WILL BE PROVIDED AT A LATER DATE.
4. ALL PUBLIC STEET NAME BLADES SHALL BE "GREEN" IN COLOR. LETTERING ON ALL STREET NAME BLADES SHALL BE HIGH INTENSITY, "WHITE" IN COLOR.

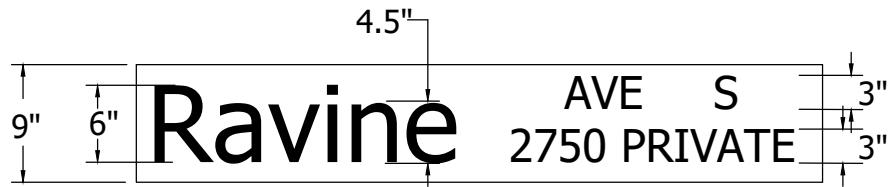


STANDARD DETAILS
STREET NAME BLADE SIGNS
PUBLIC STREETS

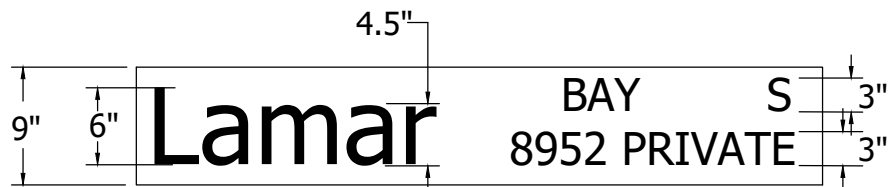
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-29



PRIVATE - THROUGH STREET



PRIVATE - CUL-DE-SAC

STANDARD CONSTRUCTION NOTES FOR STREET NAME SIGNS

1. ALL STREET SIGNS SHALL BE 3M DIAMOND GRADE DG3 DOUBLE-FACED EXTRUDED BLADES.
2. FIRST LETTER OF SUFFIX SHALL BE UPPERCASE WITH ALL REMAINING LETTERS TO BE LOWERCASE
3. ADDRESS NUMBERS FOR STREET NAME BLADES WILL BE PROVIDED AT A LATER DATE.
4. ALL PRIVATE STREET NAME BLADES SHALL BE "BLUE" IN COLOR. LETTERING ON ALL STREET NAME BLADES SHALL BE HIGH INTENSITY, "WHITE" IN COLOR.



STANDARD DETAILS

STREET NAME BLADE SIGNS
PRIVATE STREETS

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-30

 **FUTURE** 
ROAD
EXTENSION

4"

NOTES:

1. SIGN SIZE SHALL BE 18"X24".
2. LETTERS TO BE BLACK ON A WHITE BACKGROUND.
3. THE SIGN IS TO BE MOUNTED ON THE PERMANENT BARRICADES.
4. THE TEXT HEIGHT SHALL BE 4"

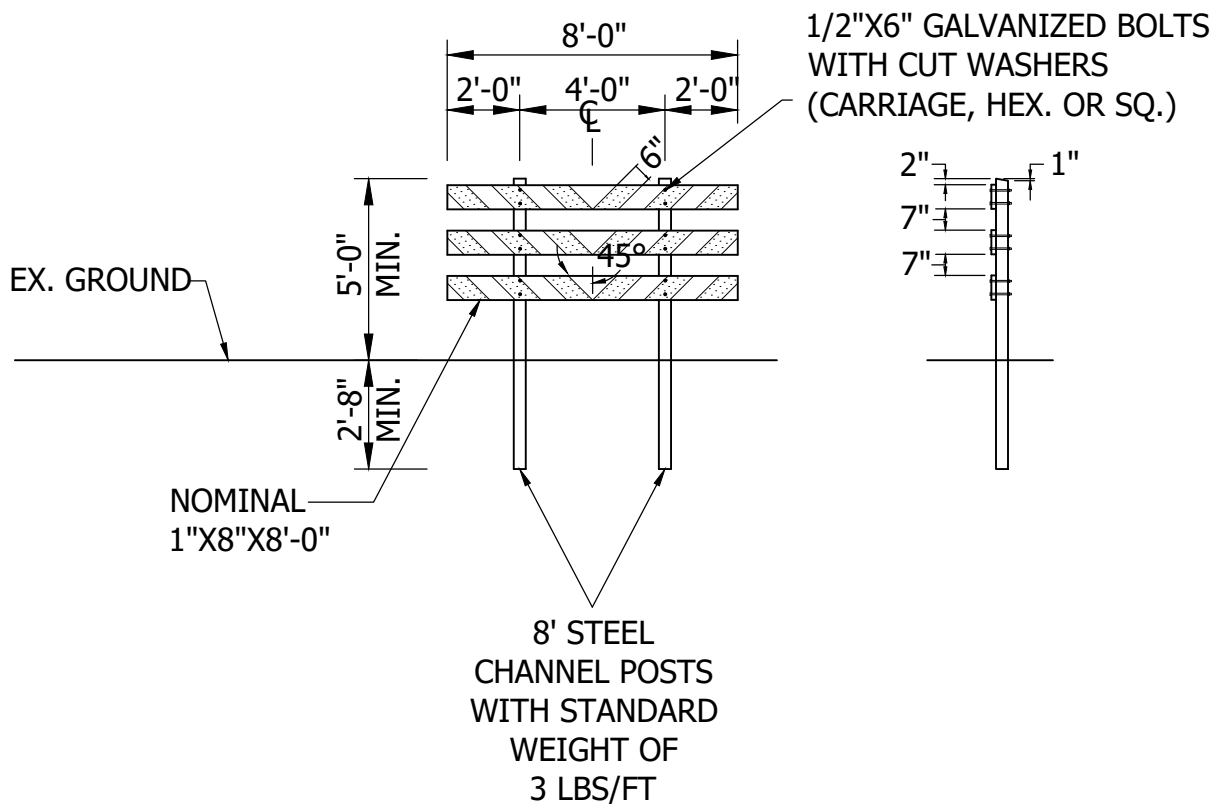


STANDARD DETAILS
FUTURE ROAD EXTENSION SIGN

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-31



NOTES:

1. THE PLACEMENT OF THE BARRICADE SHALL BE 10'-0" FROM THE END OF THE BITUMINOUS ROAD WITH THE BARRICADE CENTERED ON THE ROADWAY FACING THE FLOW OF TRAFFIC. BARRICADES SHALL BE PLACED WITH MAXIMUM 6' SPACING AND SHALL SPAN ENTIRE ROADWAY WIDTH.
2. ONLY ONE "END OF ROAD MARKER" REQUIRED PER STREET.

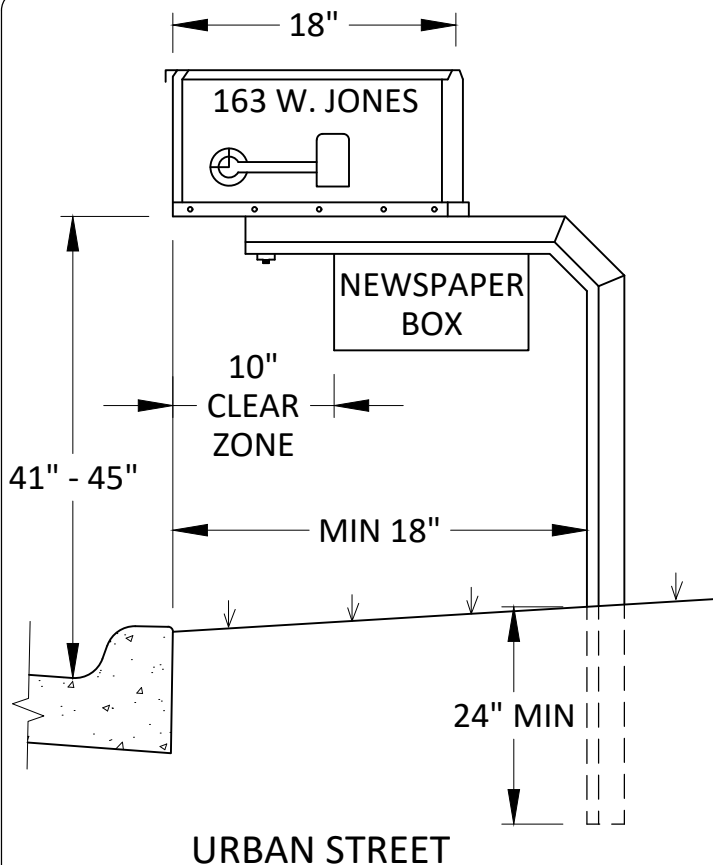


STANDARD DETAILS
PERMANENT BARRICADE

COTTAGE GROVE, MINNESOTA

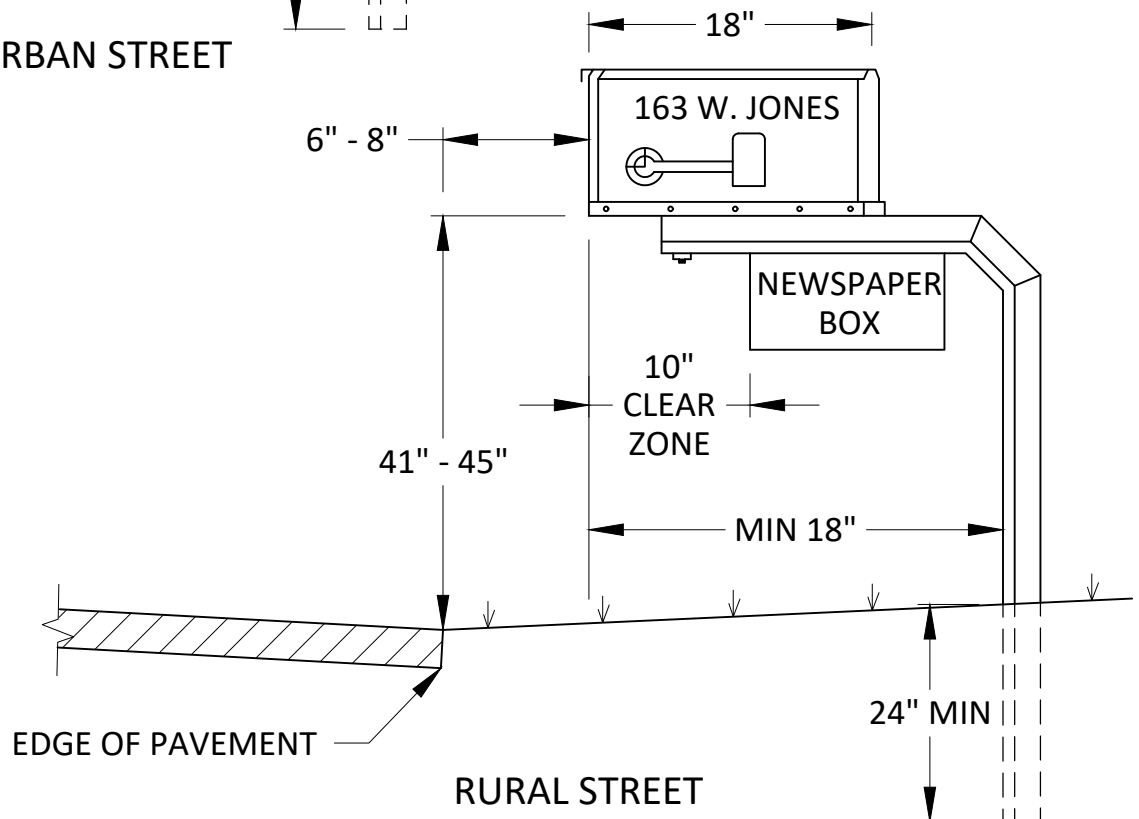
JANUARY 2024

PLATE NO.
STR-32



NOTES:
DIMENSIONS AS PER U.S.
POSTAL SERVICE

ADDRESS MUST BE ON SIDE
OF BOX FROM WHICH
CARRIER APPROACHES IN
LETTERS ABOUT ONE INCH
HIGH (OR ON FRONT WHERE
BOXES ARE GROUPED).



**Cottage
Grove**

Where Pride and Prosperity Meet

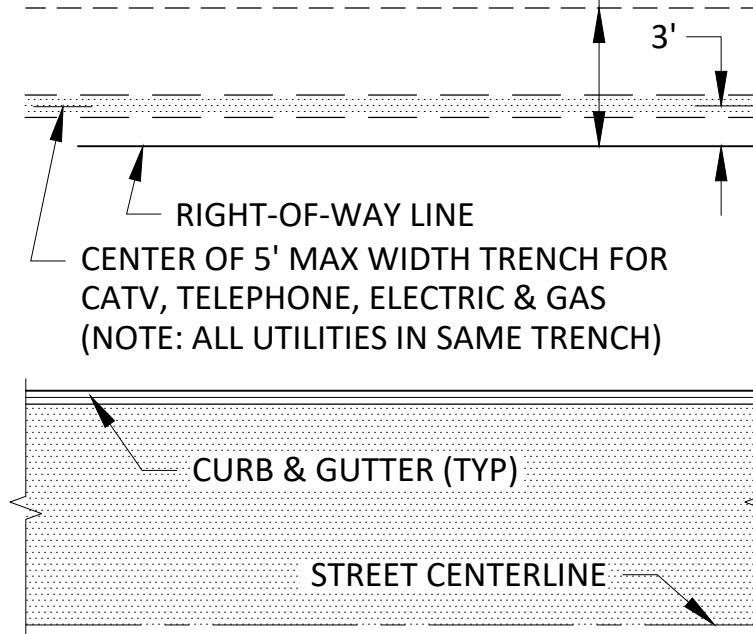
**STANDARD DETAILS
MAIL BOX INSTALLATION**

COTTAGE GROVE, MINNESOTA

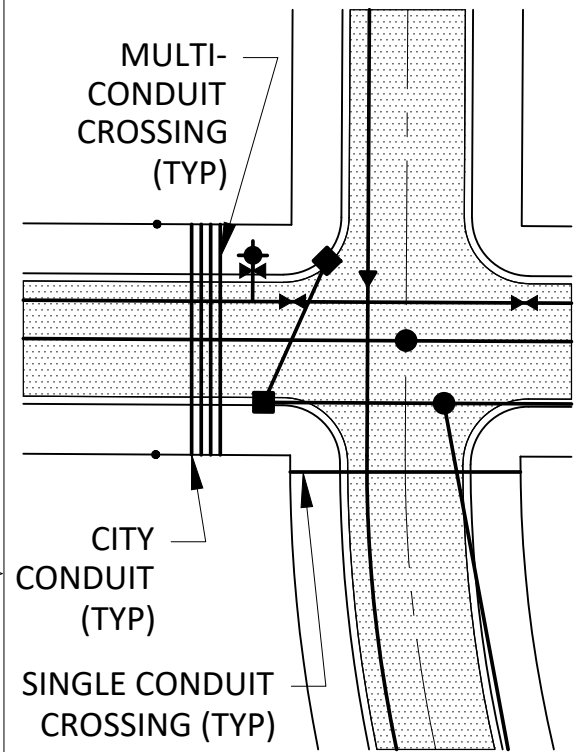
JANUARY 2024

PLATE NO.
STR-33

10' DRAINAGE & UTILITY EASEMENT

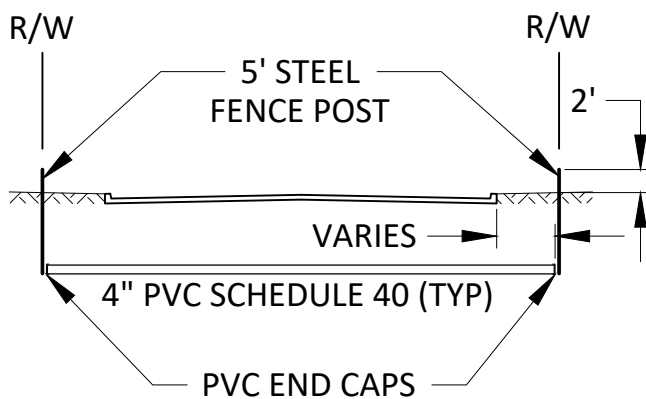


TYPICAL PRIVATE
UTILITY PLACEMENT

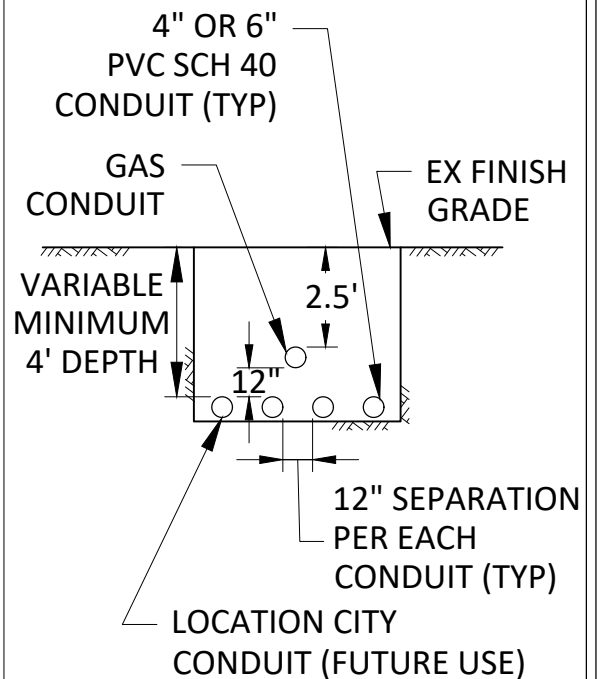


PLAN VIEW

NOTE: ABOVE GROUND UTILITY BOXES SHALL BE LOCATED TO ALLOW FOR 3.0' CLEAR ZONE FOR SIDEWALKS AND TRAILS



CROSS SECTION



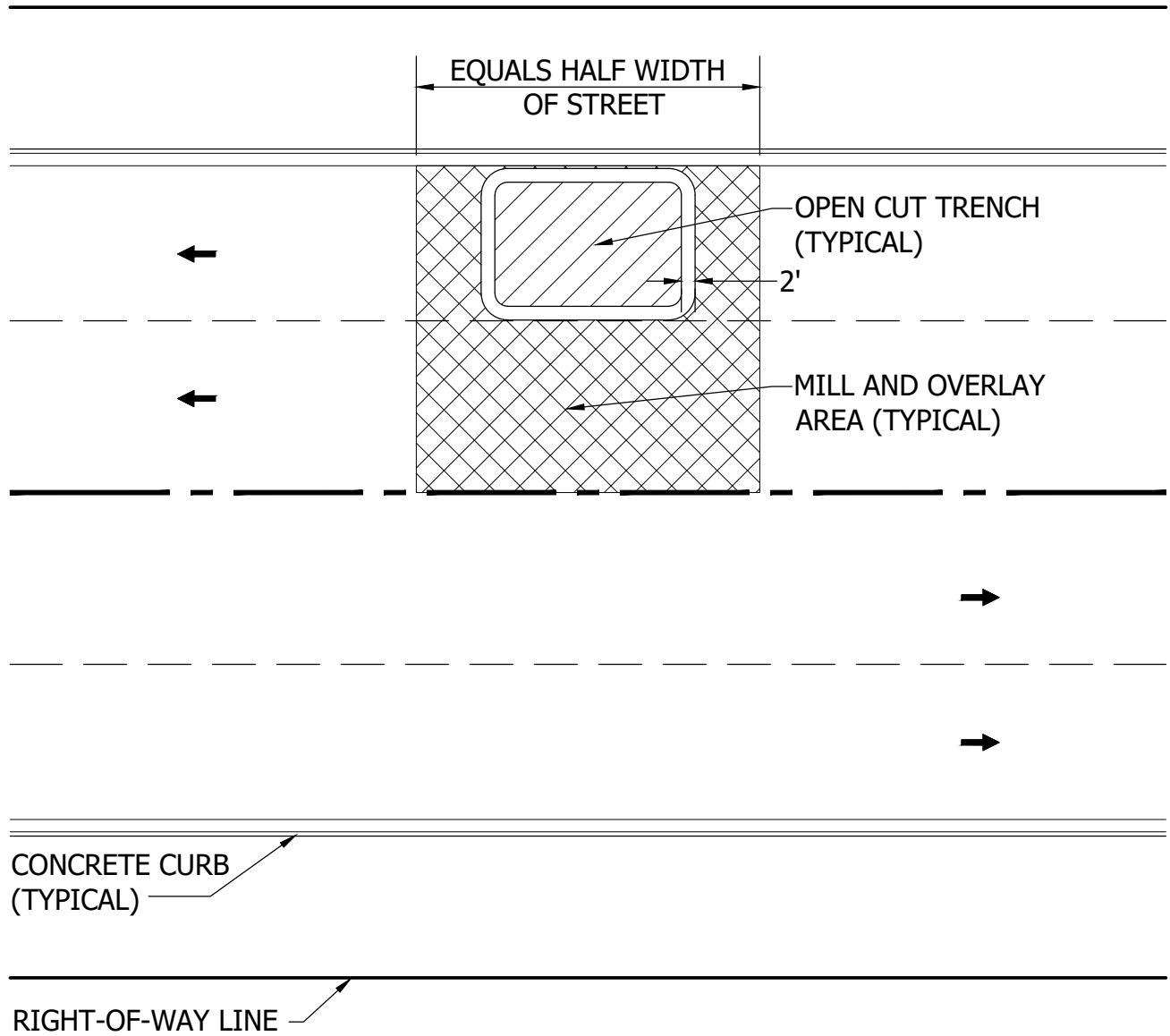
TRENCH CROSS SECTION
AT CONDUIT CROSSING



STANDARD DETAILS
PRIVATE UTILITY CONDUIT CROSSING
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-34



NOTES:

1. REMOVE AND REPLACE EXISTING STREET SECTION 2' WIDER THAN EXCAVATION.
2. MATCH EXISTING DEPTH OF MATERIALS.

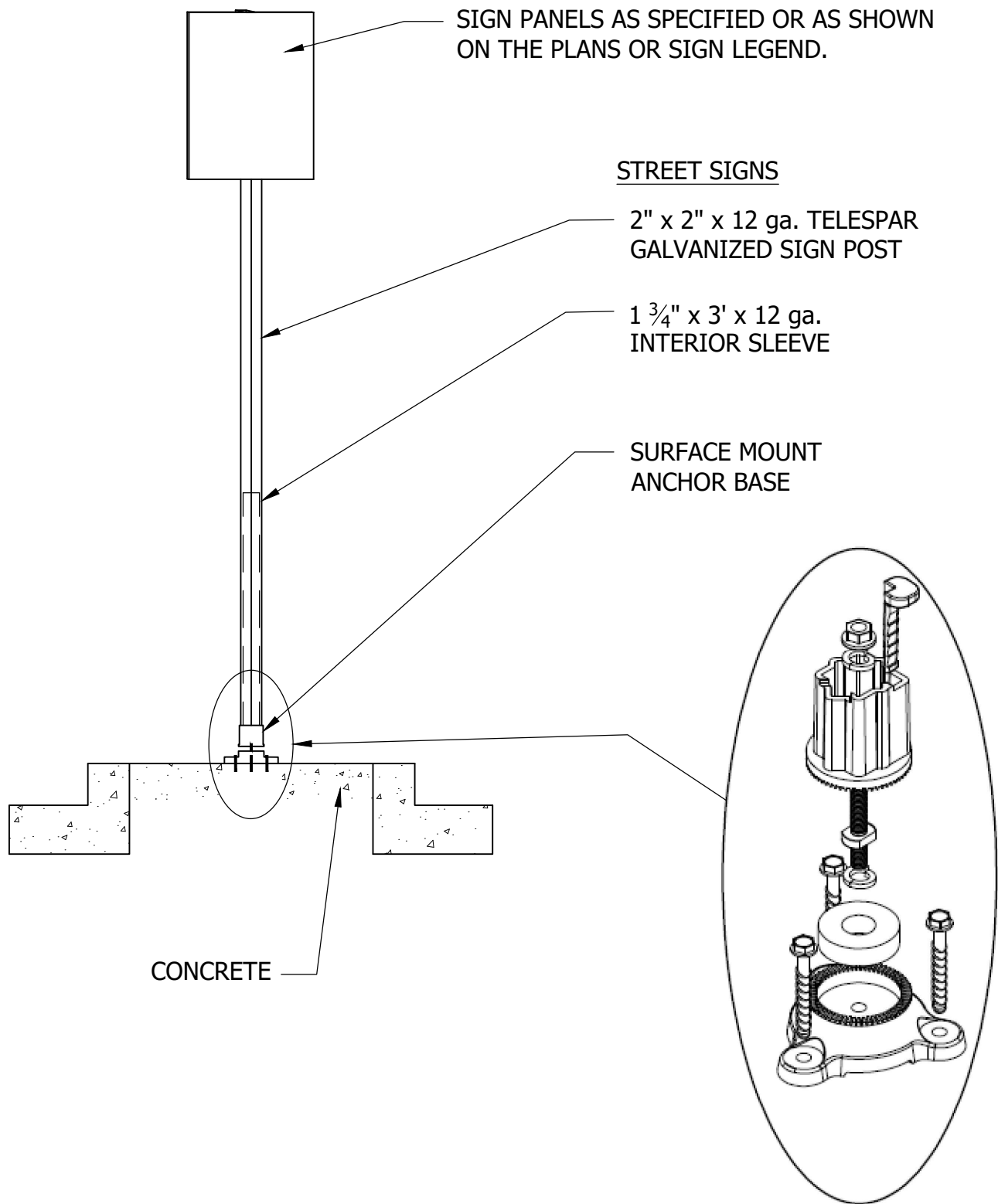


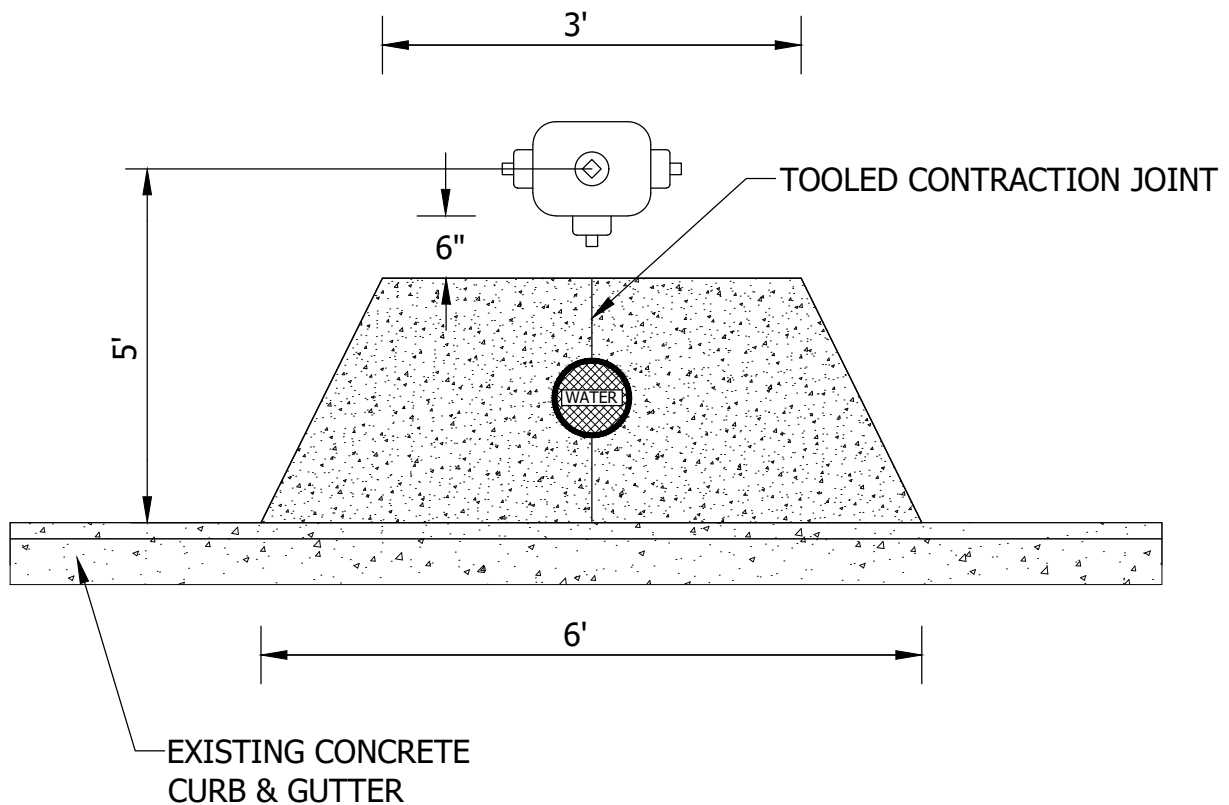
STANDARD DETAILS
BITUMINOUS REMOVAL LIMITS

COTTAGE GROVE, MINNESOTA

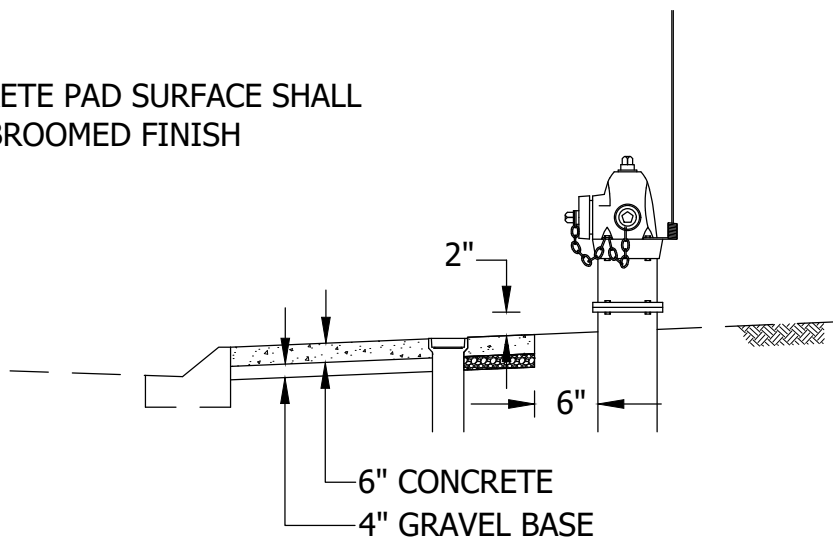
JANUARY 2024

PLATE NO.
STR-35

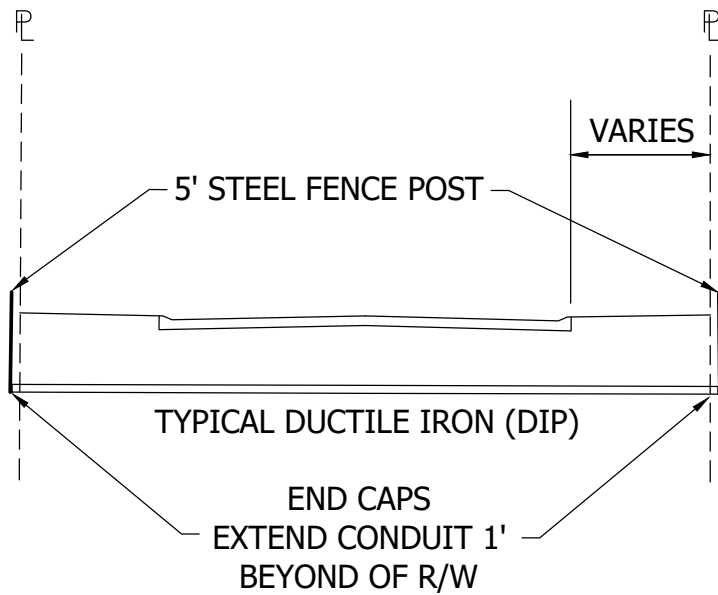
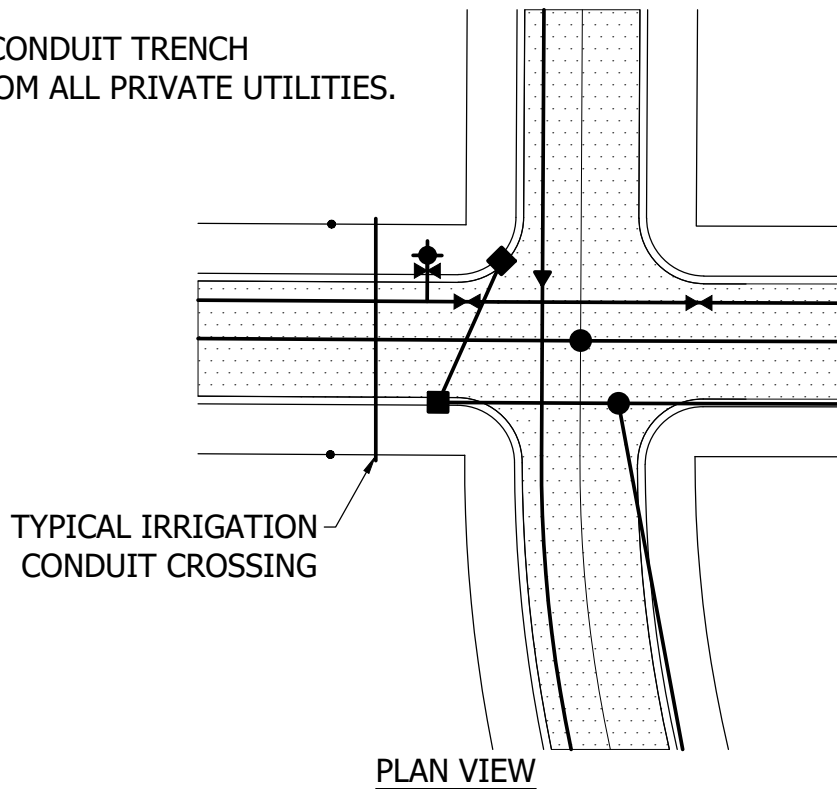




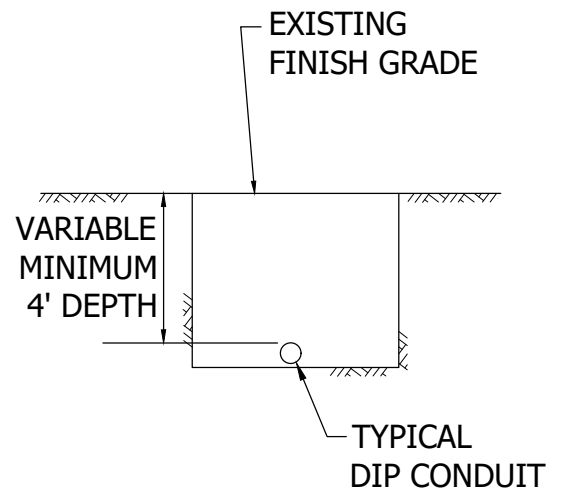
NOTE:
CONCRETE PAD SURFACE SHALL
HAVE BROOMED FINISH



NOTE:
IRRIGATION CONDUIT TRENCH
SEPARATE FROM ALL PRIVATE UTILITIES.



CROSS SECTION



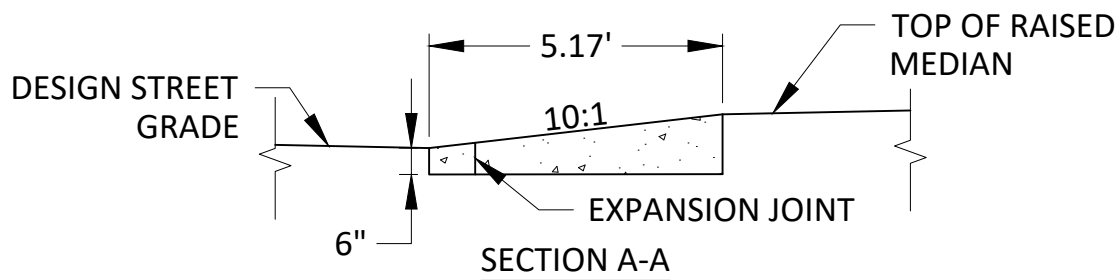
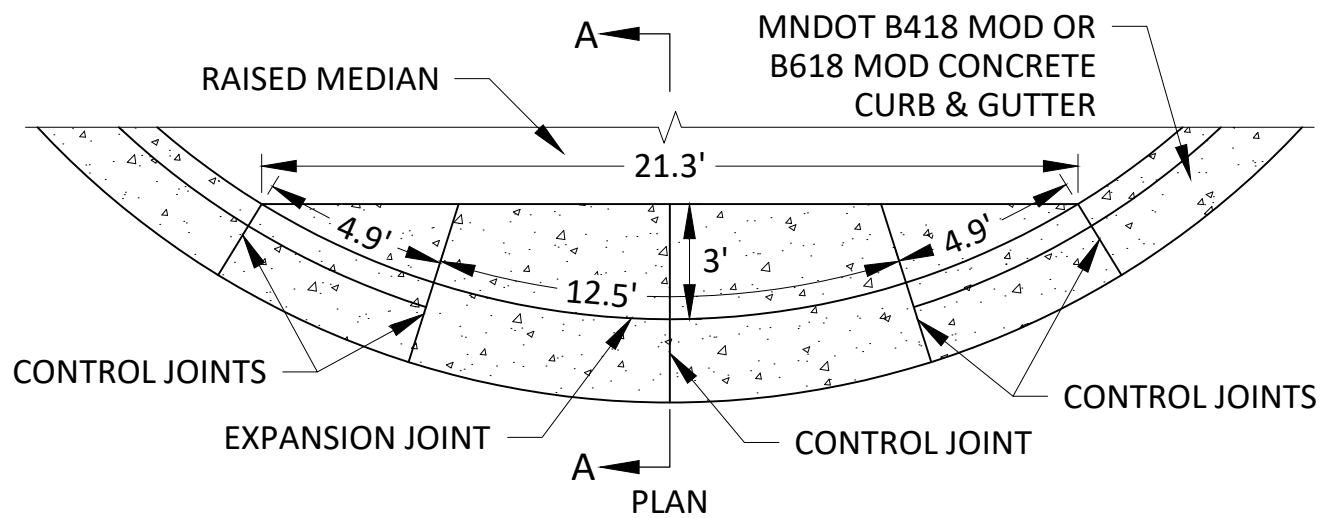
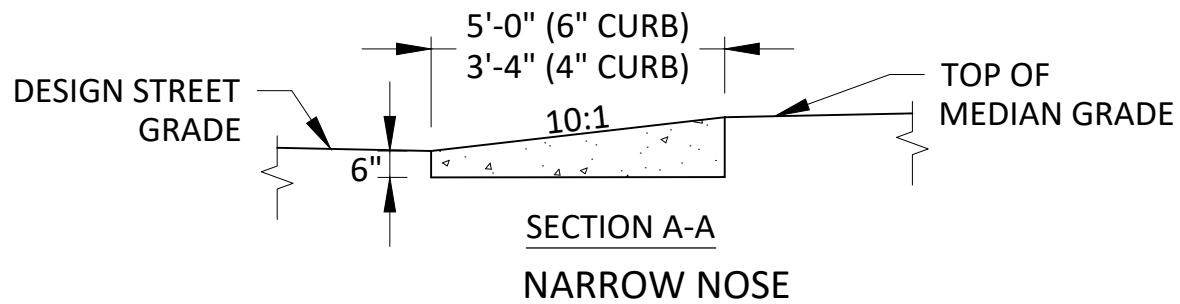
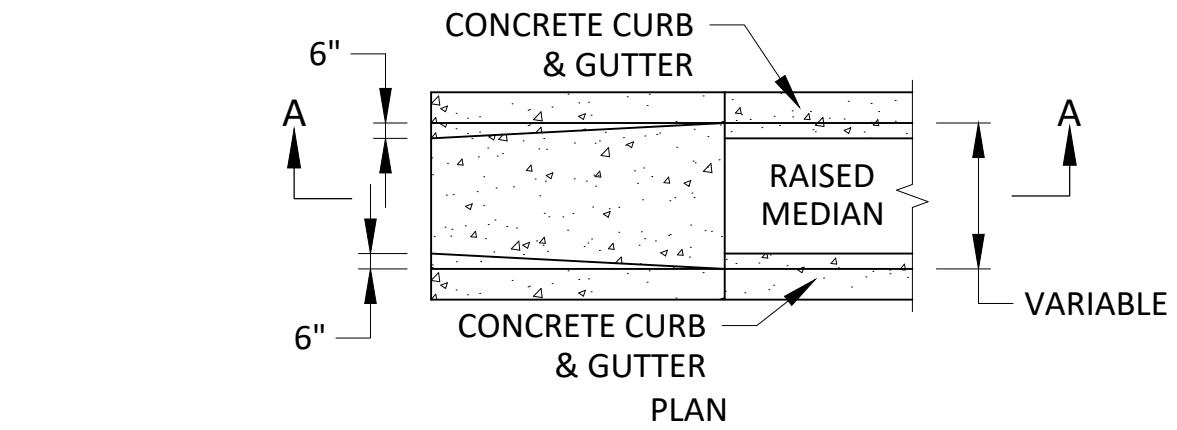
TRENCH CROSS SECTION
AT CONDUIT CROSSING



STANDARD DETAILS
DIP IRRIGATION CONDUIT CROSSING
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-38



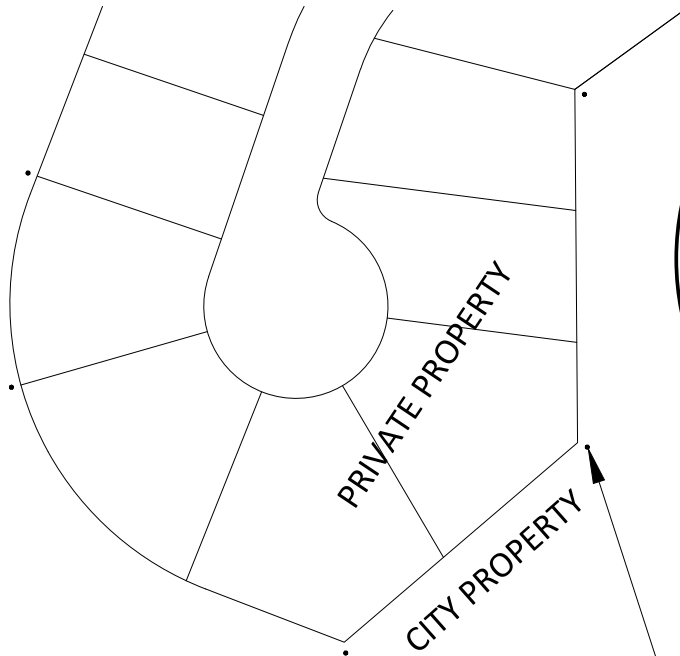
WIDE NOSE ON 21' RADIUS RAISED MEDIAN



STANDARD DETAILS
CONCRETE APPROACH NOSE DETAILS
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-39



LOCATION OF MONUMENT -
MAXIMUM 1'-2' FROM
PROPERTY CORNER (TYP)

SPECIFICATIONS:

1. LETTERING

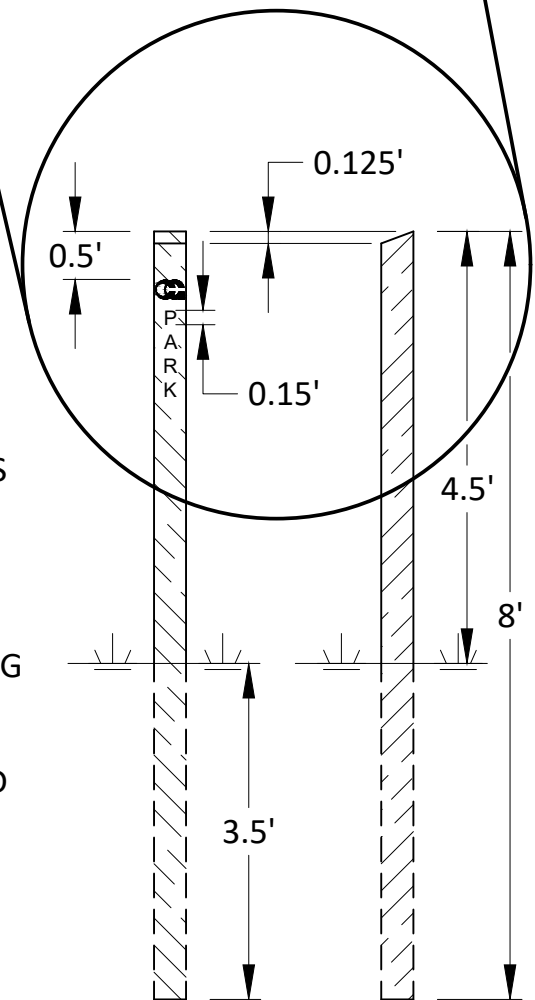
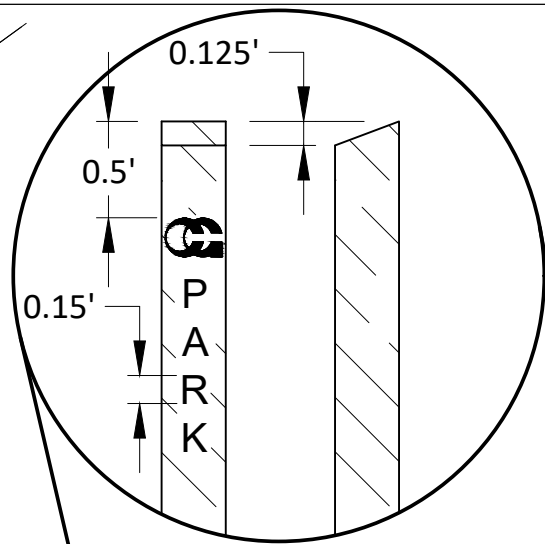
- TYPICAL LETTERING: "PARK" OR "OPEN SPACE" AS INDICATED ON PLAN
- LETTERING ENGRAVED INTO POST, 1/4" DEPTH
- LETTERS TO BE ARIAL FONT, WHITE, 0.15' TALL, 0.10' SPACING BETWEEN LETTERS, 0.30' SPACING BETWEEN LOGO AND LETTERING
- START 0.5' FROM TOP OF POST

2. POST MATERIALS

- 4"x4" SQUARE COMPOSITE POST WITH ROUNDED EDGES AND CORNERS
- FOREST GREEN

3. POST INSTALLATION

- PLACED WITH LETTERING FACING PRIVATE PROPERTY



FRONT

SIDE



**Cottage
Grove**

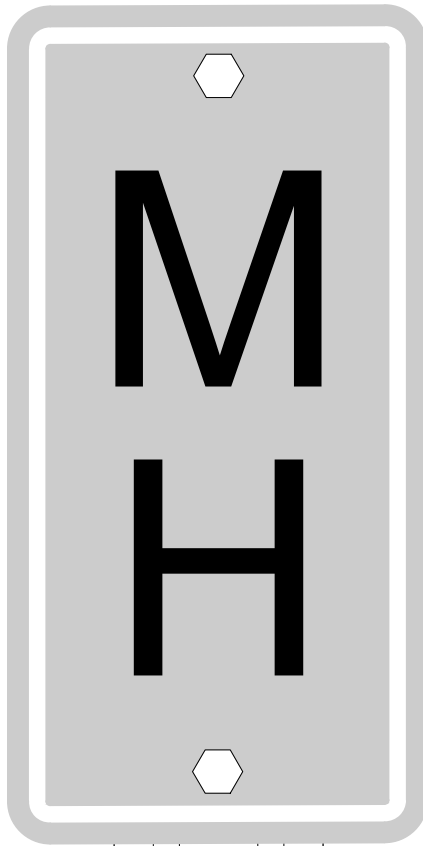
Where Pride and Prosperity Meet

STANDARD DETAILS
CITY MONUMENT POST

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
STR-40



NOTES:

1. 6"x12" SIGN PANEL:
 - 1.1. MH FOR SANITARY - WHITE LETTERS ON GREEN HIP SHEETING WITH WHITE BORDER.
 - 1.2. SW FOR STORM SEWER - WHITE LETTERS ON GREEN HIP SHEETING WITH WHITE BORDER.
 - 1.1. GV FOR WATER MAIN - WHITE LETTERS ON BLUE HIP SHEETING WITH WHITE BORDER
2. U-CHANNEL GALVANIZED POST, MINIMUM 3 LB/FT 6'-6" LONG.
3. REQUIRED FOR STRUCTURES LOCATED IN NON-MAINTAINED AREAS AS DIRECTED BY ENGINEER.



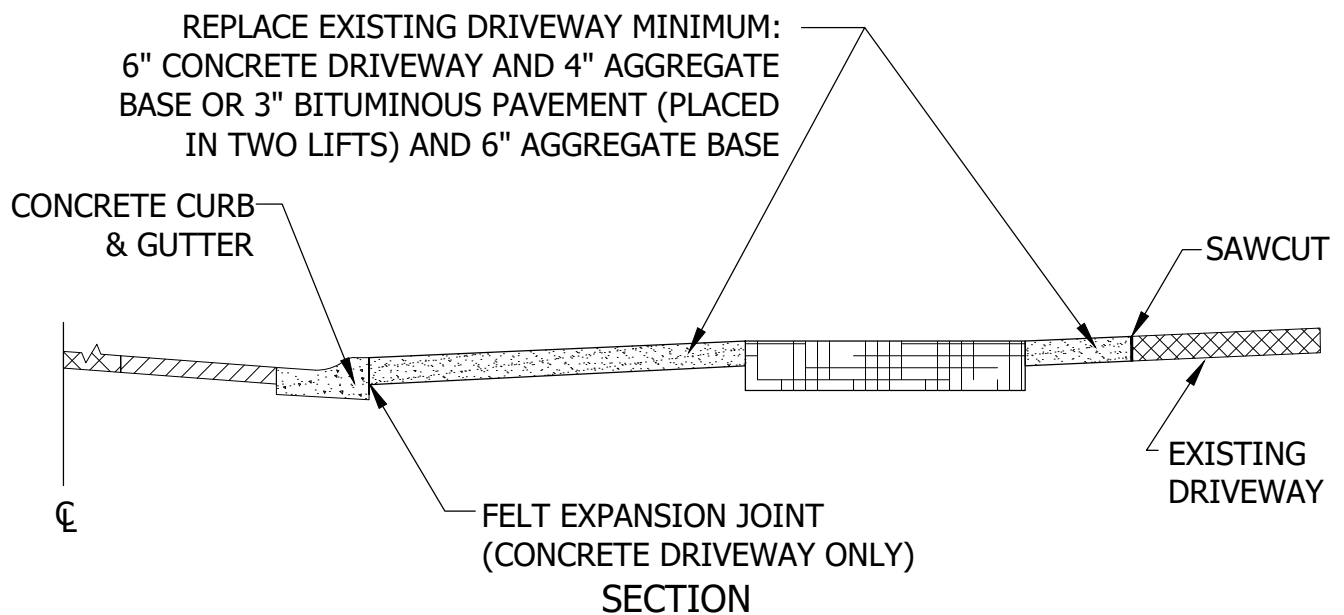
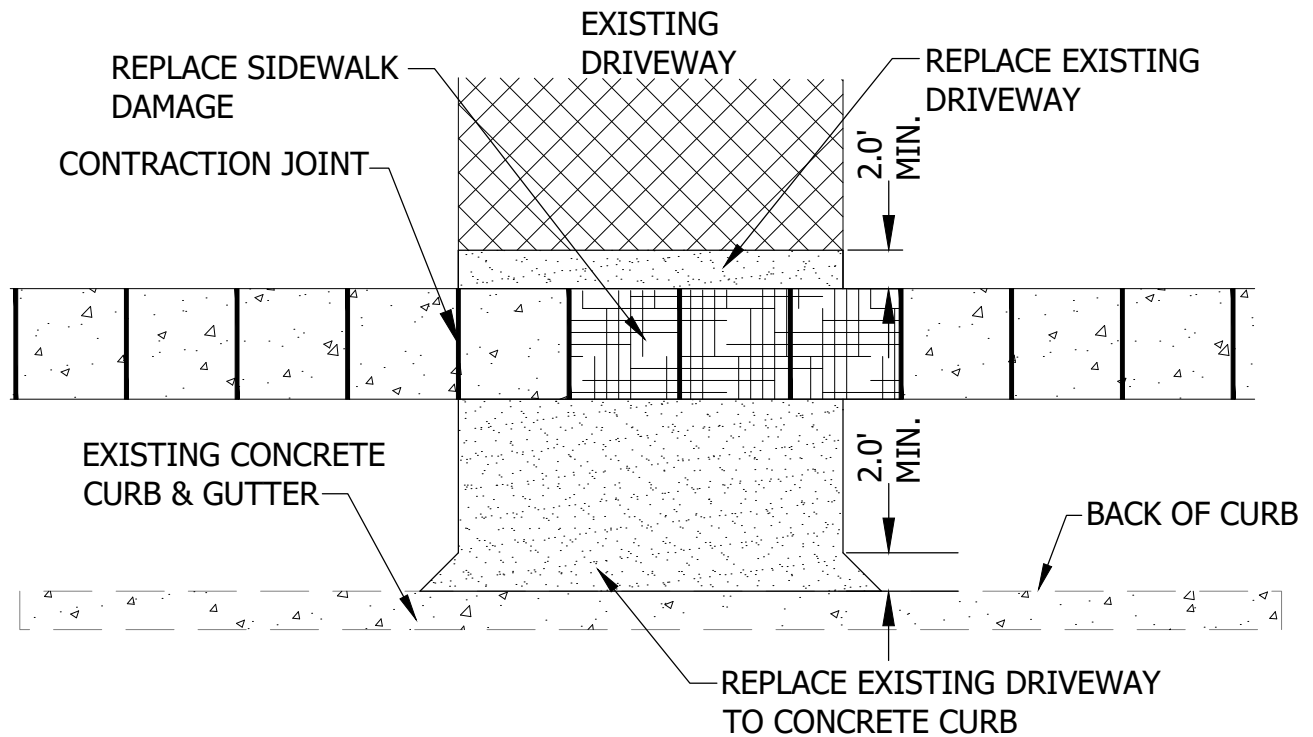
**Cottage
Grove**
Where Pride and Prosperity Meet

STANDARD DETAILS
STRUCTURE MARKER SIGN

COTTAGE GROVE, MINNESOTA

JANUARY 2024

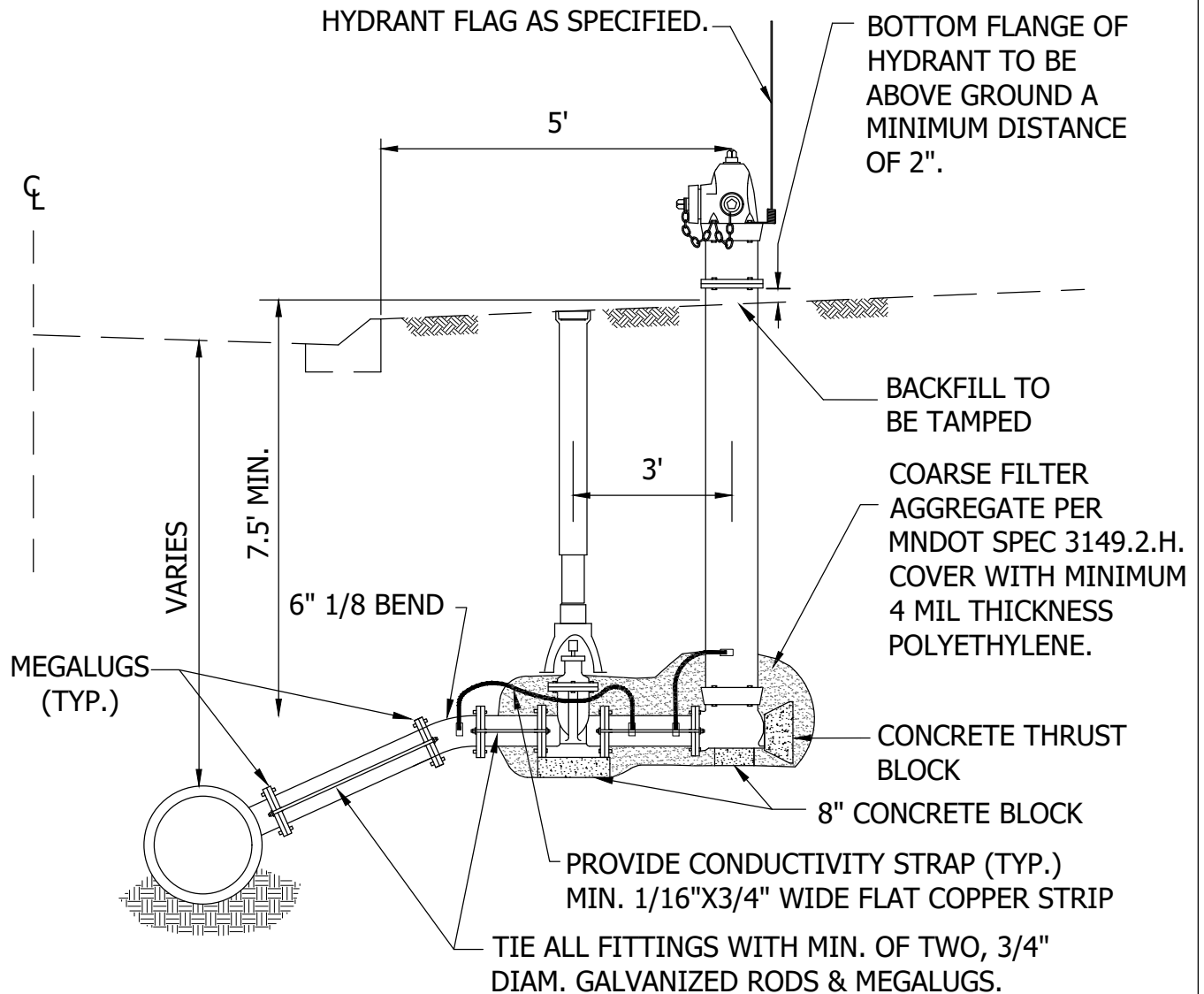
PLATE NO.
STR-41

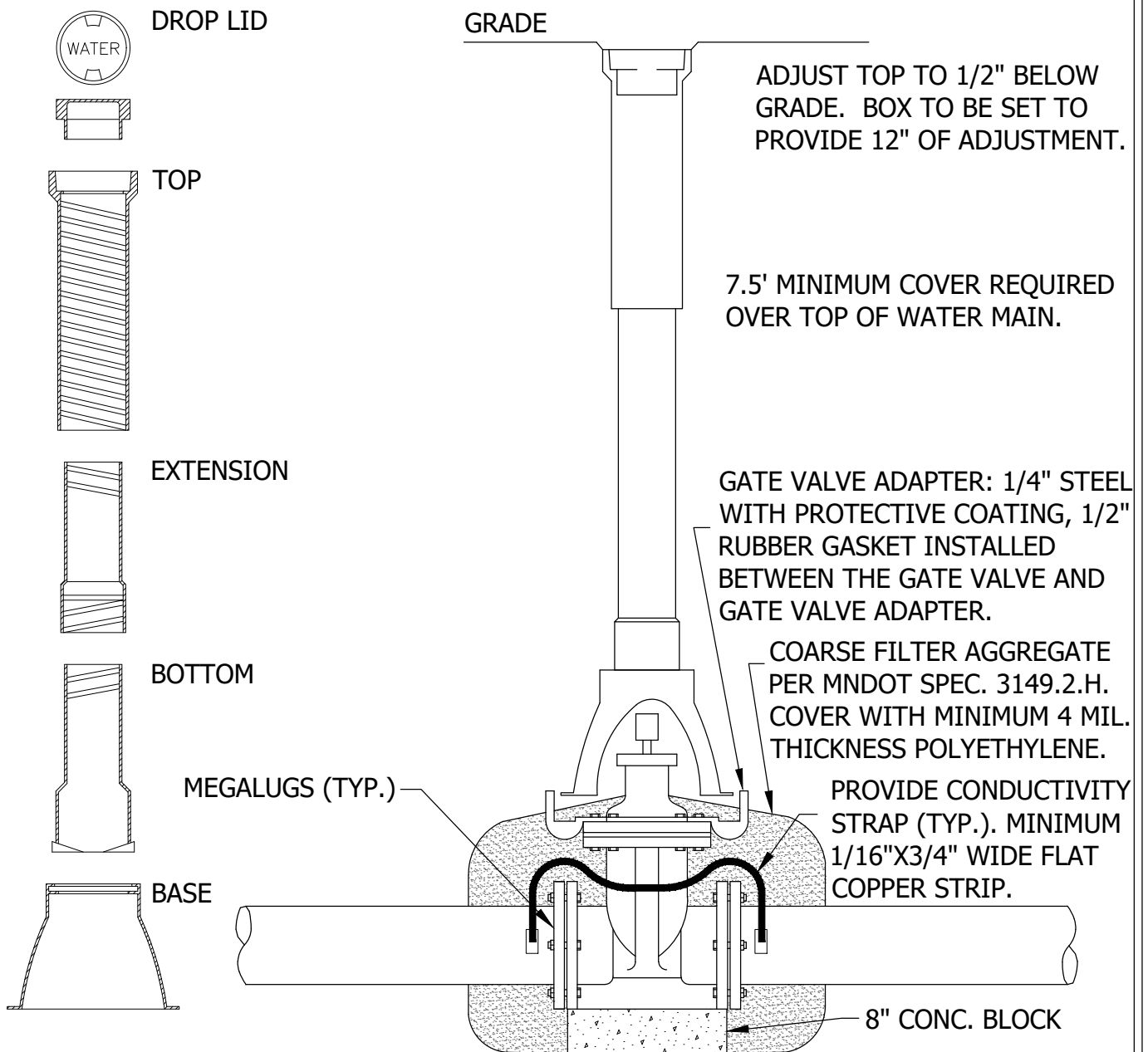


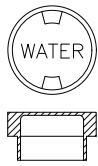
STANDARD DETAILS
CONCRETE SIDEWALK REPLACEMENT AT
DRIVEWAY LOCATION
COTTAGE GROVE, MINNESOTA

JANUARY 2024

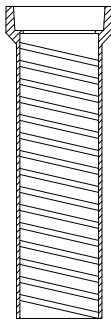
PLATE NO.
STR-42



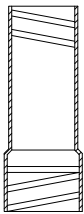




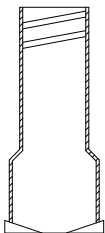
DROP LID



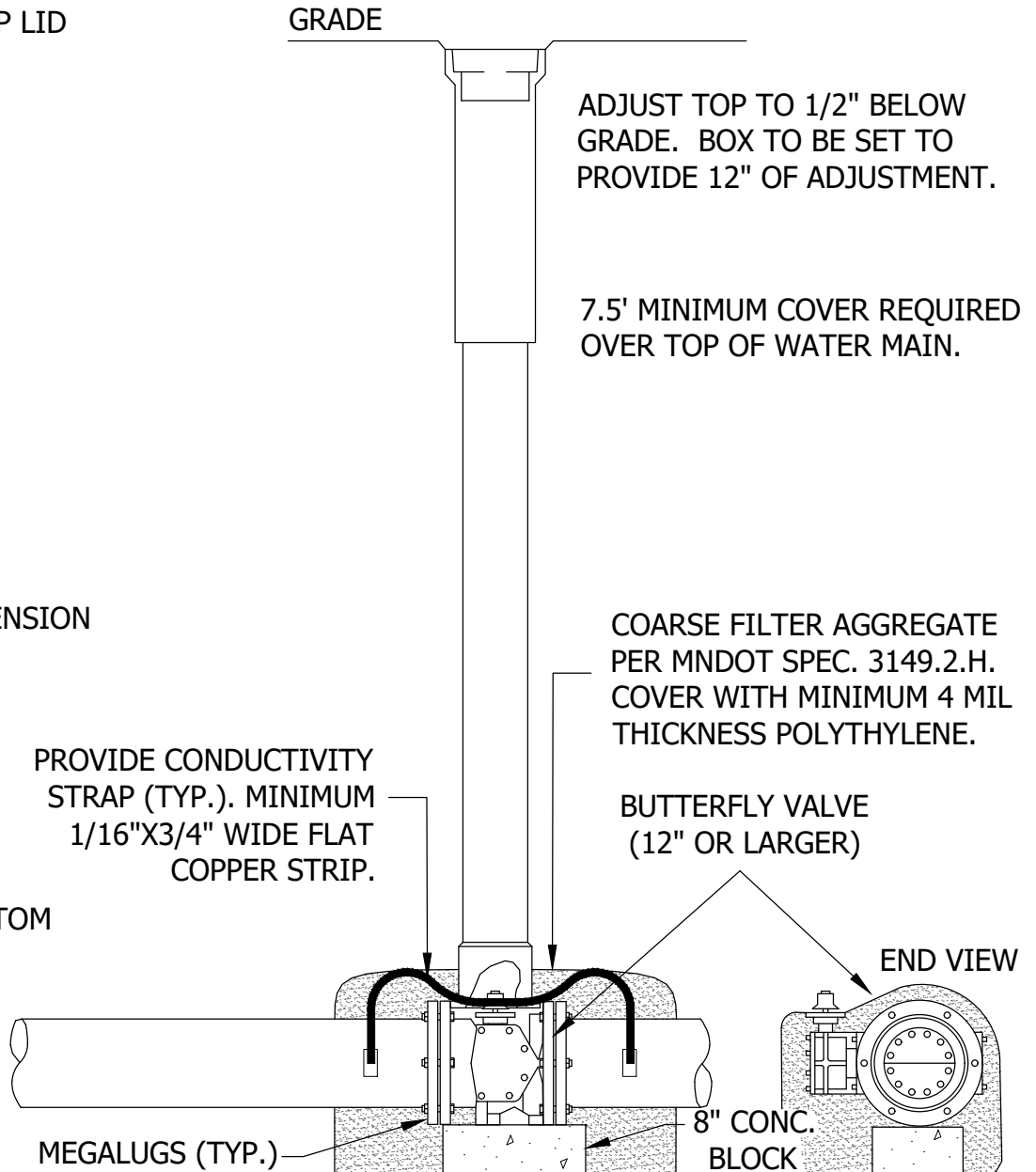
TOP



EXTENSION



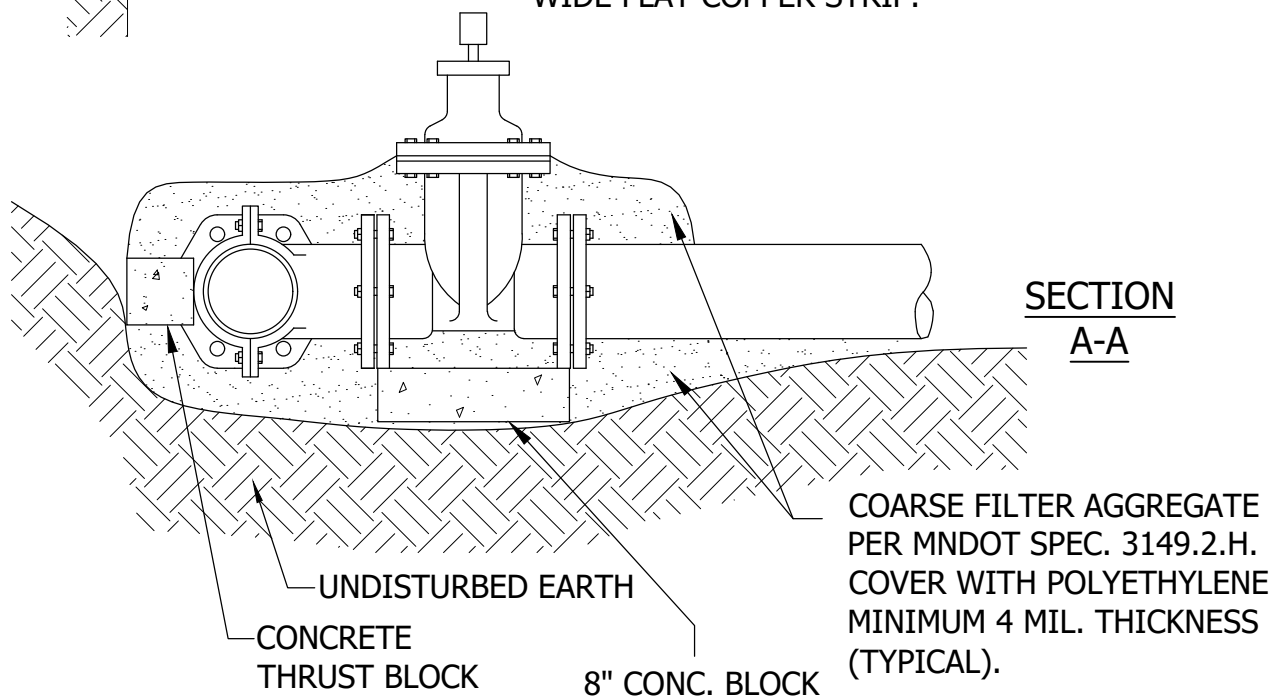
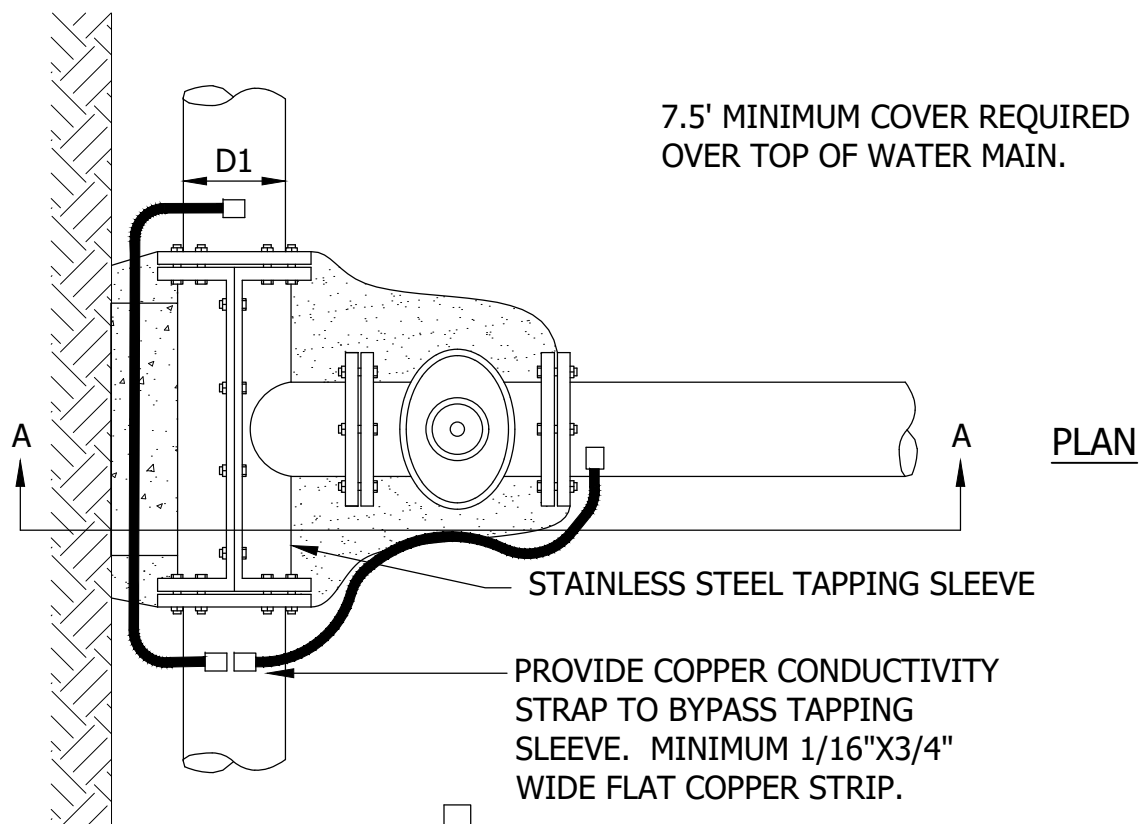
BOTTOM



STANDARD DETAILS
BUTTERFLY VALVE AND BOX
INSTALLATION
COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
WAT-4

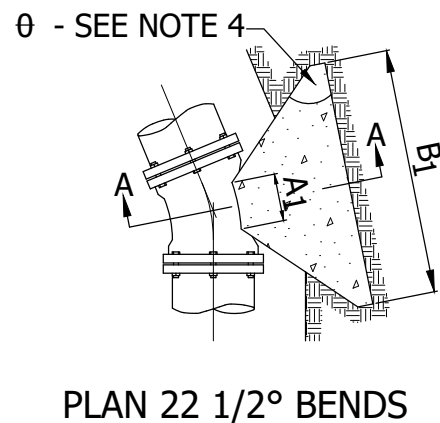
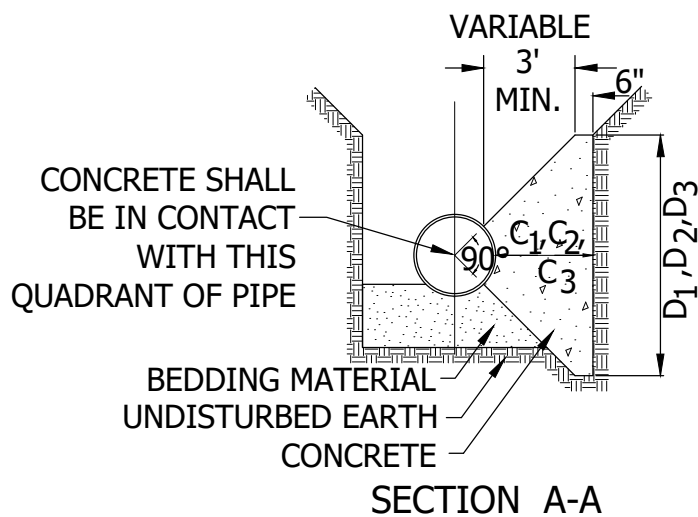
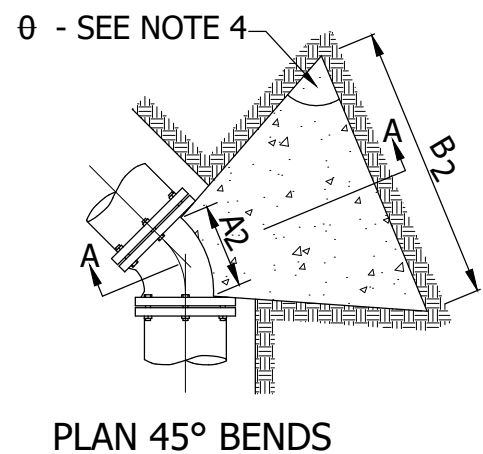
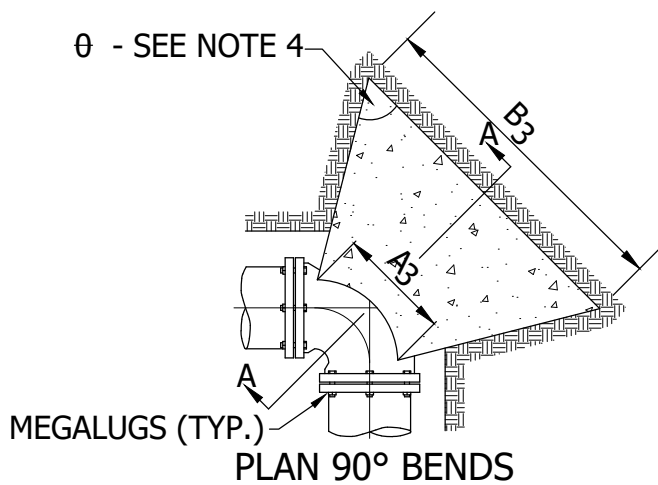


NOTES:

1. SHAPE OF BACK OF BUTTRESS MAY VARY AS LONG AS POURED AGAINST FIRM UNDISTURBED EARTH.
2. DIMENSION C1,C2,C3 SHOULD BE LARGE ENOUGH TO MAKE ANGLE θ EQUAL TO OR LARGER THAN 45° .
3. DIMENSION A1,A2,A3 SHOULD BE AS LARGE AS POSSIBLE WITHOUT INTERFERING WITH MJ BOLTS.
4. $\theta = 45^\circ$ MINIMUM.
5. PLACE POLYETHYLENE BETWEEN CONCRETE & PIPE.

BUTTRESS DIMENSIONS

PIPE SIZE	22 1/2° BEND		45° BEND		90° BEND	
	B ₁	D ₁	B ₂	D ₂	B ₃	D ₃
6"	--	--	--	--	2'-1"	1'-6"
8"	--	--	--	--	2'-8"	2'-0"
12"	1'-10"	1'-10"	3'-4"	2'-0"	4'-9"	2'-6"
16"	3'-0"	2'-0"	3'-10"	3'-0"	6'-2"	3'-6"
20"	3'-6"	2'-8"	5'-6"	3'-4"	8'-4"	4'-0"
24"	4'-4"	3'-0"	6'-10"	3'-10"	9'-8"	5'-0"
30"	--	--	9'-3"	6'-0"	17'-0"	6'-0"

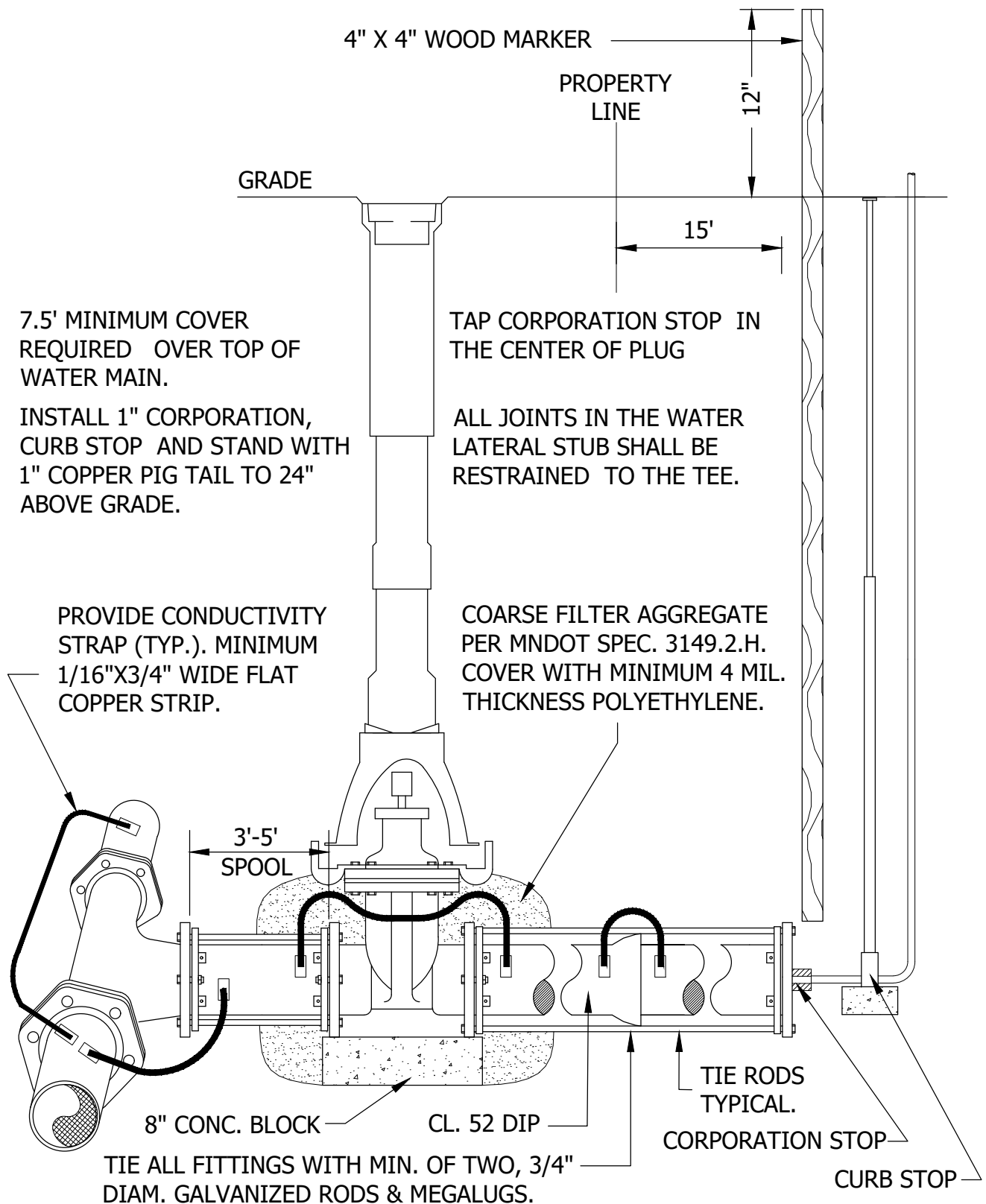


STANDARD DETAILS CONCRETE THRUST BLOCKING

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
WAT-6

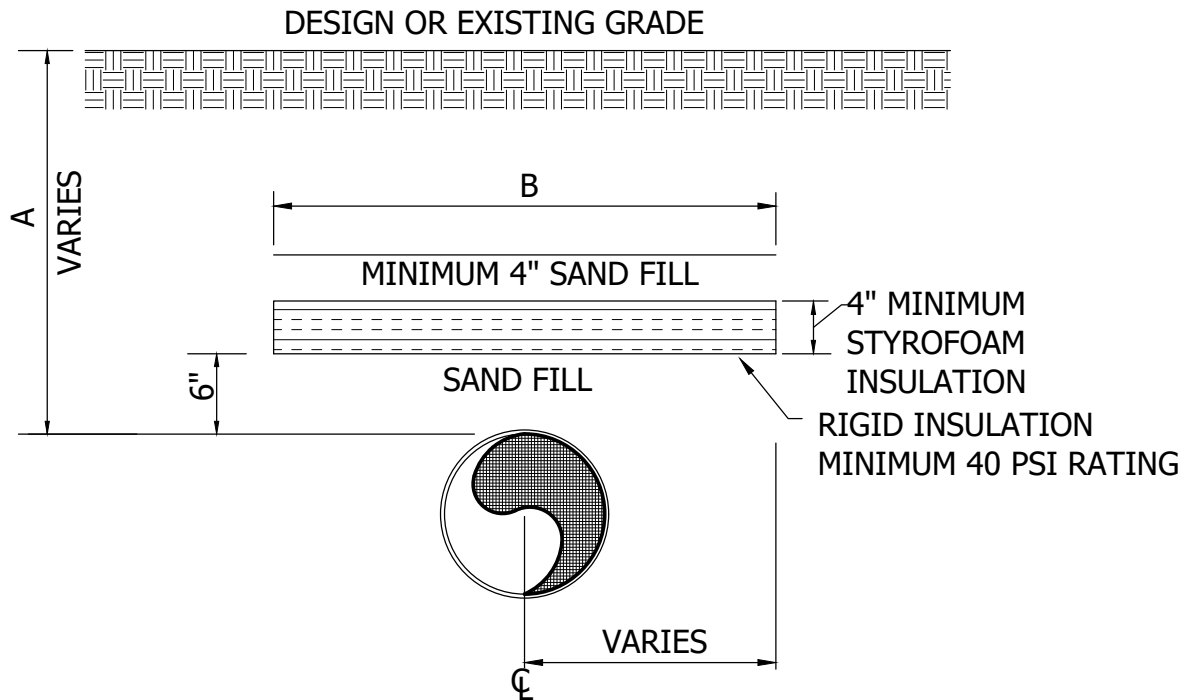


STANDARD DETAILS
DIP SERVICE OR DEAD END LINE

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.
WAT-8



PIPE SHALL BE CENTERED UNDER INSULATION UNLESS OTHERWISE SPECIFIED.

COVER OVER PIPE - A

2'

3'

4'

5'

6'

WIDTH OF INSULATING BOARD - B

11'

9'

7'

5'

3'



STANDARD DETAILS

INSULATION DETAIL

COTTAGE GROVE, MINNESOTA

JANUARY 2024

PLATE NO.

WAT-9



City Council Action Request

7.Q.

Meeting Date 2/7/2024

Department Public Works

Agenda Category Action Item

Title RAISE Grant

Staff Recommendation Adopt Resolution 2024-020 supporting the City’s RAISE grant application for the County 19A/100th Street Realignment Project.

Budget Implication None at this time, if awarded and accepted, Washington County and City will split the 20% local match grant requirement.

Attachments	1.	Adopt RAISE Grant Resolution Memo 2024-2-7
	2.	2024 RAISE Grant Resolution



To: Honorable Mayor and City Council
Jennifer Levitt, City Administrator

From: Ryan Burfeind, Public Works Director

Date: February 7, 2024

Re: County 19A/100th Street Realignment – RAISE Grant Application

Background

In 2019, Washington County began a planning study related to a future arterial roadway to be developed in the southwestern area of the County, within the City of Cottage Grove. The primary driver of this study was to address the lack of arterial roadways in this area of the County. The County worked with several partners on this project including Cottage Grove, St. Paul Park, Grey Cloud Island Township, and the South Washington Watershed District. In April of 2021, the final study was approved by the City Council.

Since that time, this southern area of Cottage Grove has seen a rapid acceleration of both industrial and residential development. Due to this, the City and County are working to implement the first phase of the Southwest Arterial Study. This will involve the realignment of County 19A and 100th Street to provide a direct connection from Highway 61 into the Business Park. This project would also include the construction of a bridge over the CP Railroad, which is critical to allow for unhindered access for logistics and distribution businesses.

Discussion

While preliminary design work has been completed by the County; final design, right-of-way acquisition, and construction costs are not funded at this point. The City and County are working to obtain funding through multiple sources including State and Federal grants, and State Bonding. Along those lines, Cottage Grove is leading the effort to submit a Federal RAISE grant, which stands for Rebuilding American Infrastructure with Sustainability and Equity. This is a very comprehensive and competitive grant, which is due February 28, 2024.

As part of the application, a resolution from the City Council is required. A very detailed cost estimate is also needed as part of the grant process. Based on the preferred design alternative that has been selected, the total project cost shown in the grant is \$47 million. The City will be requesting the maximum grant award amount of \$25,000,000. The City and Washington County Capital Improvement Plans show a combined local cost share of \$10,900,000, which will satisfy the 20% local match requirement of \$6,250,000. Currently, the local cost share is \$6,000,000 from the County and \$4,900,000 from the City. The remaining funds are being requested through state bonding.

Recommendation

It is recommended that the City Council adopt Resolution 2024-020 supporting the City's RAISE grant application for the County 19A/100th Street Realignment Project.

CITY OF COTTAGE GROVE, MINNESOTA
CITY COUNCIL
RESOLUTION 2024-020

A RESOLUTION AUTHORIZING THE CITY TO APPLY FOR THE RESTORING
AMERICAN INFRASTRUCTURE THROUGH SUSTAINABILITY AND EQUITY (RAISE)
GRANT

Whereas, the City of Cottage Grove is seeing incredible growth and modernization;
and

Whereas, with such rapid growth, it has been a challenge for the City to replace aging infrastructure, address increasing traffic congestion, and improve safety all while encouraging a robust period of diverse population growth and job growth; and

Whereas, a 2019 study conducted by Washington County (the “Study”) documented a lack of roadways specifically serving an area of growing industrial and residential development near Jamaica Avenue and Trunk Highway 61, a pivotal intersection for the community and region; and

Whereas, the Study recommended the solution to congestion and safety concerns is the construction of a new arterial roadway that would also require the realignment of the existing 100th Street and County Road 19A, the intersection reconstruction of County Road 19A and Trunk Highway 61 and the construction of a railroad bridge to provide a grade-separated crossing over Canadian Pacific’s rail line (hereinafter referred to as the “Southwest Arterial Project”); and

Whereas, the Southwest Arterial Project will serve as the main transportation route to Trunk Highway 61 from this growing area of the community, will greatly reduce congestion, increase capacity, and relieve stress at the Jamaica Avenue and Highway 61 interchange and also provide a much-needed additional access point to the City’s Industrial Park; and

Whereas there has been unprecedented new growth in the City’s Industrial Park, including the new NorthPoint Development, a 3.4 million square foot industrial park that will bring 1,800 jobs to the community, and by Renewal by Anderson which completed a 330,000 square foot expansion, and two additional distribution center projects totaling 366,000 square feet; and

Whereas, the residential development in this same area is also seeing the extraordinary growth of several potential development projects by 2025 that will total nearly 1,000 additional residential units and include a variety of housing stock and affordability tiers with single-family lots, smaller lots for active adults, townhomes and apartments; and

Whereas, the Southwest Arterial Project is both locally and regionally significant as it is directly improving the access to the main thoroughfare of Trunk Highway 61 that connects the City of Cottage Grove northerly to the Twin Cities Metro Area as well as to the southern regions of the State; and

Whereas, this critical corridor is essential to the mobility of the City's workforce, supply chain industries, and future bus transit investments; and

Whereas, by reducing traffic congestion and increasing safety, the Southwest Arterial Project will have a substantial and immediate impact by providing efficiencies in mobility, accessibility and connectivity to travelers, residents, workforce, and industries; and

Whereas, the Southwest Arterial Project is an innovative project in collaboration with other governmental agencies who all seek to increase workforce development opportunities, create community connectivity, and remove barriers to opportunity; and

Whereas, there are significant funding obstacles to design, construct and realize the Southwest Arterial Project, which has an estimated total project cost of \$47,000,000; and

Whereas, the Metropolitan Council recognized the regional significance of the Southwest Arterial by awarding in \$7,000,000 in PROTECT Program formula funding; and

Whereas, based on the estimated total project cost and the maximum \$25,000,000 grant award, the City must provide a 20% match in the amount of \$6,250,000; and

Whereas, the RAISE Grant, which seeks to provide funding for projects of universal design and accessibility for travelers, increase mobility, and remove barriers to economic opportunity is a perfect match for the Southwest Arterial Project's purposes and goals by meeting the transportation needs of growing and diverse community and expansion of the City's industrial mobility-related businesses; and

NOW THEREFORE BE IT RESOLVED, the City Council of the City of Cottage Grove, in partnership with County of Washington, State of Minnesota, that the City is hereby authorized to apply for and execute the necessary documents for the RAISE Grant application to request funding for the Southwest Arterial Project; and

Be it further resolved that if so awarded, the City will honor the local contribution requirements and any unforeseen contingencies to meet the full funding needs for the Southwest Arterial Project, and the City will honor the program requirements of meeting a funding agreement by September 30, 2028 and full expenditure of funds by September 30, 2033.

Passed this 7th day of February 2024.

Myron Bailey, Mayor

Attest:

Tamara Anderson, City Clerk



City Council Action Request

7.R.

Meeting Date 2/7/2024

Department Public Works

Agenda Category Action Item

Title Construction Cost Share & Maintenance Agreements with Washington County for the County Road (CR) 74 Multi-Use Trail Project

Staff Recommendation 1) Approve the Cooperative Agreement between Washington County and the City of Cottage Grove for Construction Cost of County Road (CR) 74 Multi-Use Trail. 2) Approve the Cooperative Agreement between Washington County and the City of Cottage Grove for Maintenance of County Road (CR) 74 Multi-Use Trail Project.

Budget Implication \$9,285 - Water Fund and Roadway Maintenance Fund

Attachments

1.	CR 74 Trail Agreements CC Memo
2.	CR 74 Cost Share Agreement
3.	CR 74 Maintenance Agreement



To: Honorable Mayor and City Council
Jennifer Levitt, City Administrator

From: Crystal Raleigh, PE, Assistant City Engineer

Date: January 30, 2024

Re: Approve Construction Cost Share & Maintenance Agreements with Washington County for the County Road (CR) 74 Multi-Use Trail Project

Background

The City of Cottage Grove is working cooperatively with Washington County on the County Road 74 Multi-Use Trail Project. This project will extend a trail along the south side of County Road 74 (65th Street) from Meadow Grass Avenue to Hadley Avenue. As part of the project, construction cost share and maintenance agreements with Washington County will need to be executed.

Discussion

Cooperative Agreement for Construction Cost Share

This cooperative agreement for construction outlines the cost participation for construction, and contract administration costs. City construction costs for the project are determined through Washington County's construction cost participation policy. The City's construction cost share is estimated at \$5,643, with a total project cost estimated at \$284,560.

The City is also responsible for construction engineering and observation costs estimated at \$3,642. These breakdowns and the cost share policy are consistent with previous City/County cooperative projects. In total, the City's cost share is estimated at \$9,285, and these numbers are based on the final engineering estimate and will be updated with actual costs once bids are received.

Cooperative Agreement for Maintenance

The cooperative agreement for maintenance outlines the agency responsibilities for future maintenance of the improvements to be constructed as part of this project. Per this agreement, the City is allowed, but not required, to perform snowplowing on trails and additional mowing of boulevards within County right-of-way. These conditions are consistent with past maintenance agreements with Washington County.

Recommendation

It is recommended the City Council:

1. Approve the Cooperative Agreement between Washington County and the City of Cottage Grove for Construction Cost of County Road (CR) 74 Multi-Use Trail.
2. Approve the Cooperative Agreement between Washington County and the City of Cottage Grove for Maintenance of County Road (CR) 74 Multi-Use Trail Project.

**COOPERATIVE AGREEMENT BETWEEN THE CITY OF
COTTAGE GROVE AND WASHINGTON COUNTY FOR CONSTRUCTION
COST OF COUNTY ROAD (CR) 74 MULTI-USE TRAIL**

WASHINGTON COUNTY	
CONTRACT NO.	15849
DEPT.	PUBLIC WORKS
DIVISION	TRANSPORTATION
TERM	SIGNATURE – END OF PROJECT

THIS AGREEMENT, by and between the City of Cottage Grove, a municipal corporation, herein after referred to as the "City", and Washington County, a political subdivision of the State of Minnesota, hereinafter referred to as the "County."

WITNESSETH:

WHEREAS, the County intends to construct a multi-use trail on County Road (CR) 74 from Meadow Grass Ave S in the City of Cottage Grove; and

WHEREAS, items included in the Project require City cost participation in accordance with "Washington County Cost Participation Policy #8001 for Cooperative Highway Improvement Projects"; and

WHEREAS, the City desires to use local funds for these improvements; and

WHEREAS, the County desires to use local funds for these improvements; and

WHEREAS, a cooperative effort between the City and County is the appropriate method to facilitate the construction of these transportation improvements; and

WHEREAS, this Agreement is made pursuant to statutory authority contained in Minnesota Statute 162.17 sub.1 and Minnesota Statute 471.59.

NOW THEREFORE, IT IS HEREBY MUTUALLY AGREED AS FOLLOWS:

A. PURPOSE

The purpose of this agreement is set forth in the above whereas clauses which are all incorporated by reference as if fully set forth herein and shall consist of this agreement, Exhibit A (Location Map) and Exhibit B (Estimated Cost Splits).

B. PLANS AND SPECIFICATION PREPARATION

1. The County shall be responsible for the preparation of all the plans and specifications for the Project, including but not limited to, compliance with all applicable standards and policies and obtaining all approvals required in formulating the bid specifications for all County and City components of this Project.
2. The following County project number has been assigned to the Project: SAP 082-591-004

C. ADVERTISEMENT AND AWARD OF CONTRACT

After plans and specifications have been approved by the County, all permits and approvals obtained, and acquisition of necessary rights-of-way and easements, the County shall advertise for construction bids and at the sole discretion of the County award the contract to the lowest responsible bidder.

D. CONSTRUCTION ADMINISTRATION, OBSERVATION, AND TESTING

The County shall be responsible for the construction administration, inspection, and for the observation

and testing for all construction items.

E. COST PARTICIPATION ITEMS AND ESTIMATED COSTS

The City hereby agrees to be bound to the cost participation provisions in the “Washington County Cost Participation Policy #8001 for Cooperative Highway Improvement Projects”, which is incorporated into this agreement by reference. The City’s cost participation is set forth in Table 1 and is broken down into two categories which are: 1) Construction; 2) Construction Engineering/Contract Administration;

1. Construction

Construction costs shall be the cost to construct the Project. The County has prepared a statement of estimated quantities and cost splits hereto attached as Exhibit B. The City shall pay to the County its share of the total cost as shown in Exhibit B and set forth in Table 1. After the County has awarded the construction contract, Exhibit B will be updated to reflect the actual contractor’s unit prices.

2. Construction Engineering/Contract Administration

Construction engineering/contract administration costs shall be construction observation, construction testing, construction administration, staking, conducting and recording the pre-bid, pre-construction and weekly construction meetings, reviewing monthly pay estimates, labor compliance, and other administrative functions necessary for the Project. Construction engineering/contract administration is 8% of the construction cost. Based on the City’s share of the construction cost, the City shall pay the prorated cost of construction engineering/contract administration as set forth in Table 1. After the County has awarded the construction contract, Exhibit B will be updated to reflect the estimated construction engineering/contract administration cost.

TABLE 1 – ESTIMATED COSTS City of Cottage Grove Cost Summary				
ITEM	TOTAL COST	CITY SHARE	FUNDING APPLIED	CITY COST
Construction	\$284,560	See Exhibit B	\$40,557	\$5,643
Construction Engineering/Contract Administration	\$22,764	16%		\$3,642
TOTAL ESTIMATED COST	\$307,324			\$9,285

Notes:

(1) City share of safe routes to school grant applied

3. The costs and shares attributable to the City and payable to the County as shown in Table 1 are merely estimated and a final reconciliation of costs as set forth in Section G below shall be done at the end of the Project. Actual City costs and shares are based on the following:
 - a. Construction shall be based on the contractor's unit prices and final quantities at Project completion including all contract changes.
 - b. Design engineering shall be based on the contractor’s unit prices at the time of contract award.
 - c. Construction engineering/contract administration shall be based on the contractor’s unit prices and final quantities at Project completion including all contract changes and liquidated damages.
 - d. Right of way shall be based on the final costs to acquire right of way.

F. PAYMENT

1. Construction and Construction Engineering/Contract Administration

- a. After the County has awarded the construction contract, the County shall update Exhibit B to conform the Exhibit to the amounts in the awarded bid and shall invoice the City 10 percent of the City's estimated construction and construction engineering/contract administration cost based on the updated Exhibit B.
 - b. During construction, the County shall submit to the City partial estimates of work performed by the contractor. The City shall pay to the County its share of the partial estimate as determined in Section F.
 - c. Upon substantial completion of the work the County shall submit to the City a final invoice and final reconciliation of costs. The reconciliation will add or subtract contract amendments to the City's Project components, adjustments for liquidated damages pursuant to Section I., and previous Project cost payments made by the City to the County.
2. The costs set forth in Table 1 for design engineering and right of way shall be separate line items on the invoice and paid by the City on a reimbursable basis.
 3. In the event that the City paid more in advance than the actual cost of the City's portion of the Project, the County shall refund without interest the amount to the City.
 4. The City shall pay 100 percent of an invoice amount within thirty (30) days of receipt.

G. CONTRACT CHANGES

Any modifications or additions to the final approved plans and/or specifications of the Project shall be made part of the construction contract through a written amendment to the construction contract and the cost for such changes shall be appropriated as set forth in Section F. of this Agreement.

H. LIQUIDATED DAMAGES

Any liquidated damages assessed to the contractor in connection with the work performed on the Project shall be used to adjust the project completion costs thus adjusting the City's construction engineering/contract administration costs as stated in F.6.c. No adjustment to construction costs will be made to the City's portion of the project in the event of liquidated damages.

I. CONDITIONS

The City shall not assess or otherwise recover any portion of its cost for this Project through special assessment of County property on County-owned property.

J. CIVIL RIGHTS AND NON-DISCRIMINATION

The provisions of Minn. Stat. 181.59 and of any applicable ordinance relating to civil rights and discrimination shall be considered part of this Agreement as if fully set further herein, and shall be part of any Agreement entered into by the parties with any contractor subcontractor, or material suppliers.

K. WORKERS COMPENSATION

It is hereby understood and agreed that any and all employees of the City and all other persons employed by the City in the performance of construction and/or construction engineering work or services required or provided for under this agreement shall not be considered employees of the County and that any and all claims that may or might arise under the Worker's Compensation Act of the State of Minnesota on behalf of said employees while so engaged and any and all claims made by any third parties as a consequence of any act or omission on the part of said City employees while so engaged on any of the construction and/or construction engineering work or services to be rendered herein shall in no way be the obligation or responsibility of the County.

L. INDEMNIFICATION

1. The City agrees that it will defend, indemnify and hold harmless the County against any and all liability,

loss, damages, costs and expenses which the County may hereafter sustain, incur or be required to pay by reason of any negligent act by the City, its agents, officers or employees during the performance of this agreement.

2. The County agrees that it will defend, indemnify and hold harmless the City against any and all liability, loss, damages, costs and expenses which the City may hereafter sustain, incur or be required to pay by reason of any negligent act by the County, its agents, officers or employees during the performance of this agreement.
3. To the fullest extent permitted by law, actions by the parties to this Agreement are intended to be and shall be construed as a "cooperative activity" and it is the intent of the parties that they shall be deemed a "single governmental unit" for the purposes of liability, as set forth in Minnesota Statutes, Section 471.59, subd. 1a.(b). The parties to this Agreement are not liable for the acts or omissions of another party to this Agreement except to the extent they have agreed in writing to be responsible for the acts or omissions of the other parties as provided for in Section 471.59, subd. 1a.
4. Each party's liability shall be governed by the provisions of Minnesota Statutes, Chapter 466 and other applicable law. The parties agree that liability under this Agreement is controlled by Minnesota Statute 471.59, subdivision 1a. and that the total liability for the parties shall not exceed the limits on governmental liability for a single unit of government as specified in 466.04, subdivision 1(a).

M. DATA PRACTICES

All data collected, created, received, maintained, disseminated, or used for any purposes in the course of this Agreement is governed by the Minnesota Government Data Practices Act, Minnesota Statutes 1984, Section 13.01, et seq. or any other applicable state statutes and state rules adopted to implement the Act, as well as state statutes and federal regulations on data privacy.

IN TESTIMONY WHEREOF the parties have duly executed this agreement by their duly authorized officers.

WASHINGTON COUNTY

Chair Date
Board of Commissioners

Kevin Corbid Date
County Administrator

Approved as to form:

Andrew Jackola 8/24/2023

Assistant County Attorney Date

CITY OF COTTAGE GROVE

Mayor Date

City Administrator Date

Approved as to form:

City Attorney Date

**CR 74 (65TH ST S)
MEADOW GRASS AVE S
TO HADLEY AVE S
COTTAGE GROVE**

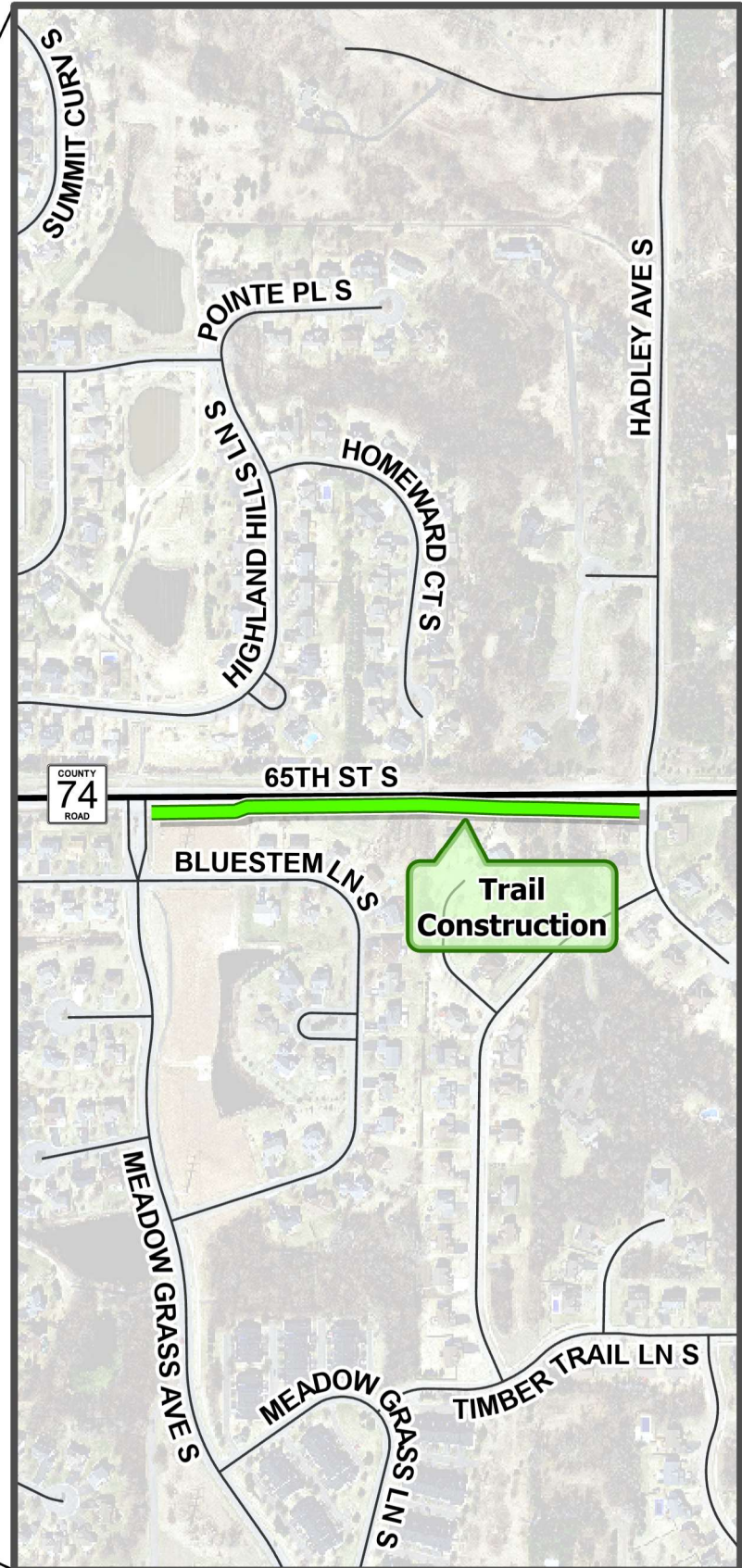
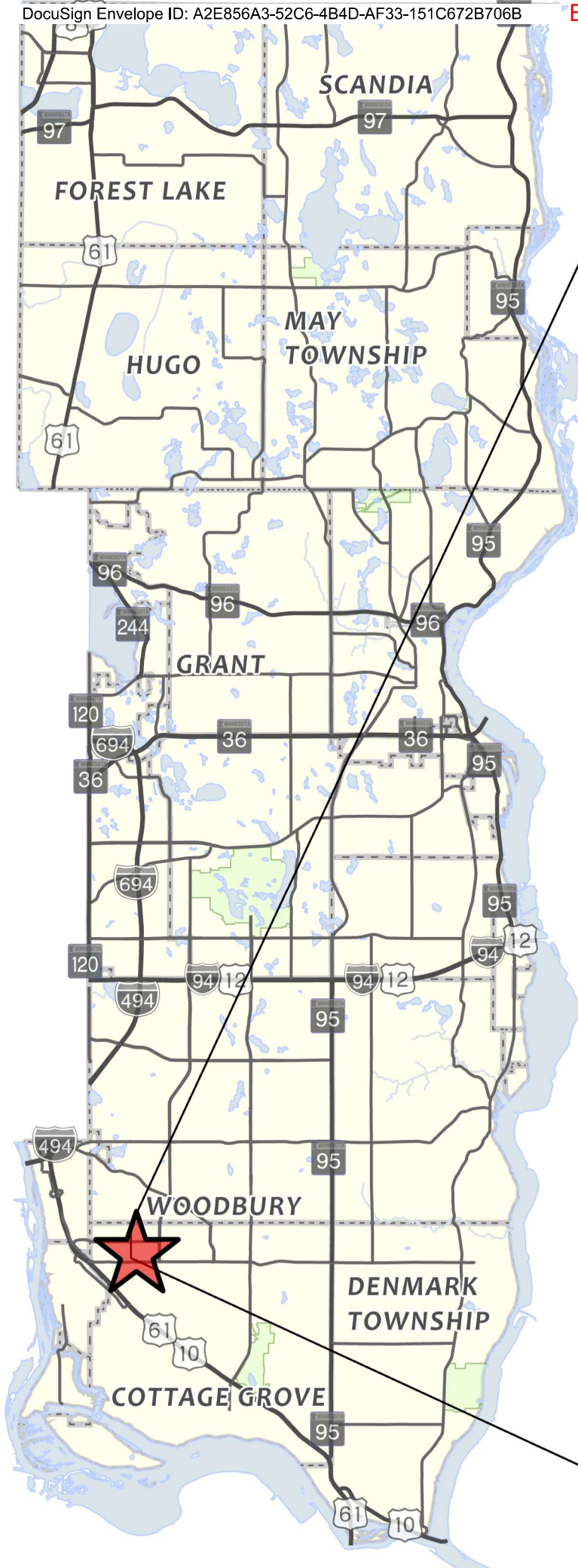


Exhibit B									
CR 74 SRTS Trail Cost Estimate									
ITEM NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QTY.	EST. UNIT	TOTAL	SAP 082-591-004	SAP 082-591-004	City of Cottage Grove	City of Cottage Grove
				COST	COST	QTY	COST	QTY	COST
2021.501	MOBILIZATION	LUMP SUM	1	\$50,000.00	\$50,000.00	0.75	\$37,500.00	0.25	\$12,500.00
2101.505	GRUBBING	EACH	5	\$200.00	\$1,000.00	5	\$1,000.00		
2102.503	PAVEMENT MARKING REMOVAL	LIN FT	201	\$1.50	\$301.50	201	\$301.50		
2104.502	SALVAGE GATE VALVE & BOX	EACH	1	\$1,500.00	\$1,500.00	0	\$0.00	1	\$1,500.00
2104.502	SALVAGE HYDRANT	EACH	1	\$1,500.00	\$1,500.00		\$0.00	1	\$1,500.00
2104.502	REMOVE SIGN TYPE C	EACH	3	\$35.00	\$105.00	3	\$105.00		\$0.00
2104.503	SAWING BIT PAVEMENT (FULL DEPTH)	LIN FT	1001	\$2.50	\$2,502.50	1001	\$2,502.50		\$0.00
2104.503	REMOVE CURB & GUTTER	LIN FT	310	\$4.00	\$1,240.00	310	\$1,240.00		\$0.00
2104.503	REMOVE METAL CULVERT	LIN FT	24	\$10.00	\$240.00	24	\$240.00		\$0.00
2104.504	REMOVE BITUMINOUS PAVEMENT	SQ YD	1071	\$3.50	\$3,748.50	1071	\$3,748.50		\$0.00
2140.602	INSTALL HYDRANT	EACH	1	\$5,000.00	\$5,000.00		\$0.00	1	\$5,000.00
2104.602	INSTALL GATE VALVE & BOX	EACH	1	\$5,000.00	\$5,000.00		\$0.00	1	\$5,000.00
2106.507	EXCAVATION - COMMON	CU YD	462	\$7.00	\$3,234.00	462	\$3,234.00	0	\$0.00
2106.507	SELECT GRANULAR EMBANKMENT (CV)	CU YD	547	\$15.00	\$8,205.00	547	\$8,205.00		
2118.607	AGGREGATE SURFACING CLASS 1 MOD (P)	TON	5	\$50.00	\$250.00	5	\$250.00		\$0.00
2211.507	AGGREGATE BASE CLASS 5 (CV) (P)	CU YD	420	\$22.00	\$9,240.00	420	\$9,240.00		\$0.00
2231.509	BITUMINOUS PATCHING MIXTURE	TON	117	\$100.00	\$11,700.00	117	\$11,700.00		\$0.00
2504.602	CONNECT TO EXISTING WATERMAIN	EACH	2	\$500.00	\$1,000.00		\$0.00	2	\$1,000.00
2504.603	6" WATER MAIN-DUCTILE IRON	LIN FT	10	\$85.00	\$850.00		\$0.00	10	\$850.00
2521.518	6" CONCRETE WALK	SQ FT	1624	\$10.00	\$16,240.00	812	\$8,120.00	812	\$8,120.00
2521.518	3" BITUMINOUS WALK	SQ FT	10510	\$2.00	\$21,020.00	5255	\$10,510.00	5255	\$10,510.00
2301.602	DRILL & GROUT REINF BAR (EPOXY COATED)	EACH	20	\$20.00	\$400.00	10	\$200.00	10	\$200.00
2531.503	CONCRETE CURB & GUTTER DESIGN B624	LIN FT	722	\$40.00	\$28,880.00	722	\$28,880.00		\$0.00
2531.618	TRUNCATED DOMES	SQ FT	20	\$52.00	\$1,040.00	10	\$520.00	10	\$520.00
2563.601	TRAFFIC CONTROL SUPERVISOR	LUMP SUM	1	\$5,000.00	\$5,000.00	1	\$5,000.00		\$0.00
2563.601	TRAFFIC CONTROL	LUMP SUM	1	\$10,000.00	\$10,000.00	1	\$10,000.00		\$0.00
2563.610	FLAGGER	HOURL	24	\$50.00	\$1,200.00	24	\$1,200.00		\$0.00
2563.613	PORTABLE CHANGEABLE MESSAGE SIGN	UDAY	14	\$100.00	\$1,400.00	14	\$1,400.00		\$0.00
2564.518	SIGN PANEL TYPE C	SQ FT	15	\$35.00	\$525.00	15	\$525.00		\$0.00
2557.503	WIRE FENCE DESIGN SPECIAL VINYL COATED	LIN FT	257	\$300.00	\$77,100.00	257	\$77,100.00		\$0.00
2573.502	STORM DRAIN INLET PROTECTION	EACH	1	\$200.00	\$200.00	1	\$200.00		\$0.00
2573.503	SILT FENCE; TYPE HI	LIN FT	143	\$3.00	\$429.00	143	\$429.00		\$0.00
2573.503	SILT FENCE; TYPE MS	LIN FT	1192	\$2.10	\$2,503.20	1192	\$2,503.20		\$0.00
2573.503	SEDIMENT CONTROL LOG TYPE COMPOST	LIN FT	100	\$2.70	\$270.00	100	\$270.00		\$0.00
2574.505	SOIL BED PREPARATION	ACRE	0.33	\$200.00	\$66.00	0.33	\$66.00		\$0.00
2574.507	COMMON TOPSOIL BORROW	CU YD	326	\$20.00	\$6,520.00	326	\$6,520.00		\$0.00
2575.505	SEEDING	ACRE	0.33	\$500.00	\$167.01	0.33	\$165.00		\$0.00
2575.508	FERTILIZER TYPE 3	LB	117	\$1.00	\$117.00	117	\$117.00		\$0.00
2575.508	SEED MIXTURE 25-141	LB	20	\$5.00	\$100.00	20	\$100.00		\$0.00
2575.523	RAPID STABILIZATION METHOD 3	M GAL	2	\$300.00	\$600.00	2	\$600.00		\$0.00
2575.604	ROLLED EROSION PREVENTION CATEGORY 25	SQ YD	1617	\$1.70	\$2,748.90	1617	\$2,748.90		\$0.00
2580.503	INTERIM PAVEMENT MARKING	LIN FT	147	\$0.30	\$44.10	147	\$44.10		\$0.00
2582.503	4" SOLID LINE MULTI COMP	LIN FT	1415	\$0.60	\$849.00	1415	\$849.00		\$0.00
2582.518	PAVT MSSG PREF THERMO GR IN	SQ FT	15	\$35.00	\$525.00	15	\$525.00		\$0.00
					\$284,560.71		\$237,858.70		\$46,700.00

**COOPERATIVE AGREEMENT BETWEEN
THE CITY OF COTTAGE GROVE AND WASHINGTON COUNTY
FOR MAINTENANCE OF COUNTY ROAD (CR) 74
MULTI-USE TRAIL PROJECT**

WASHINGTON COUNTY	
CONTRACT NO.	<u>15848</u>
DEPT.	<u>PUBLIC WORKS</u>
DIVISION	<u>TRANSPORTATION</u>
TERM	<u>PERPETUAL</u>

THIS AGREEMENT, by and between the City of Cottage Grove, a municipal corporation, hereinafter referred to as the "City", and Washington County, a political subdivision of the State of Minnesota, hereinafter referred to as the "County," sets forth the parties' respective financial responsibilities as they relate to post-construction maintenance of County Road (CR) 74 Multi-Use Trail Project, hereinafter referred to as the "Project."

RECITALS

- WHEREAS, the County intends to construct a new multi-use trail on the south side of CR 74 from Meadow Grass Ave to Hadley Ave; and
- WHEREAS, the following County project numbers have been assigned to the Project: SAP 082-591-004 CP 23-37405 and
- WHEREAS, a cooperative effort between the City and County is the appropriate method to facilitate the ongoing maintenance of this Project; and
- WHEREAS, this Agreement is made pursuant to the statutory authority contained in Minnesota Statute 162.17 sub.1 and Minnesota Statute 471.59.

NOW THEREFORE, IT IS HEREBY MUTUALLY AGREED AS FOLLOWS:

A. PURPOSE

The purpose of this Agreement is stated in the recitals, which, along with the attached Exhibits, are all incorporated by reference as if fully set forth herein

B. MAINTENANCE/OWNERSHIP

1. Upon completion of the Project, the City shall own and maintain the following Project improvements:
 - a. Municipal Utilities, including, but not limited to, water main, water main service lines, and hydrants.
 - b. Permanent roadway signing and striping on City roads.
 - c. Curb and gutters updated or constructed on its existing City right-of-ways.
 - d. Corridor boulevards. The City, at its expense, may, but is not required to, perform corridor boulevard mowing. Washington County does not have the staff or equipment to maintain turf grass. The City and County shall review seeded areas no more than 45-days after the installation of seed. If these areas have established to the satisfaction of the City and County, the City shall immediately take over maintenance of these areas to their standards. Any costs for improvements, amendments, or re-seeding requested by the City shall be the responsibility of the City.

2. Upon completion of the Project, the County shall own and maintain the following Project improvements:
 - a. Permanent roadway signing and striping on County roads.
 - b. Curb and gutter on its County right-of-way, existing or obtained under this project.
 - c. Pavement systems on its County right-of-way, existing or obtained under this project.
3. Sidewalks, Trails, and Pedestrian Ramps. The County will own sidewalks, trails, and pedestrian ramps located within County right-of-way. The maintenance of the sidewalks, trails, and pedestrian ramps within County right-of-way will be split between the County and City as follows:
 - a) The County will be responsible for major maintenance, including repair and/or replacement of sidewalk and pedestrian ramp panels, steps, and failing trail segments. The County will not complete snow removal on any sidewalks, trails, and pedestrian ramps.
 - b) The City, at no cost to the County, will be responsible for minor maintenance, including sweeping, plowing, debris removal, patching, crack repair, and elements consistent with City ordinances, policies, or council directives.
4. All maintenance required to be performed by this Agreement by the Parties shall be performed in a manner which shall be at the sole discretion of the party so obligated.
5. The City and County will follow work zone traffic control procedures required in the Minnesota Manual of Uniform Traffic Control Devices for all maintenance activities.
6. The County and City will notify each other at least 24 hours in advance of any maintenance activities requiring a lane closure for work within the other party's right-of-way.
7. The County will control all parking and other regulations on County roads, subject to any previous Agreements between the City and the County.
8. The City shall not assess or otherwise recover any portion of its cost for the maintenance under this Agreement through special assessment of County-owned property.

C. CIVIL RIGHTS AND NON-DISCRIMINATION

The provisions of Minn. Stat. 181.59 and of any applicable ordinance relating to civil rights and discrimination shall be considered part of this Agreement as if fully set further herein, and shall be part of any Agreement entered into by the parties with any contractor subcontractor, or material suppliers.

D. WORKERS COMPENSATION

It is hereby understood and agreed that any and all employees of the City and all other persons employed by the City in the performance of construction and/or construction engineering work or services required or provided for under this Agreement shall not be considered employees of the County and that any and all claims that may or might arise under the Worker's Compensation Act of the State of Minnesota on behalf of said employees while so engaged and any and all claims made by any third parties as a consequence of any act or omission on the part of said City employees while so engaged on any of the construction and/or construction engineering work or services to be rendered herein shall in no way be the obligation or responsibility of the County.

It is hereby understood and agreed that any and all employees of the County and all other persons employed by the County in the performance of construction and/or construction engineering work or services required or provided for under this Agreement shall not be considered employees of the City and that any and all claims that may or might arise under the Worker's Compensation Act of the State of

Minnesota on behalf of said employees while so engaged and any and all claims made by any third parties as a consequence of any act or omission on the part of said County employees while so engaged on any of the construction and/or construction engineering work or services to be rendered herein shall in no way be the obligation or responsibility of the City.

E. INDEMNIFICATION

1. The City agrees that it will defend, indemnify and hold harmless the County against any and all liability, loss, damages, costs and expenses which the County may hereafter sustain, incur or be required to pay by reason of any negligent act by the City, its agents, officers or employees during the performance of this Agreement.
2. The County agrees that it will defend, indemnify and hold harmless the City against any and all liability, loss, damages, costs and expenses which the City may hereafter sustain, incur or be required to pay by reason of any negligent act by the County, its agents, officers or employees during the performance of this Agreement.
3. To the fullest extent permitted by law, actions by the parties to this Agreement are intended to be and shall be construed as a “cooperative activity” and it is the intent of the parties that they shall be deemed a “single governmental unit” for the purposes of liability, as set forth in Minnesota Statutes, Section 471.59, subd. 1a.(b). The parties to this Agreement are not liable for the acts or omissions of another party to this Agreement except to the extent they have agreed in writing to be responsible for the acts or omissions of the other parties as provided for in Section 471.59, subd. 1a.
4. Each party’s liability shall be governed by the provisions of Minnesota Statutes, Chapter 466 and other applicable law. The parties agree that liability under this Agreement is controlled by Minnesota Statute 471.59, subdivision 1a. and that the total liability for the parties shall not exceed the limits on governmental liability for a single unit of government as specified in 466.04, subdivision 1(a).

F. DATA PRACTICES

All data collected, created, received, maintained, disseminated, or used for any purposes in the course of this Agreement is governed by the Minnesota Government Data Practices Act, Minnesota Statutes 1984, Section 13.01, et seq. or any other applicable state statutes and state rules adopted to implement the Act, as well as state statutes and federal regulations on data privacy.

G. TERM

This Agreement shall remain in full force and effect until terminated by mutual Agreement of the parties.

H. COUNTERPARTS

This Agreement may be executed in counterparts.

I. SEVERABILITY

If any provision or provisions of this Agreement are held to be invalid, illegal, or unenforceable, the validity, legality, and enforceability of the remaining provisions shall not be affected.

IN TESTIMONY WHEREOF the parties have duly executed this Agreement by their duly authorized officers.

WASHINGTON COUNTY

Chair Date
Board of Commissioners

Kevin Corbid Date
County Administrator

Approved as to form:

Andrew Jackola 8/23/2023

Assistant County Attorney Date

CITY OF COTTAGE GROVE

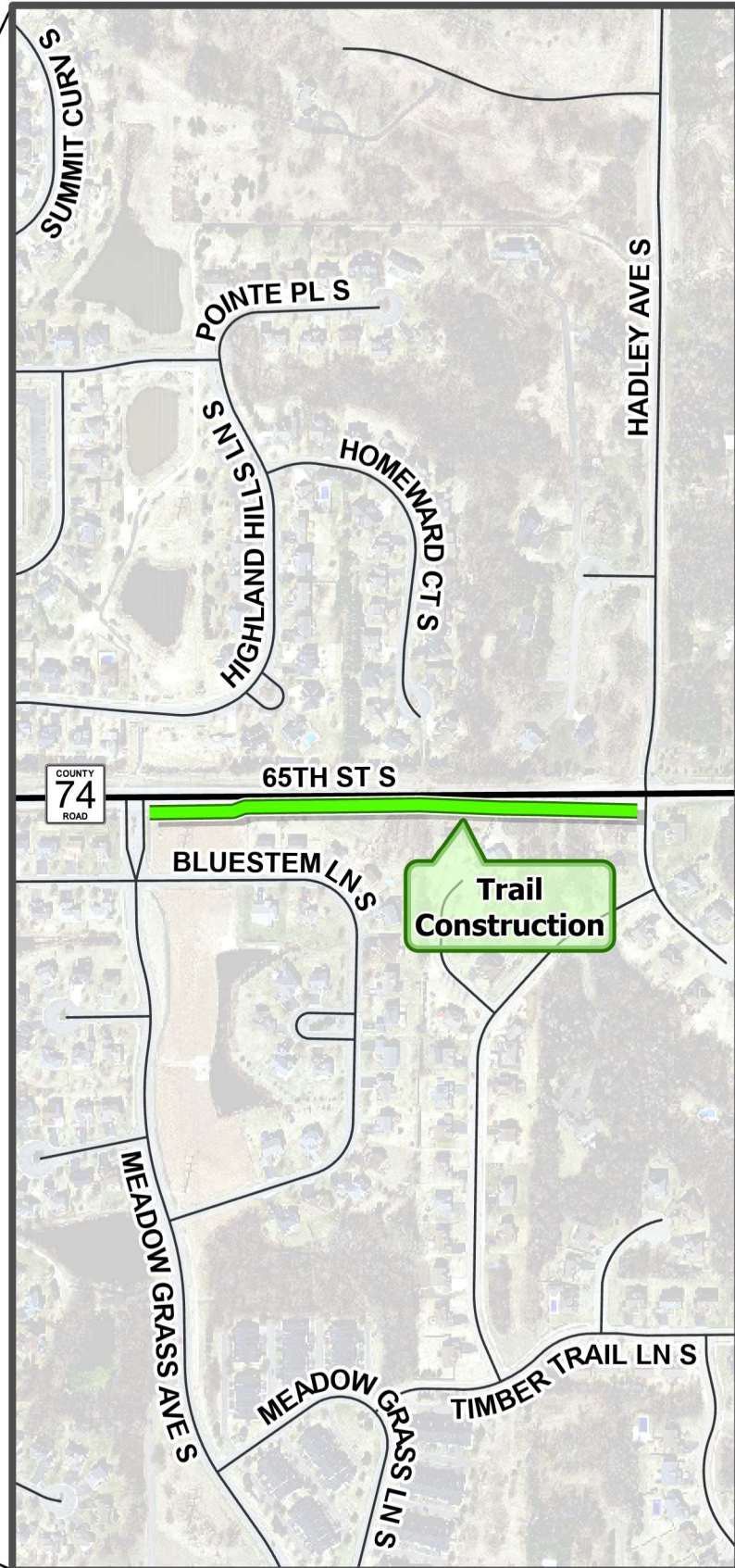
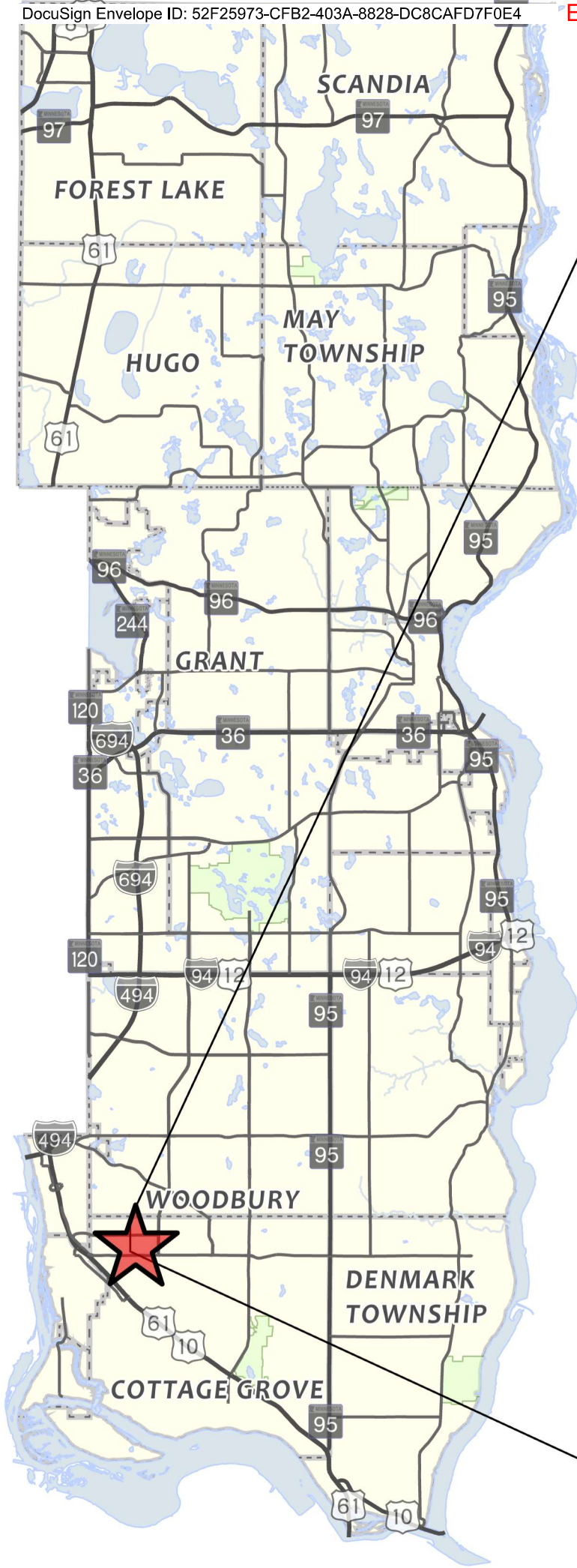
Mayor Date

City Administrator Date

Approved as to form:

City Attorney Date

**CR 74 (65TH ST S)
MEADOW GRASS AVE S
TO HADLEY AVE S
COTTAGE GROVE**





City Council Action Request

7.S.

Meeting Date 2/7/2024

Department Public Works

Agenda Category Action Item

Title 2024 Mill and Overlay Project – Approve Plans and Specifications and Establish Bid Date

Staff Recommendation Adopt Resolution 2024-018 approving the plans and specifications and establishing a March 7, 2024, bid date for the 2024 Mill and Overlay Project.

Budget Implication \$1,408,000 - Roadway Maintenance Fund, Utility Funds, St. Paul Park Cost Share

Attachments

1.	Mill and Overlay CC Memo
2.	Mill and Overlay Resolution
3.	Mill and Overlay Plans and Specs



To: Honorable Mayor and City Council
Jennifer Levitt, City Administrator

From: Amanda Meyer, PE, City Engineer
Genevieve Tester, Graduate Engineer

Date: January 24, 2024

Re: 2024 Mill and Overlay Project – Approve Plans and Specifications and
Establish Bid Date

Background

The proposed work for the Mill and Overlay Project in 2024 is to resurface streets in the final phase of the three-year Thompson Grove neighborhood road rehabilitation plan, including a 0.15-mile section of 85th Street that extends west into St. Paul Park.

This program focuses on replacing the top layer of pavement to lengthen the life cycle of the roadway. As projects are completed, any necessary ADA improvements to bring existing pedestrian infrastructure into compliance would be addressed as well. These improvements would not be assessed to the adjacent property owners; the Roadway Maintenance Fund will be used for this project.

Discussion

Summary of Road and Infrastructure Improvements: The proposed Mill and Overlay project for 2024 includes roadways in the Thompson Grove neighborhood as shown in the below image. The rehabilitation method proposed is to remove the top layer of existing asphalt surface and replace it with a new surface. The distresses observed in the pavement point to a failing top layer of pavement, though the bottom layer of pavement and the base below the pavement are still structurally sound. Replacing the top layer of pavement will help to increase the lifecycle of the road; it is common with a mill and overlay project that any cracking of the roadway that has extended to the base layer will typically reflect through the new pavement within the first year. Minor spot curb replacement, utility repairs, and ADA improvements will also be completed as part of the project. If the project moves forward, additional information will be provided to neighborhood residents prior to construction.

The 2024 project will include approximately 5.0 miles of streets in the Thompson Grove neighborhood. Proposed streets extend west from Grange Boulevard to the southeast city limit of St. Paul Park.

Plans and Specifications: Plans and specifications have been prepared in accordance with City standards and specifications. The engineer's estimate for construction of the project is \$1,408,000. St. Paul Park will be responsible for the cost associated with the portion of the project that is within their city limits as noted in the background.



Bid Date: A bid date of March 7, 2024, at 10:00 a.m. will provide ample time to provide required notification to contractors.

Recommendation

It is recommended the City Council adopt Resolution 2024-018 approving the plans and specifications and establishing a March 7, 2024, bid date for the 2024 Mill and Overlay Project.

CITY OF COTTAGE GROVE, MINNESOTA
CITY COUNCIL
RESOLUTION 2024-018

**RESOLUTION APPROVING THE PLANS AND
SPECIFICATIONS AND ESTABLISHING A BID DATE FOR THE
2024 MILL AND OVERLAY PROJECT**

WHEREAS, plans and specifications have been prepared in accordance with the City Standards and Specifications for the 2024 Mill and Overlay Project; and

WHEREAS, a bid date has been established for March 7, 2024; and

WHEREAS, the City Engineer has presented such plans and specifications to the City Council for approval.

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of Cottage Grove, County of Washington, State of Minnesota, approves the plans and specifications and establishes a bid date of March 7, 2024, for the 2024 Mill and Overlay Project.

Passed this 7th day of February 2024.

Myron Bailey, Mayor

Attest:

Tamara Anderson, City Clerk



2024 MILL AND OVERLAY

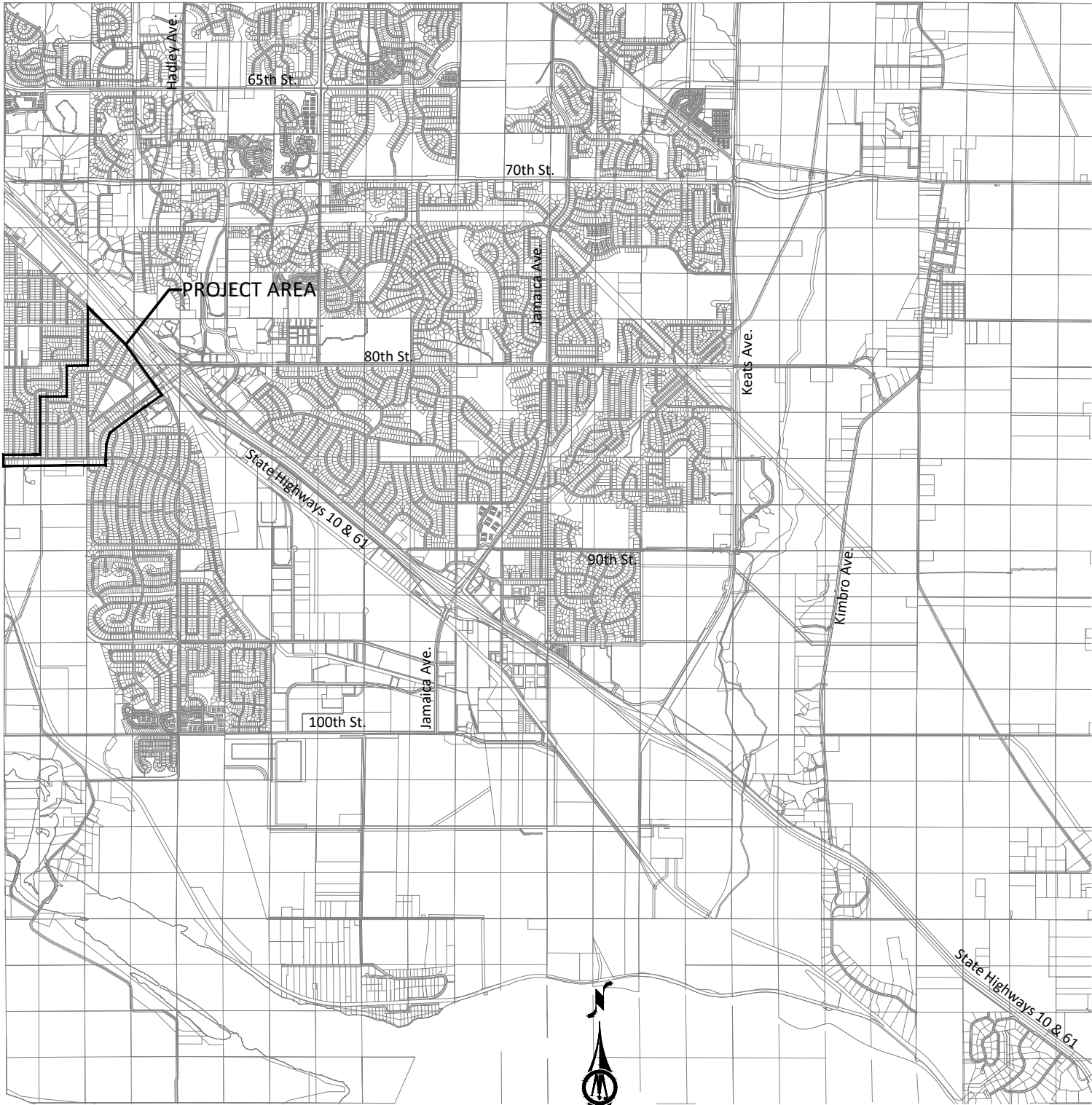
STREET IMPROVEMENTS

THOMPSON GROVE - AREA 3

SHEET INDEX

SHEET NO.	DESCRIPTION
G0.01	TITLE SHEET
G0.02	LEGEND
G2.01	LOCATION PLAN
C1.01	TYPICAL SECTIONS
C1.02-C1.07	MNDOT PEDESTRIAN CURB RAMP DETAILS
C1.08-C1.09	STANDARD DETAILS
C2.01	EROSION CONTROL
C4.01	WATER MAIN IMPROVEMENTS
C6.01-C6.03	STREET IMPROVEMENTS
C7.01	SIGNING
C7.02	STRIPING
THIS SET OF PLANS CONTAINS 19 SHEETS	

MYRON BAILEY	MAYOR
DAVID THIEDE	COUNCIL MEMBER
MONIQUE GARZA	COUNCIL MEMBER
JUSTIN OLSEN	COUNCIL MEMBER
TONY KHAMBATA	COUNCIL MEMBER
JENNIFER LEVITT	CITY ADMINISTRATOR
AMANDA MEYER	CITY ENGINEER
RYAN BURFEIND	DIRECTOR OF PUBLIC WORKS
KORINE LAND	ATTORNEY



- PROJECT CONTROL NOTES:
- 1. ALL COORDINATES ARE WASHINGTON COUNTY COORDINATE SYSTEM
 - 2. HORIZONTAL COORDINATES ARE BASED ON GEODETIC POSITION NAD83, 1986 ADJUSTMENT
 - 3. VERTICAL ELEVATIONS ARE BASED ON MNDOT NAVD 88



MAP OF THE
CITY OF COTTAGE GROVE
WASHINGTON COUNTY, MN

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

ANDREW N OLSON
LIC. NO. 59327 DATE 01/30/2024



3507 HIGH POINT DRIVE NORTH
BLDG. 1 SUITE E130
OAKDALE, MINNESOTA 55128
Phone: (651) 704-9970
Email: Oakdale@bolton-menk.com
www.bolton-menk.com



DESIGNED	NO.	ISSUED FOR	DATE
ANO	0	BID	1/20/2023
DRAWN	TCJ		
CHECKED	ANO		
CLIENT PROJ. NO.	0N1.132557		

CITY OF COTTAGE GROVE, MINNESOTA
2024 MILL AND OVERLAY
TITLE SHEET

SHEET
G0.01

	ACCESS GRATE		REGULATION STATION GAS
	AIR CONDITION UNIT		SATELLITE DISH
	ANTENNA		SIGN NON TRAFFIC
	AUTO SPRINKLER CONNECTION		SIGN TRAFFIC
	BARRICADE PERMANENT		SIGNAL CONTROL CABINET
	BASKETBALL POST		SOIL BORING
	BENCH		SIREN
	BIRD FEEDER		TELEPHONE BOOTH
	BOLLARD		TILE INLET
	BUSH		TILE OUTLET
	CATCH BASIN RECTANGULAR CASTING		TILE RISER
	CATCH BASIN CIRCULAR CASTING		TRANSFORMER-ELECTRIC
	CURB STOP		TREE-CONIFEROUS
	CLEAN OUT		TREE-DEAD
	CULVERT END		TREE-DECIDUOUS
	DRINKING FOUNTAIN		TREE STUMP
	DOWN SPOUT		TRAFFIC ARM BARRIER
	FILL PIPE		TRAFFIC SIGNAL
	FIRE HYDRANT		TRASH CAN
	FLAG POLE		UTILITY MARKER
	FLARED END / APRON		VALVE
	FUEL PUMP		VALVE POST INDICATOR
	GRILL		VALVE VAULT
	GUY WIRE ANCHOR		VAULT
	HANDHOLE		VENT PIPE
	HANDICAP SPACE		WATER SPIGOT
	IRRIGATION SPRINKLER HEAD		WELL
	IRRIGATION VALVE BOX		WETLAND DELINEATED MARKER
	LIFT STATION CONTROL PANEL		WETLAND
	LIFT STATION		WET WELL
	LIGHT ON POLE		YARD HYDRANT

	CLEANOUT
	MANHOLE
	LIFT STATION
	STORM SEWER CIRCULAR CASTING
	STORM SEWER RECTANGULAR CASTING
	STORM SEWER FLARED END / APRON
	STORM SEWER OUTLET STRUCTURE
	STORM SEWER OVERFLOW STRUCTURE
	CURB BOX
	FIRE HYDRANT
	WATER VALVE
	WATER REDUCER
	WATER BEND
	WATER TEE
	WATER CROSS
	WATER SLEEVE
	WATER CAP / PLUG
	RIP RAP
	DRAINAGE FLOW
	TRAFFIC SIGNS

	BENCHMARK LOCATION		CAST IRON MONUMENT
	CONTROL POINT		STONE MONUMENT
	MONUMENT FOUND		

Diagram illustrating the layout of a road with various features:

- RETAINING WALL
- FENCE
- FENCE-DECORATIVE
- GUARD RAIL
- TREE LINE
- BUSH LINE

	CONTROLLED ACCESS BOUNDARY
	CENTERLINE
	EXISTING EASEMENT LINE
	PROPOSED EASEMENT LINE
	EXISTING LOT LINE
	PROPOSED LOT LINE
	EXISTING RIGHT-OF-WAY
	PROPOSED RIGHT-OF-WAY
	SETBACK LINE
	SECTION LINE
	QUARTER LINE
	SIXTEENTH LINE
	TEMPORARY EASEMENT

	FORCEMAIN
	SANITARY SEWER
	SANITARY SERVICE
	STORM SEWER
	STORM SEWER DRAIN TILE
	WATERMAIN
	WATER SERVICE

	FORCEMAIN
	SANITARY SEWER
	SANITARY SERVICE
	STORM SEWER
	STORM SEWER DRAIN TILE
	WATERMAIN
	WATER SERVICE
	PIPE CASING
	TRENCHLESS PIPE (PLAN VIEW)
	TRENCHLESS PIPE (PROFILE VIEW)

Diagram illustrating the proposed grading limits and slope limits for a road project. The diagram shows the existing contour (minor and major) and the proposed contour (minor and major). The proposed grading limits and slope limits are indicated by a dashed line. The project limits are shown by a solid line. The diagram also includes the proposed spot elevation and the rise:run (slope) ratio.

EXISTING CONTOUR MINOR
 EXISTING CONTOUR MAJOR
 PROPOSED CONTOUR MINOR
 PROPOSED CONTOUR MAJOR
 PROPOSED GRADING LIMITS / SLOPE LIMITS
 PROJECT LIMITS
 PROPOSED SPOT ELEVATION
 RISE:RUN (SLOPE)

1:4

x 953.53 x STA:5+67.19
 980.87

	BITUMINOUS		GRAVEL
	CONCRETE		

NOTE:
EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY GOPHER STATE ONE CALL, 1-800-252-1166 OR 651-454-0002.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D UNLESS OTHERWISE NOTED. THIS UTILITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA"

_____ F _____ F _____ F _____ F _____	UNDERGROUND FIBER OPTIC
_____ E _____ E _____ E _____ E _____	UNDERGROUND ELECTRIC
_____ G _____ G _____ G _____ G _____	UNDERGROUND GAS
_____ C _____ C _____ C _____ C _____	UNDERGROUND COMMUNICATION
_____ OE _____ OE _____ OE _____ OE _____	OVERHEAD ELECTRIC
_____ OC _____ OC _____ OC _____ OC _____	OVERHEAD COMMUNICATION
_____ OU _____ OU _____ OU _____ OU _____	OVERHEAD UTILITY

LINE TYPES FOLLOW THE FORMAT: UTILITY TYPE - QUALITY LEVEL
EXAMPLE: ——— G-A ——— G-A ——— UNDERGROUND GAS, QUALITY LEVEL A
UTILITY QUALITY LEVEL (A,B,C,D) DEFINITIONS CAN BE FOUND IN CI/ASCE 38-02.

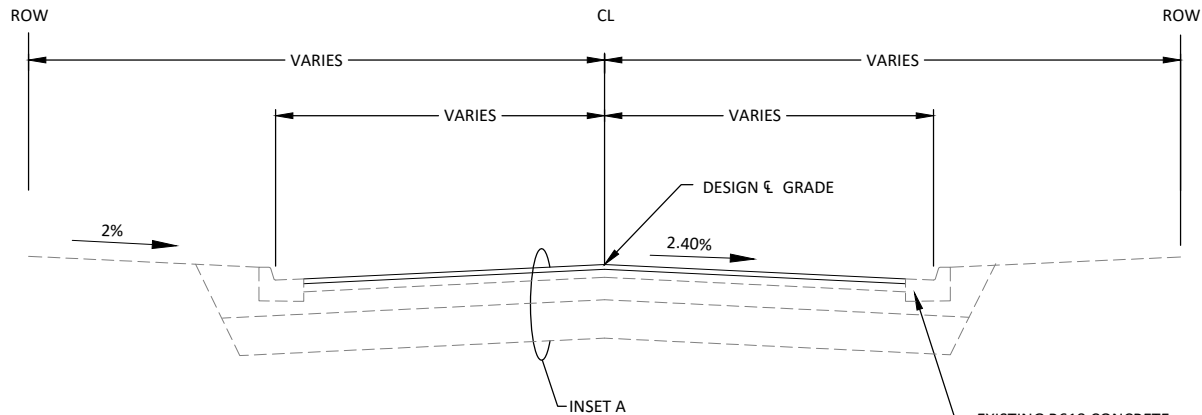
QUALITY LEVEL D: PROVIDES THE MOST BASIC LEVEL OF INFORMATION. IT INVOLVES COLLECTING DATA FROM EXISTING UTILITY RECORDS. RECORDS MAY INCLUDE AS-BUILT DRAWINGS, DISTRIBUTION AND SERVICES MAPS, EXISTING GEOGRAPHIC INFORMATION SYSTEM DATABASES, CONSTRUCTION PLANS, ETC.

QUALITY LEVEL C: INVOLVES SURVEYING VISIBLE SUBSURFACE UTILITY STRUCTURES SUCH AS MANHOLES, HAND-HOLES, UTILITY VALVES AND METERS, FIRE HYDRANTS, PEDESTALS AND UTILITY MARKERS, AND THEN CORRELATING THE INFORMATION WITH EXISTING UTILITY RECORDS TO CREATE COMPOSITE DRAWINGS. INCLUDES QUALITY LEVEL D ACTIVITIES.

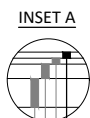
QUALITY LEVEL B: INVOLVES DESIGNATING THE HORIZONTAL POSITION OF SUBSURFACE UTILITIES THROUGH SURFACE DETECTION METHODS AND COLLECTING THE INFORMATION THROUGH A SURVEY METHOD. INCLUDES QUALITY LEVEL C AND D TASKS.

QUALITY LEVEL A: PROVIDES THE HIGHEST LEVEL OF ACCURACY. IT INVOLVES LOCATING OR POTHOLING UTILITIES AS WELL AS ACTIVITIES IN QUALITY LEVELS B, C, AND D. THE LOCATED FACILITY INFORMATION IS SURVEYED AND MAPPED AND THE DATA PROVIDES PRECISE PLAN AND PROFILE INFORMATION.

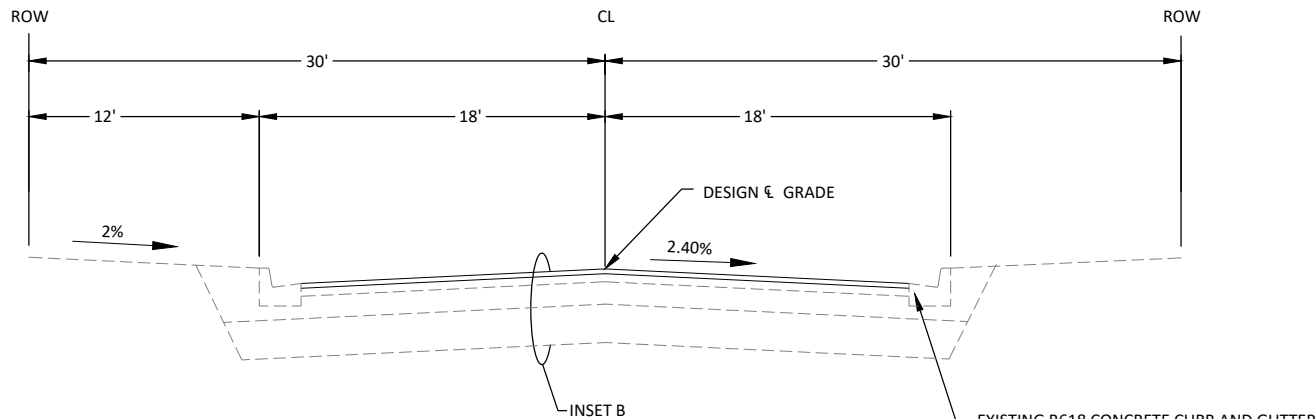
A	ALGEBRAIC DIFFERENCE	GRAV	GRAVEL	RSC	RIGID STEEL CONDUIT
ADJ	ADJUST	GU	GUTTER	RT	RIGHT
ALT	ALTERNATE	GV	GATE VALVE	SAN	SANITARY SEWER
B-B	BACK TO BACK	HDPE	HIGH DENSITY POLYETHYLENE	SCH	SCHEDULE
BIT	BITUMINOUS	HH	HANDHOLE	SERV	SERVICE
BLDG	BUILDING	HP	HIGH POINT	SHLD	SHOULDER
BMP	BEST MANAGEMENT PRACTICE	HWL	HIGH WATER LEVEL	STA	STATION
BR	BEGIN RADIUS	HYD	HYDRANT	STD	STANDARD
BV	BUTTERFLY VALVE	I	INVERT	STM	STORM SEWER
CB	CATCH BASIN	K	CURVE COEFFICIENT	TC	TOP OF CURB
C&G	CURB AND GUTTER	L	LENGTH	TE	TEMPORARY EASEMENT
CIP	CAST IRON PIPE	LO	LOWEST OPENING	TEMP	TEMPORARY
CIPP	CURED-IN-PLACE PIPE	LP	LOW POINT	TNH	TOP NUT HYDRANT
CL	CENTER LINE	LT	LEFT	TP	TOP OF PIPE
CL	CLASS	MAX	MAXIMUM	TYP	TYPICAL
CLVT	CULVERT	MH	MANHOLE	VCP	VITRIFIED CLAY PIPE
CMP	CORRUGATED METAL PIPE	MIN	MINIMUM	VERT	VERTICAL
C.O.	CHANGE ORDER	MR	MID RADIUS	VPC	VERTICAL POINT OF CURVE
COMM	COMMUNICATION	NIC	NOT IN CONTRACT	VPI	VERTICAL POINT OF INTERSECTION
CON	CONCRETE	NMC	NON-METALLIC CONDUIT	VPT	VERTICAL POINT OF TANGENT
CSP	CORRUGATED STEEL PIPE	NTS	NOT TO SCALE	WM	WATERMAIN
DIA	DIAMETER	NWL	NORMAL WATER LEVEL		
DIP	DUCTILE IRON PIPE	OHW	ORDINARY HIGH WATER LEVEL		
DWY	DRIVEWAY	PC	POINT OF CURVE	AC	ACRES
E	EXTERNAL CURVE DISTANCE	PCC	POINT OF COMPOUND CURVE	CF	CUBIC FEET
ELEC	ELECTRIC	PE	PERMANENT EASEMENT	CV	COMPACTED VOLUME
ELEV	ELEVATION	PED	PEDESTRIAN, PEDESTAL	CY	CUBIC YARD
EOF	EMERGENCY OVERFLOW	PERF	PERFORATED PIPE	EA	EACH
ER	END RADIUS	PERM	PERMANENT	EV	EXCAVATED VOLUME
ESMT	EASEMENT	PI	POINT OF INTERSECTION	LB	POUND
EX	EXISTING	PL	PROPERTY LINE	LF	LINEAR FEET
FES	FLARED END SECTION	PRC	POINT OF REVERSE CURVE	LS	LUMP SUM
F-F	FACE TO FACE	PT	POINT OF TANGENT	LV	LOOSE VOLUME
FF	FINISHED FLOOR	PVC	POLYVINYL CHLORIDE PIPE	SF	SQUARE FEET
F&I	FURNISH AND INSTALL	PVMT	PAVEMENT	SV	STOCKPILE VOLUME
FM	FORCEMAIN	R	RADIUS	SY	SQUARE YARD
FO	FIBER OPTIC	R/W	RIGHT-OF-WAY		
F.O.	FIELD ORDER	RCP	REINFORCED CONCRETE PIPE		
GRAN	GRANULAR	RET	RETAINING		



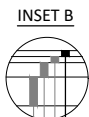
A TYPICAL PAVEMENT SECTION
GRANGE BOULEVARD
85TH STREET



2" TYPE SP 9.5 WEARING COURSE MIXTURE (3,B) [SPWEA330B]
EXISTING 2.5" NON-WEARING COURSE MIXTURE (ACTUAL DEPTH VARIES)
EXISTING 8" AGGREGATE BASE, CLASS 5
EXISTING AGGREGATE BACKFILL



B TYPICAL PAVEMENT SECTION
BELDEN BOULEVARD
GARY BOULEVARD
GLENBROOK AVENUE (SEE NOTE 2)
GOODVIEW AVENUE
GRAFTON AVENUE
GRANADA AVENUE
GRANADIER AVENUE
GRESHAM LANE
SCOTT BOULEVARD
83RD STREET
82ND STREET
81ST STREET
77TH STREET

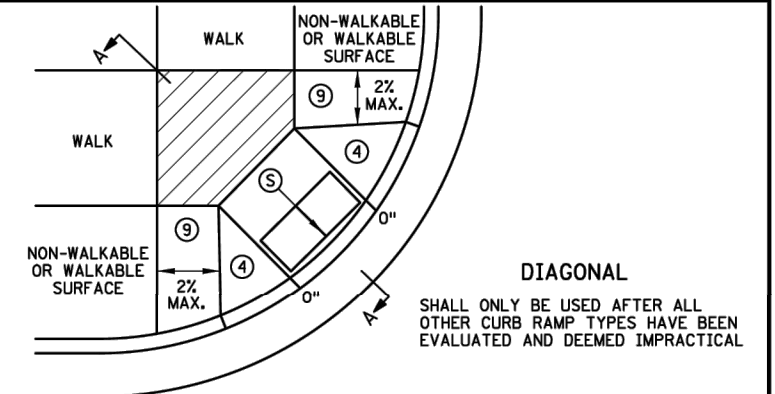
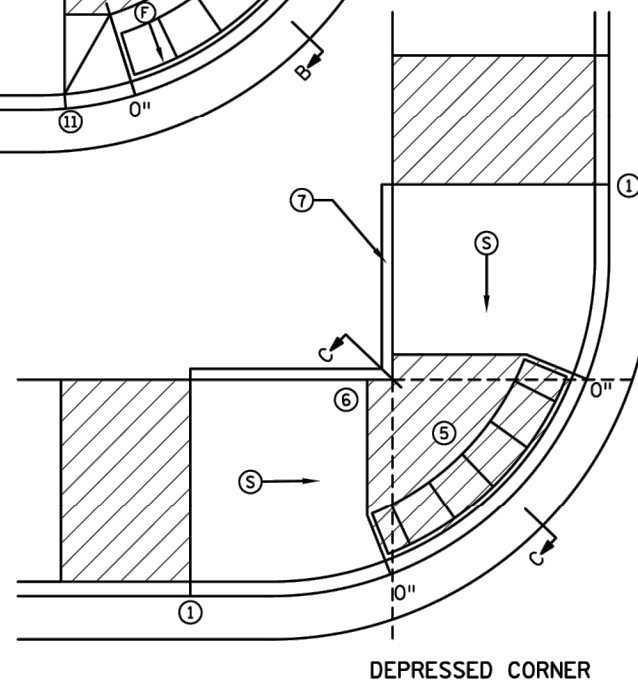
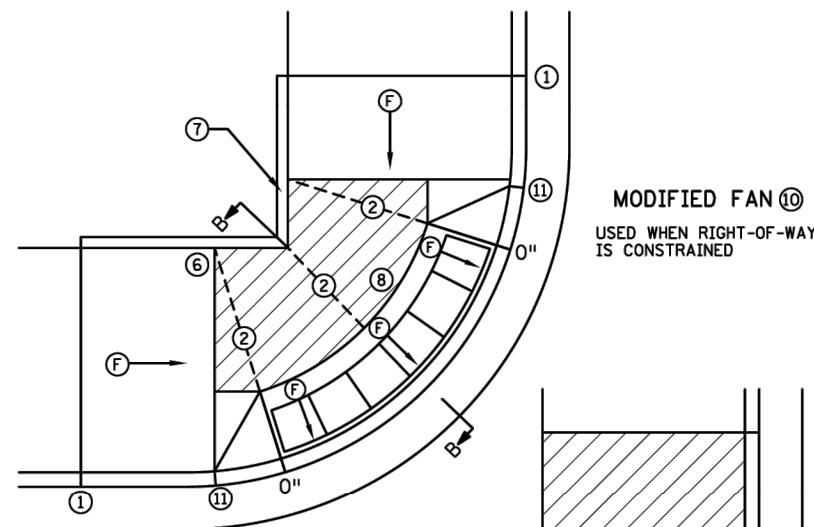
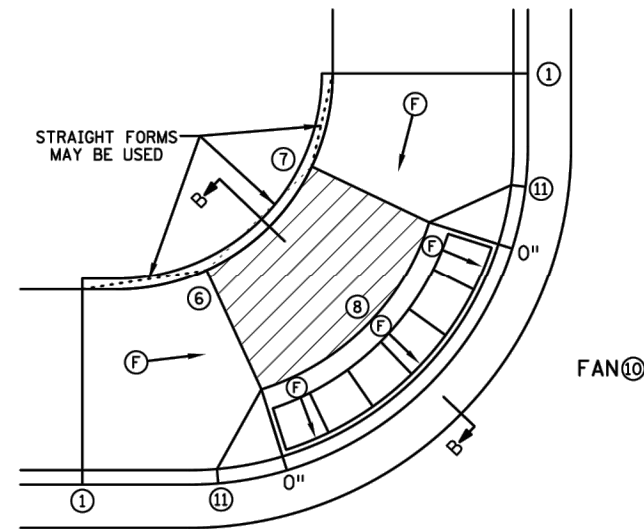
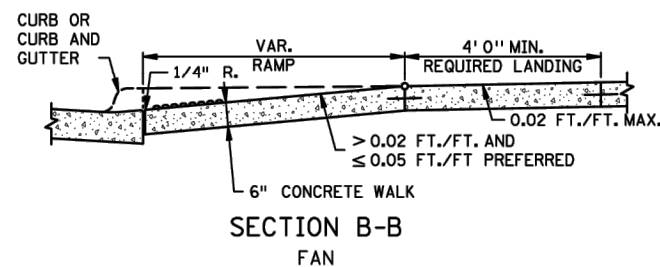
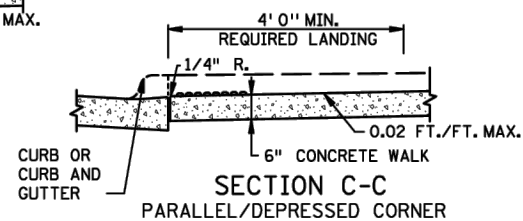
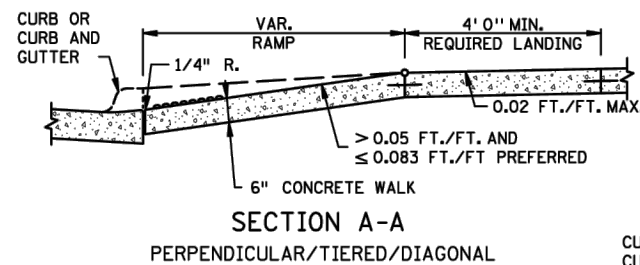
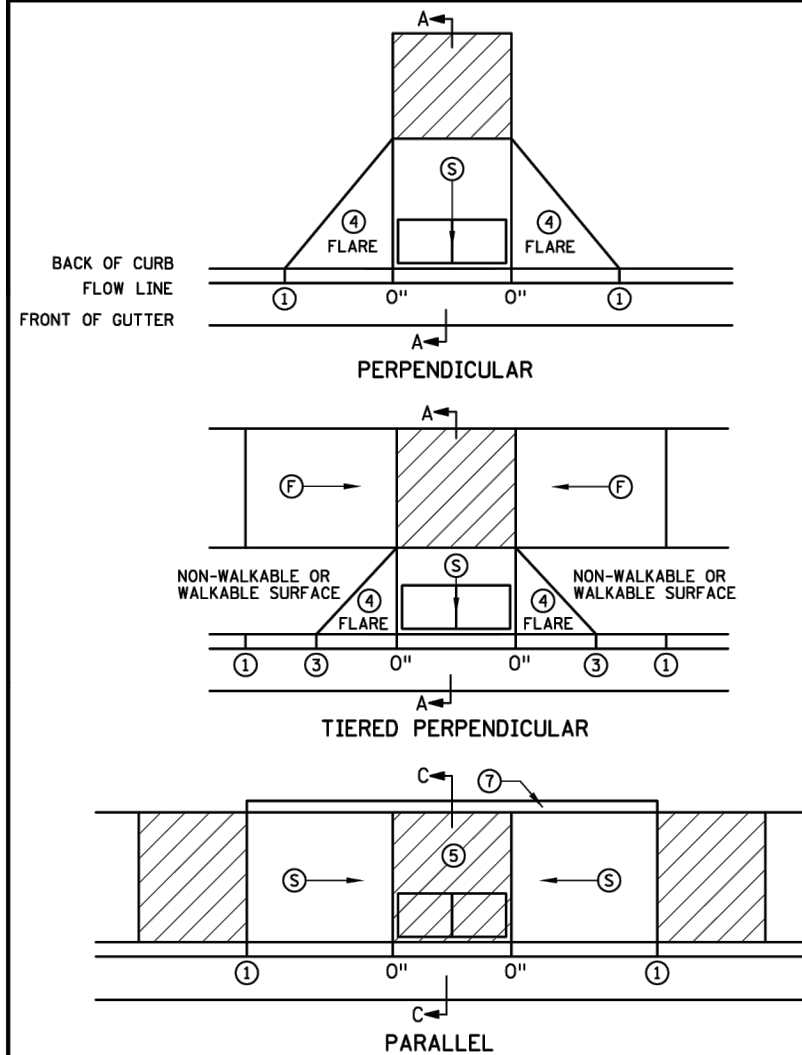


2" TYPE SP 9.5 WEARING COURSE MIXTURE (3,B) [SPWEA330B]
EXISTING 2" NON-WEARING COURSE MIXTURE (ACTUAL DEPTH VARIES)
EXISTING 5" - 7" AGGREGATE BASE, CLASS 5
EXISTING AGGREGATE BACKFILL

- NOTES:
- ALL INTERSECTION RADII ARE 15' TO BACK OF CURB UNLESS NOTED OTHERWISE.
 - GLENBROOK AVENUE STREET PATCH FOR UTILITY WORK TO BE: 6" CLASS 5 AGGREGATE BASE, 2" SPWEA330B, TACK COAT, 2" SPWEA330B.

TYPICAL CONSTRUCTION NOTES:

- PROVIDE CONSTRUCTION SIGNAGE AT ENTRANCES TO SITE: " CONSTRUCTION ZONE" (INCIDENTAL TO TRAFFIC CONTROL BID ITEM).
- REMOVE AND REPLACE CONCRETE CURB AS DIRECTED BY ENGINEER.
- RESTORE DISTURBED AREAS WITH SEED AND HYDRAULIC MATRIX TYPE MULCH.
- MILL 2 INCHES EXISTING BITUMINOUS PAVEMENT. PROTECT EXISTING CURB FROM DAMAGE (INCIDENTAL). MILL AROUND AND PROTECT EXISTING STRUCTURES LOCATED WITHIN PAVEMENT.
- ADJUST STRUCTURES AS DEPICTED ON PLANS OR DIRECTED BY ENGINEER
- REMOVE AND REPLACE DAMAGED BITUMINOUS LOWER WEARING COURSE AS DIRECTED BY ENGINEER.
- PAVE BITUMINOUS WEARING COURSE.



NOTES:

- LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE (PAR) CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE GREATER THAN 2%.
- INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE, ONLY APPLICABLE WHEN THE INITIAL RAMP RUNNING SLOPE IS OVER 5.0%.
- SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30' OF VERTICAL RISE WHEN THE LONGITUDINAL RUNNING SLOPE IS GREATER THAN 5.0%.
- CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS WITHIN THE PAR. 1/4" DEEP VISUAL JOINTS SHALL BE USED AT THE TOPS OF CONCRETE FLARES ADJACENT TO WALKABLE SURFACES.
- ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL. THUS BOTH SIDES OF A SLOPED WALKING SURFACE MUST BE EQUAL LENGTH. (EXCEPT AS STATED IN 6) BELOW.
- TO ENSURE RAMPS AND LANDINGS ARE PROPERLY CONSTRUCTED, ALL INITIAL LANDINGS AT A TOP OF A RAMPED SURFACE (RUNNING SLOPE GREATER THAN 2%) SHALL BE FORMED AND PLACED SEPARATELY IN AN INDEPENDENT CONCRETE POUR. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 6 OF 6 FOR ALL SEPARATELY POURED INITIAL LANDINGS.
- WHEN SIDEWALK IS AT BACK OF CURB, TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE. MAINTAIN POSITIVE BOULEVARD DRAINAGE TO TOP OF CURB.
- ALL RAMP TYPES SHOULD HAVE A MINIMUM 3' LONG RAMP LENGTH.
- 4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNING SHALL CONTINUOUSLY EXTEND FOR A MIN. OF 24" IN THE PATH OF TRAVEL. DETECTABLE WARNING TO COVER THE ENTIRE PAR WIDTH OF SHARED-USE PATHS AND THE ENTIRE PAR WIDTH OF THE WALK WITH THE EXCEPTION OF 3" MAXIMUM ON EACH OUTSIDE EDGE WHICH ENSURES THE DETECTABLE WARNING ARE ENCASED IN CONCRETE WHEN ADJACENT TO TURF. WHEN ADJACENT TO CONCRETE FLARES 0" - 3" OFFSET IS ALLOWED.
- WHEN DESIGNING OR ORDERING RECTANGULAR DETECTABLE WARNING SURFACES SHOULD BE 6" LESS THAN THE INCOMING PAR. ARC LENGTH OF THE RADIAL DETECTABLE WARNING SHOULD NOT BE GREATER THAN 20 FEET.
- RECTANGULAR DETECTABLE WARNING SHALL BE SETBACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNING SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB.
- 1 MATCH FULL HEIGHT CURB.
- 2 4' MINIMUM DEPTH LANDING REQUIRED ACROSS TOP OF RAMP.
- 3 3" HIGH CURB WHEN USING A 3' LONG RAMP, 4" HIGH CURB WHEN USING A 4' LONG RAMP.
- 4 SEE SHEET 4 OF 6, TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS.
- 5 DETECTABLE WARNING MAY BE PART OF THE 4' X 4' MIN. LANDING AREA IF IT IS NOT FEASIBLE TO CONSTRUCT THE LANDING OUTSIDE OF THE DETECTABLE WARNING AREA.
- 6 THE GRADE BREAK SHALL BE PERPENDICULAR TO THE BACK OF WALK. THIS WILL ENSURE THAT THE GRADE BREAK IS PERPENDICULAR TO THE DIRECTION OF TRAVEL. (TYPICAL FOR ALL)
- 7 WHEN ADJACENT TO GRASS, GRADING SHALL ALWAYS BE USED WHEN FEASIBLE. V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. WHEN ADJACENT TO PARKING LOTS, CONCRETE OR BITUMINOUS TAPERS LESS THAN 5% RUNNING SLOPE SHOULD BE USED OVER V CURB TO REDUCE TRIPPING HAZARDS AND FACILITATE SNOW & ICE REMOVAL.
- 8 A 7' MIN TOP RADIUS GRADE BREAK IS REQUIRED TO BE CONSTRUCTIBLE.
- 9 PAVE FULL WALK WIDTH.
- 10 "S" SLOPES ON FANS SHALL ONLY BE USED WHEN ALL OTHER FEASIBLE OPTIONS HAVE BEEN EVALUATED AND DEEMED IMPRACTICAL.
- 11 INTERMEDIATE CURB HEIGHTS TAPER SHALL RISE AT 8-10% TO A MINIMUM 3" CURB HEIGHT. REDUCE INTERMEDIATE CURB HEIGHT TO 2+ INCHES IF NECESSARY TO MATCH ADJACENT BOULEVARD OR SIDEWALK GRADES.

LEGEND

- THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.
- (S) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.
 - (F) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.
 - LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PAR.
 - X" CURB HEIGHT

REVISION:

APPROVED: 11-04-2021

Jeff J. Perkins
OPERATIONS DIVISION

STANDARD PLAN 5-297.250 1 OF 6

APPROVED: 11-04-2021

REVIS:

STATE PROJ. NO. (TH) SHEET NO. OF SHEETS

PEDESTRIAN CURB RAMP DETAILS



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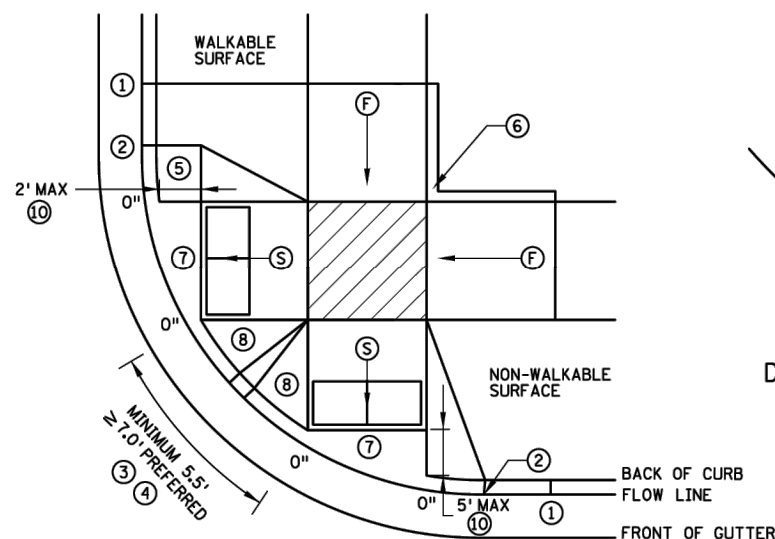
CITY OF COTTAGE GROVE, MINNESOTA

2024 MILL AND OVERLAY

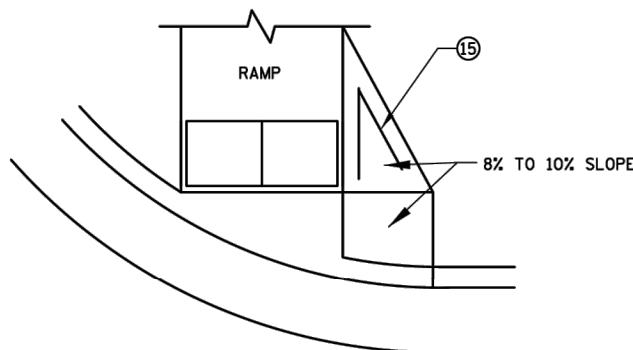
MNDOT PEDESTRIAN CURB RAMP DETAILS

SHEET

C1.02

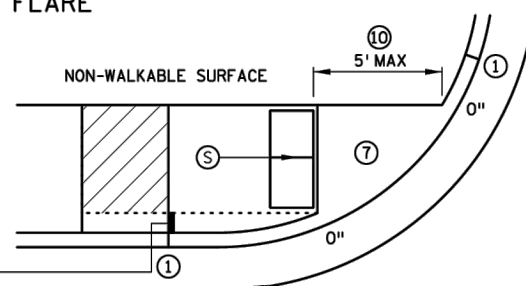


COMBINED DIRECTIONAL

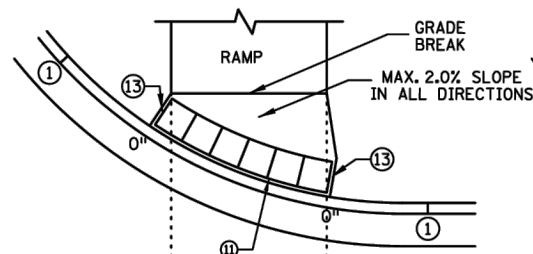


DIRECTIONAL RAMP WALKABLE FLARE

IF NON-CONCRETE BLVD. IS CONSTRUCTED AND IS LESS THAN 2' IN WIDTH AT TOP OF CURB TRANSITION, PAVE CONCRETE RAMP WIDTH TO ADJACENT BACK OF CURB.

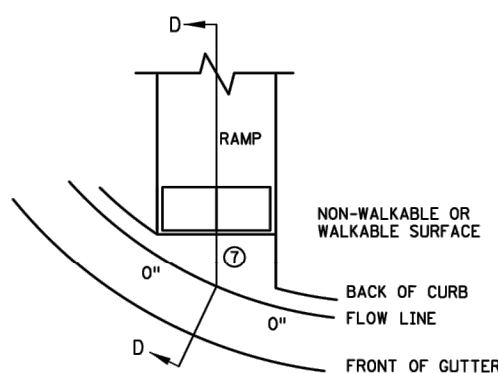


STANDARD ONE-WAY DIRECTIONAL ⑨

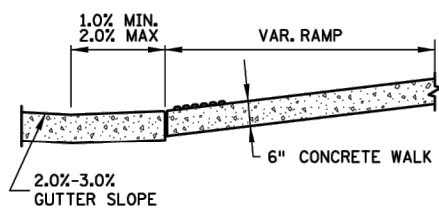


DETECTABLE WARNING PLACEMENT WHEN SETBACK CRITERIA IS EXCEEDED ⑫

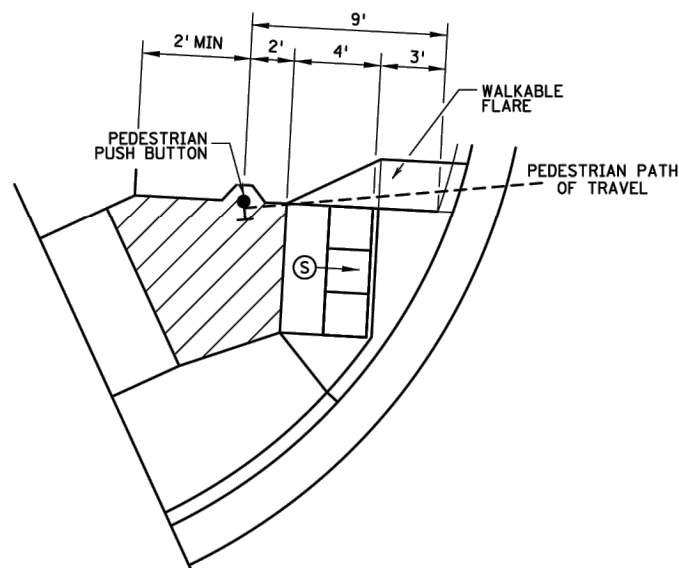
ONE-WAY DIRECTIONAL WITH DETECTABLE WARNING AT BACK OF CURB



CURB FOR DIRECTIONAL RAMPS ⑭



SECTION D-D



SEMI-DIRECTIONAL RAMP ③④⑨

3' DOME SETBACK, 4' LONG RAMP AND PUSH BUTTON 9' FROM THE BACK OF CURB
PRIMARYLY USED FOR APS APPLICATIONS WHERE THE PAR DOES NOT CONTINUE PAST THE PUSH BUTTON (DEAD-END SIDEWALK)

NOTES:

LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE (PAR) CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE.

INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE, ONLY APPLICABLE WHEN THE INITIAL RAMP RUNNING SLOPE IS OVER 5.0%.

SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30' OF VERTICAL RISE WHEN THE LONGITUDINAL SLOPE IS GREATER THAN 5.0%.

CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS WITHIN THE PAR. 1/4" DEEP VISUAL JOINTS SHALL BE USED AT THE TOP GRADE BREAK OF CONCRETE FLARES ADJACENT TO WALKABLE SURFACES.

ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL. THUS BOTH SIDES OF A SLOPED WALKING SURFACE MUST BE EQUAL LENGTH.

TO ENSURE INITIAL RAMPS AND INITIAL LANDINGS ARE PROPERLY CONSTRUCTED, LANDINGS SHALL BE CAST SEPARATELY. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 6 AND THE ADA SPECIAL PROVISION (PROSECUTION OF WORK).

TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.

WHEN THE BOULEVARD IS 4' WIDE OR LESS, THE TOP OF CURB TAPER SHALL MATCH THE RAMP SLOPES TO REDUCE NEGATIVE BOULEVARD SLOPES FROM THE TOP BACK OF CURB TO THE PAR.

ALL RAMP TYPES SHOULD HAVE A MINIMUM 3' LONG RAMP LENGTH.

4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MIN. OF 24" IN THE PATH OF TRAVEL. DETECTABLE WARNING TO COVER THE ENTIRE PAR WIDTH OF SHARED-USE PATHS AND THE ENTIRE PAR WIDTH OF THE WALK WITH THE EXCEPTION OF 3" MAXIMUM ON EACH OUTSIDE EDGE WHICH ENSURES THE DETECTABLE WARNINGS ARE ENCASED IN CONCRETE WHEN ADJACENT TO TURF. WHEN ADJACENT TO CONCRETE FLARES 0" - 3" OFFSET IS ALLOWED.

WHEN DESIGNING OR ORDERING RECTANGULAR DETECTABLE WARNING SURFACES SHOULD BE 6" LESS THAN THE INCOMING PAR. ARC LENGTH OF THE RADIAL DETECTABLE WARNINGS SHOULD NOT BE GREATER THAN 20 FEET.

RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB. SEE NOTES ⑩ & ⑪ FOR INFORMATION REGARDING RECTANGULAR DETECTABLE WARNING PLACEMENT.

① MATCH FULL CURB HEIGHT.

② 3" HIGH CURB WHEN USING A 3' LONG RAMP
4" HIGH CURB WHEN USING A 4' LONG RAMP.

③ 3" MINIMUM CURB HEIGHT (5.5' MIN. DISTANCE REQUIRED BETWEEN DOMES)
4" PREFERRED (7' MIN. DISTANCE REQUIRED BETWEEN DOMES).

④ THE "BUMP" IN BETWEEN THE RAMPS SHOULD NOT BE IN THE PATH OF TRAVEL FOR COMBINED DIRECTIONAL RAMPS. IF THIS OCCURS MODIFY THE RAMP LOCATION OR SWITCH RAMP TO A FAN/DEPRESSED CORNER.

⑤ WHEN USING CONCRETE PAVED FLARES ON THE OUTSIDE OF DIRECTIONAL RAMPS, AND ADJACENT TO A WALKABLE SURFACE, DIRECTIONAL RAMP FLARES SHALL BE USED. SEE THE DETAIL ON THIS SHEET.

⑥ GRADING SHALL ALWAYS BE USED WHEN FEASIBLE. V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. WHEN ADJACENT TO PARKING LOTS, CONCRETE OR BITUMINOUS TAPERS SHOULD BE USED OVER V CURB TO REDUCE TRIPPING HAZARDS AND FACILITATE SNOW & ICE REMOVAL.

⑦ MAX. 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK AND DRAIN TO FLOW LINE. SHALL BE CONSTRUCTED INTEGRAL WITH CURB AND GUTTER.

⑧ 8% TO 10% WALKABLE FLARE.

⑨ PLACE DOMES AT THE BACK OF CURB WHEN ALLOWABLE SETBACK CRITERIA IS EXCEEDED.

⑩ FRONT EDGE OF DETECTABLE WARNING SHALL BE SET BACK 2' MAXIMUM WHEN ADJACENT TO WALKABLE SURFACE, AND 5' MAXIMUM WHEN ADJACENT TO NON-WALKABLE SURFACE WITH ONE CORNER SET 3" FROM BACK OF CURB. A WALKABLE SURFACE IS DEFINED AS A PAVED SURFACE ADJACENT TO A CURB RAMP WITHOUT RAISED OBSTACLES THAT COULD MISTAKENLY BE TRAVERSED BY A USER WHO IS VISUALLY IMPAIRED.

⑪ RECTANGULAR DETECTABLE WARNINGS MAY BE SETBACK UP TO 9" FROM THE BACK OF CURB WITH CORNERS SET 3" FROM BACK OF CURB. IF 9" SETBACK IS EXCEEDED USE RADIAL DETECTABLE WARNINGS.

⑫ FOR DIRECTIONAL RAMPS WITH THE DETECTABLE WARNINGS PLACED AT THE BACK OF CURB, THE DETECTABLE WARNINGS SHALL COVER THE ENTIRE WIDTH OF THE WALK/PATH. THIS ENSURES A DETECTABLE EDGE AND HELPS ELIMINATE THE CURB TAPER OBSTRUCTING THE PATH OF PEDESTRIAN TRAVEL.

⑬ THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE BACK OF CURB. MAINTAIN 3" BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.

⑭ TO BE USED FOR ALL DIRECTIONAL RAMPS, EXCEPT WHERE DOMES ARE PLACED ALONG THE BACK OF CURB.

⑮ PLACE 2 NO. 4 BARS 4 INCHES FROM SIDE OF FORMS WITH A MINIMUM 2 INCHES OF CONCRETE COVER ALONG EACH SIDE OF FLARE (INCIDENTAL).

LEGEND

THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.

⑤ INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.

⑥ INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.

⑦ LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PAR.

X" CURB HEIGHT

REVISION:

APPROVED: 11-04-2021

Jeffrey Perkins
OPERATIONS DIVISION



STANDARD PLAN 5-297.250

2 OF 6

Tom Styrbicki
THOMAS STYRBICKI
STATE DESIGN ENGINEER

APPROVED: 11-04-2021

REVISED:

STATE PROJ. NO.

PEDESTRIAN CURB RAMP DETAILS

(T.H.) SHEET NO. OF SHEETS



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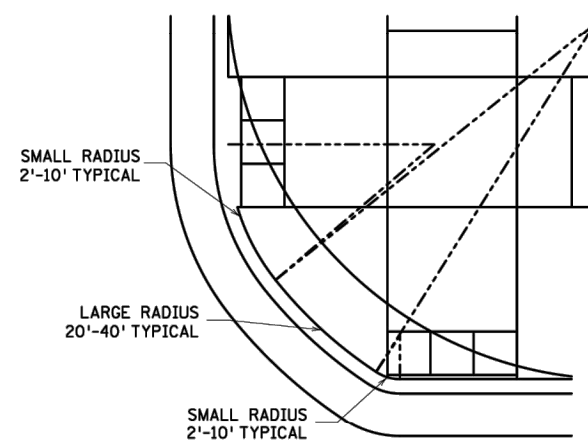
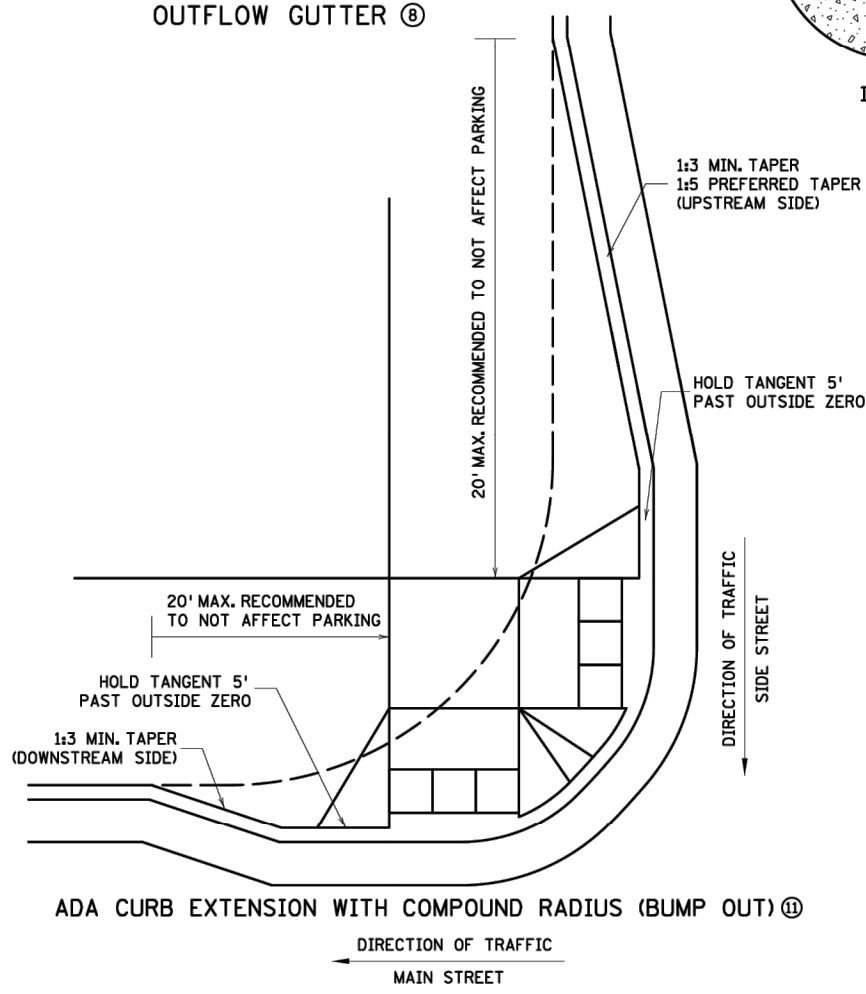
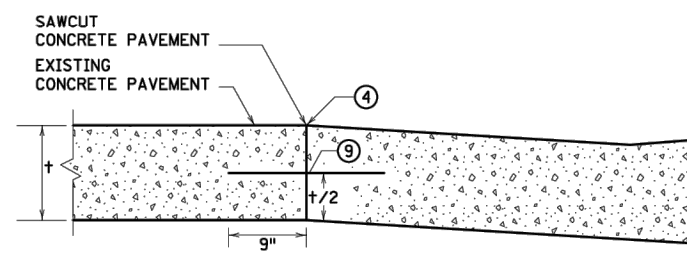
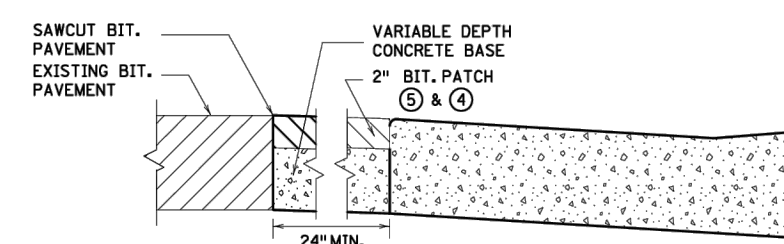
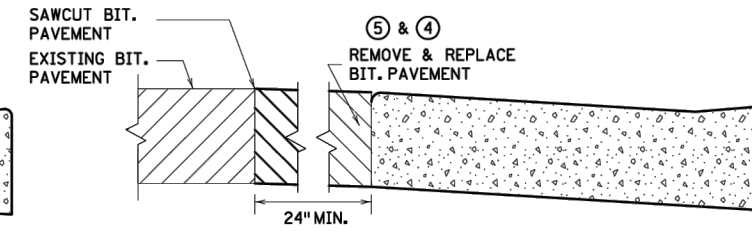
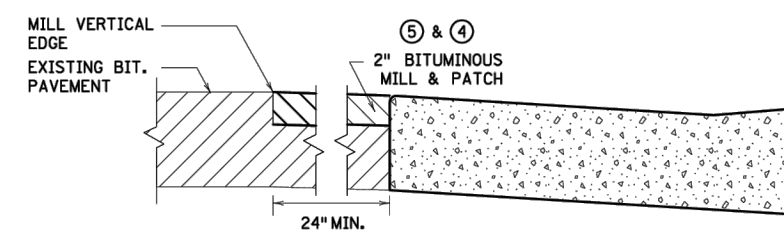
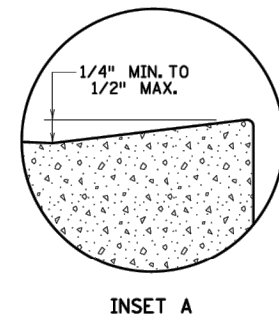
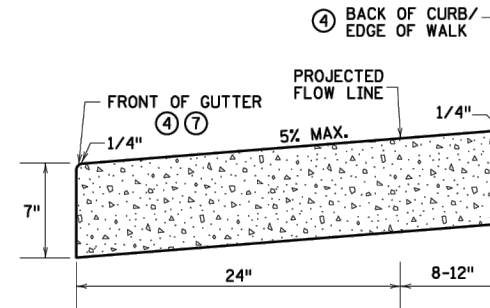
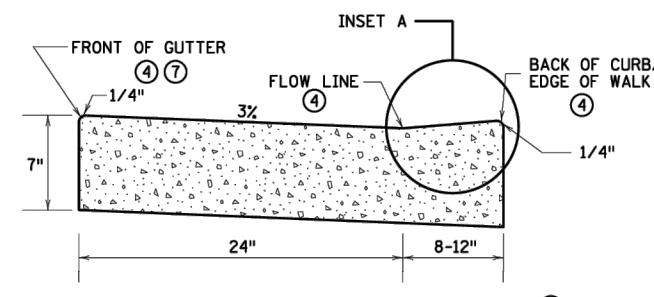
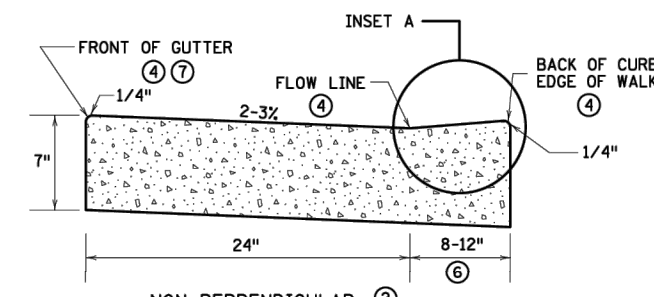
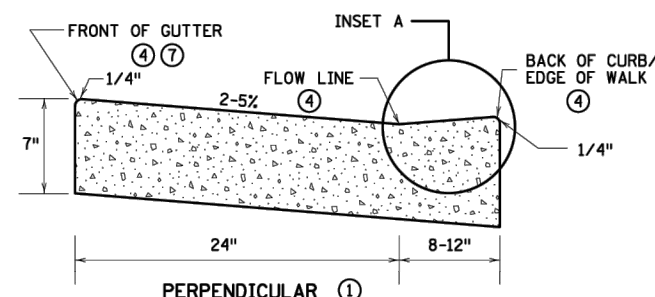
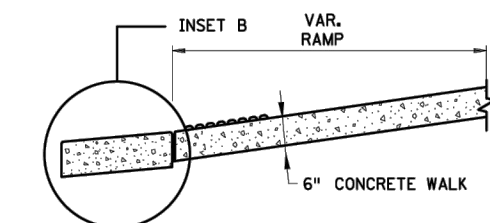
CITY OF COTTAGE GROVE, MINNESOTA

2024 MILL AND OVERLAY

MNDOT PEDESTRIAN CURB RAMP DETAILS

SHEET

C1.03



PEDESTRIAN ACCESS ROUTE CURB & GUTTER DETAIL

ONLY ALLOWED PER ENGINEER'S APPROVAL

PAVEMENT TREATMENT OPTIONS IN FRONT OF CURB & GUTTER
FOR USE ON CURB RAMP RETROFITS

- NOTES:**
- POSITIVE FLOW LINE DRAINAGE SHALL BE MAINTAINED THROUGH THE PEDESTRIAN ACCESS ROUTE (PAR) AT A 2% MAXIMUM. NO PONDING SHALL BE PRESENT IN THE PAR.
 - ANY VERTICAL LIP THAT OCCURS AT THE FLOW LINE SHALL NOT BE GREATER THAN 1/4 INCH.
 - ① FOR USE AT CURB CUTS WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: PERPENDICULAR, TIERED PERPENDICULAR, PARALLEL, AND DIAGONAL RAMP.
 - ② FOR USE AT CURB RAMP WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED NON PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: FANS & DEPRESSED CORNERS.
 - ③ BEGIN GUTTER SLOPE TRANSITION 10' OUTSIDE OF ALL CURB RAMP.
 - ④ THERE SHALL BE NO VERTICAL DISCONTINUITIES GREATER THAN 1/4".
 - ⑤ ELEVATION CHANGE TAKES PLACE FROM THE EXISTING TO NEW FRONT OF GUTTER. PATCH IS USED TO MATCH THE NEW GUTTER FACE INTO THE EXISTING ROADWAY.
 - ⑥ VARIABLE WIDTH FOR DIRECTIONAL CURB APPLICATIONS. SEE SHEET 2 FOR DIRECTIONAL CURB SLOPE REQUIREMENTS.
 - ⑦ TOP FRONT OF GUTTER SHALL BE CONSTRUCTED FLUSH WITH PROPOSED ADJACENT PAVEMENT ELEVATION. TOP 1.5" OF THE GUTTER FACE MUST BE A FORMED EDGE. PAR GUTTER SHALL NOT BE OVERLAID.
 - ⑧ SHOULD BE USED AT VERTICALLY CONSTRAINED AREAS WHEN AT A DRAINAGE HIGH POINT OR SUPER ELEVATED ROADWAY SEGMENTS.
 - ⑨ DRILL AND GROUT NO. 4 EPOXY-COATED 18" LONG TIE BARS AT 30" CENTER TO CENTER INTO EXISTING CONCRETE PAVEMENT 1' MINIMUM FROM ALL JOINTS.
 - ⑩ HELPS PROVIDE TWO SEPARATE RAMP, REDUCES THE DOME SETBACK LENGTH AND MINIMIZES DIRECTIONAL CURB. THIS RADIUS DESIGN CLOSELY FOLLOWS THE TURNING VEHICLE PATH WHILE OPTIMIZING CURB RAMP LENGTH.
 - ⑪ CURB EXTENSIONS SHOULD BE USED IN VERTICALLY CONSTRAINED AREAS, USUALLY IN DOWNTOWN ROADWAY SEGMENTS WHERE ON-STREET PARKING IS AVAILABLE. CURB EXTENSIONS SHOULD BE CONSIDERED FOR APS INTERSECTIONS WHERE SPACE IS LIMITED. PUSH BUTTONS MUST MEET APS CRITERIA AS DESCRIBED IN THE PUSH BUTTON LOCATION DETAIL SHEET.

REVISION:
APPROVED: 11-04-2021
Jeff J. Perkins
JEFFREY PERKINS
OPERATIONS DIVISION

m
MINNESOTA
DEPARTMENT
OF
TRANSPORTATION

STANDARD PLAN 5-297.250 3 OF 6
APPROVED: 11-04-2021
REVISOR:
THOMAS STYRBICKI
STATE DESIGN ENGINEER

PEDESTRIAN CURB RAMP DETAILS

STATE PROJ. NO. (TH) SHEET NO. OF SHEETS



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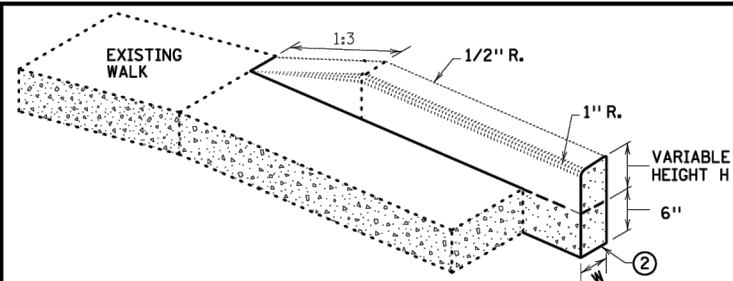
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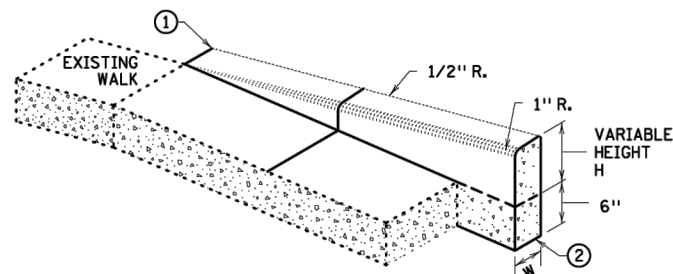
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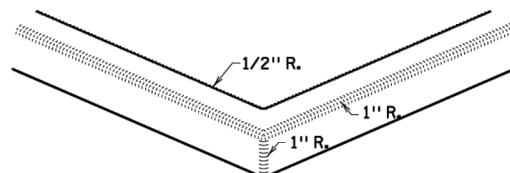
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V CURB ADJACENT TO LANDSCAPE
CURB WITHIN SIDEWALK LIMITS

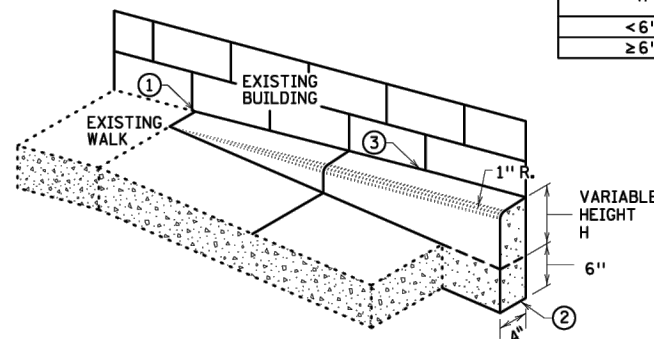


V CURB ADJACENT TO LANDSCAPE
CURB OUTSIDE SIDEWALK LIMITS

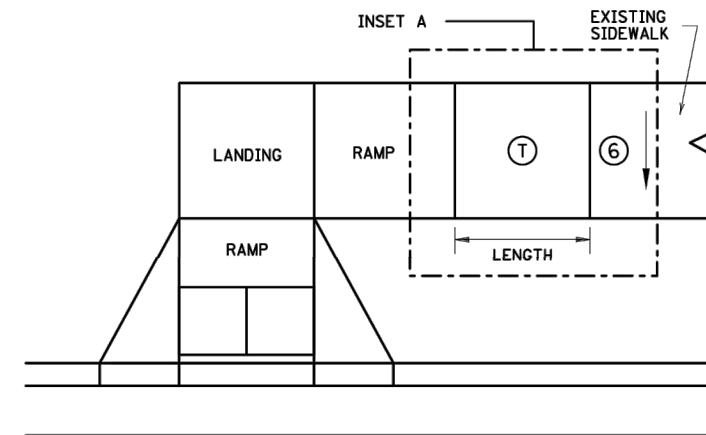


V CURB INTERSECTION

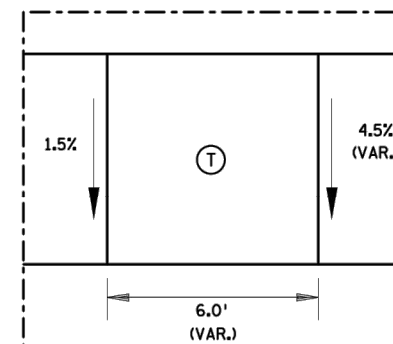
CONCRETE CURB DESIGN V	
CURB HEIGHT H	CURB WIDTH W
< 6"	4"
≥ 6"	6"



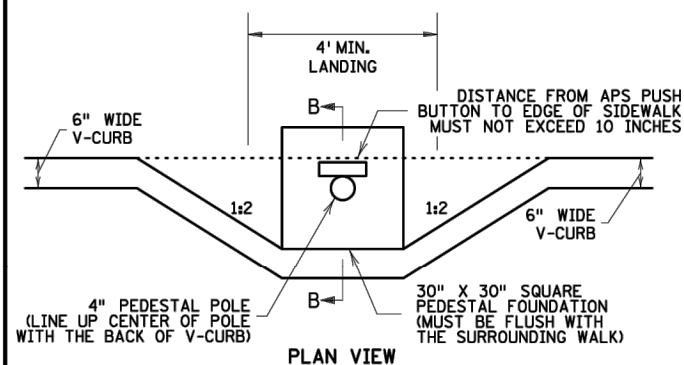
V CURB ADJACENT TO BUILDING
OR BARRIER



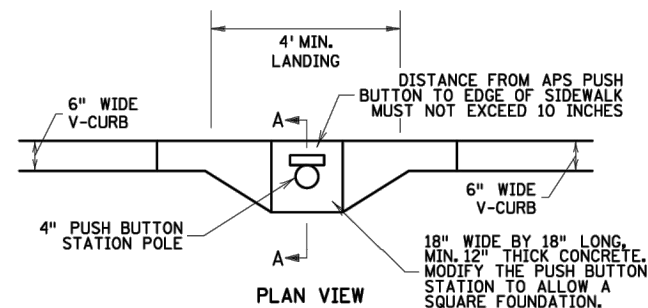
TRANSITION PANEL ④ ⑤



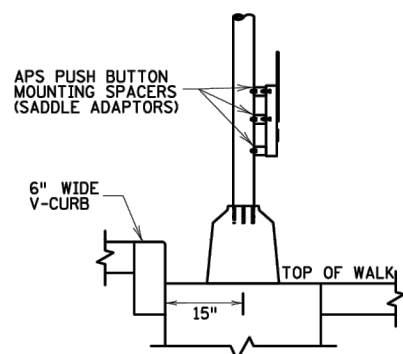
INSET A



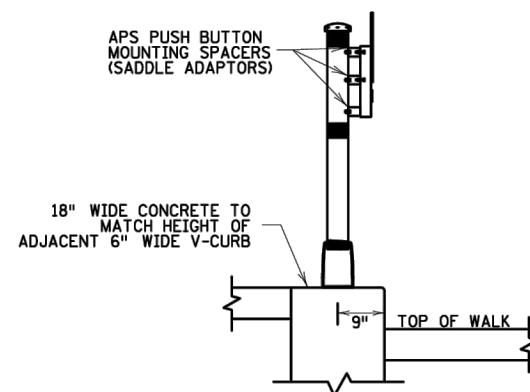
PLAN VIEW



PLAN VIEW



SECTION B-B
SIGNAL PEDESTAL & PUSH BUTTON (V-CURB)



SECTION A-A
PUSH BUTTON STATION (V-CURB)

NOTES:

A WALKABLE FLARE IS AN 8-10% CONCRETE FLARE THAT IS REQUIRED WHEN THE FLARE IS ADJACENT TO A WALKABLE SURFACE, OR WHEN THE PEDESTRIAN PATH OF TRAVEL OF A PUSH BUTTON TRAVERSES THE FLARE.

ALL V CURB CONTRACTION JOINTS SHALL MATCH CONCRETE WALK JOINTS.

WHERE RIGHT-OF-WAY ALLOWS, USE OF V CURB SHOULD BE MINIMIZED. GRADING ADJACENT TURF OR SLOPING ADJACENT PAVEMENT IS PREFERRED.

V CURB SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS.

V CURB NEXT TO BUILDING SHALL BE A 4" WIDTH AND SHALL MATCH PREVIOUS TOP OF SIDEWALK ELEVATIONS.

① END TAPERS AT TRANSITION SECTION SHALL MATCH INPLACE SIDEWALK GRADES.

② ALL V CURB SHALL MATCH BOTTOM OF ADJACENT WALK.

③ CONSTRUCT USING APPROVED EXPANSION MATERIAL PER MNDOT TYPE A-E EXPANSION. LEAVE A MINIMUM 1/2" TOP GAP AND SEAL WITH MNDOT APPROVED SILICONE PER MNDOT SPEC 3722.

④ THE MAX. RATE OF CROSS SLOPE TRANSITIONING IS 1' LINEAR FOOT OF SIDEWALK PER HALF PERCENT CROSS SLOPE. WHEN PAR WIDTH IS GREATER THAN 6' OR THE RUNNING SLOPE IS GREATER THAN 5%, DOUBLE THE CALCULATED TRANSITION LENGTH.

⑤ TRANSITION PANELS ARE TO ONLY BE USED AFTER THE RAMP, OR IF NEEDED, LANDING ARE AT THE FULL CURB HEIGHT (TYPICAL SECTION).

⑥ EXISTING CROSS SLOPE GREATER THAN 2.0%.

LEGEND

THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.

⑤ INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.

④ LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX. 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PARS.

① TRANSITION PANEL(S) - TO BE USED FOR TRANSITIONING THE CROSS-SLOPE OF A RAMP TO THE EXISTING WALK CROSS-SLOPE. RATE OF TRANSITION SHOULD BE 0.5% PER 1 LINEAR FOOT OF WALK. SEE THIS SHEET FOR ADDITIONAL INFORMATION.

REVISION:
APPROVED: 11-04-2021
<i>Jeff J. Perkins</i>
JEFFREY PERKINS OPERATIONS DIVISION



STANDARD PLAN 5-297.250

5 OF 6

PEDESTRIAN CURB RAMP DETAILS

APPROVED: 11-04-2021
REVISED:

STATE PROJ. NO.

(TH) SHEET NO. OF SHEETS



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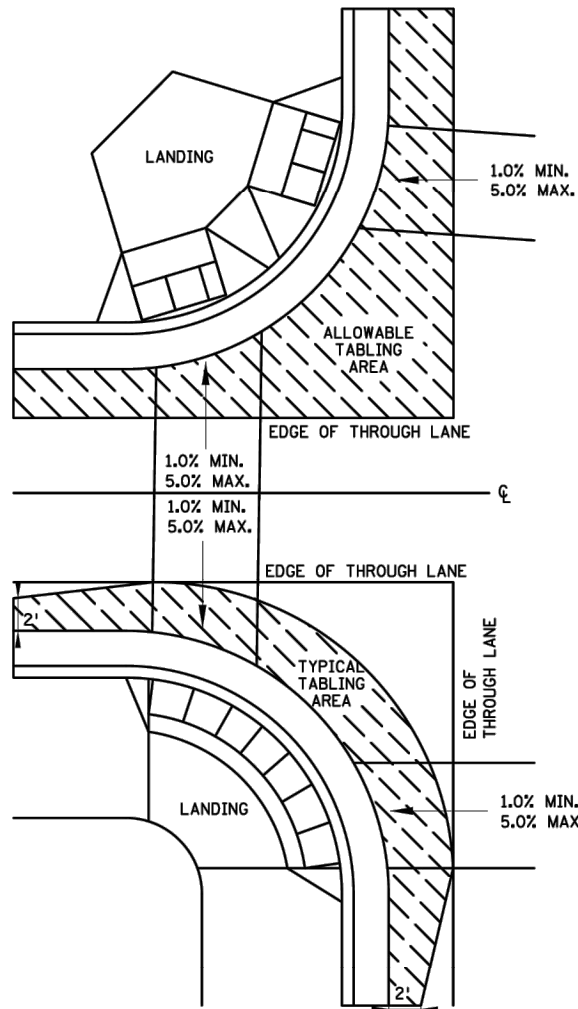
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2024 MILL AND OVERLAY

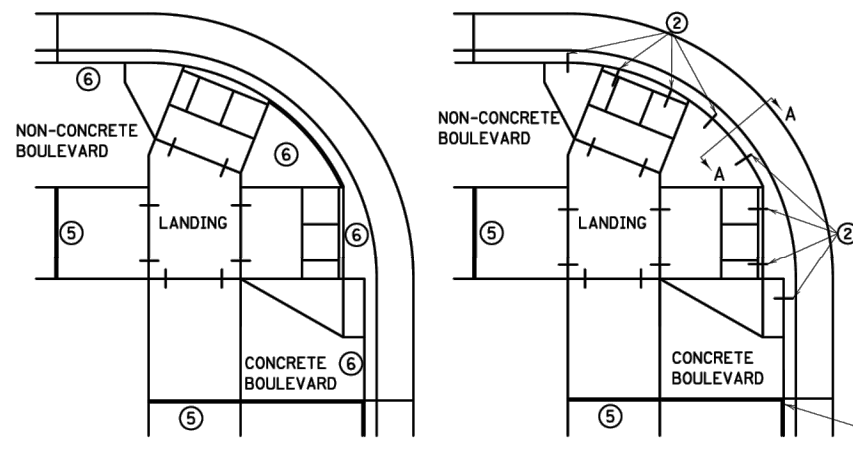
MNDOT PEDESTRIAN CURB RAMP DETAILS

SHEET

C1.06

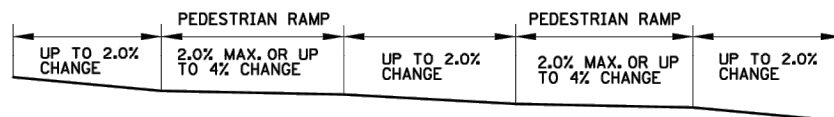


CURB LINE AND ROAD CROSSING ADJUSTMENTS

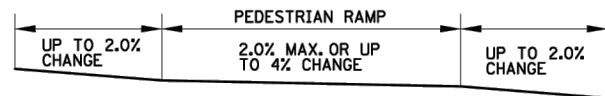


EXPANSION MATERIAL PLACEMENT
FOR CONCRETE ROADWAYS

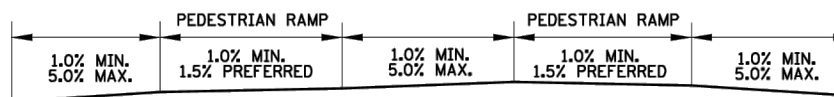
CURB LINE REINFORCEMENT ④
PLACEMENT ON BITUMINOUS ROADWAYS



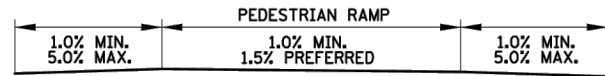
FLOW LINE PROFILE "TABLE" - TWIN PERPENDICULARS



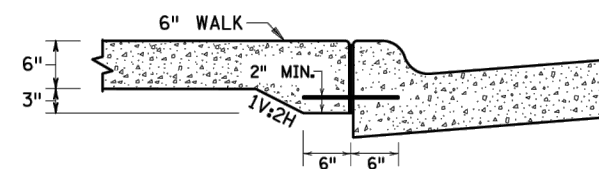
FLOW LINE PROFILE "TABLE" - FAN



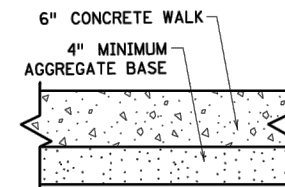
FLOW LINE PROFILE RAISE - TWIN PERPENDICULARS



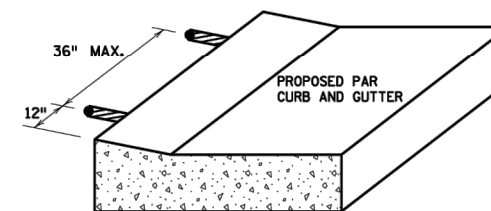
FLOW LINE PROFILE RAISE - FAN



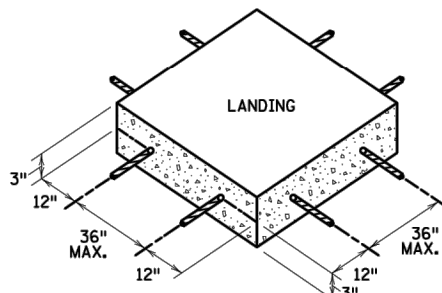
SECTION VIEW A-A
THICKENED SECTION
THROUGH CURB RAMP FLARES



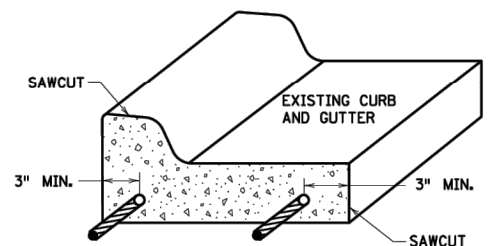
TYPICAL SIDEWALK SECTION
WITHIN INTERSECTION CORNER



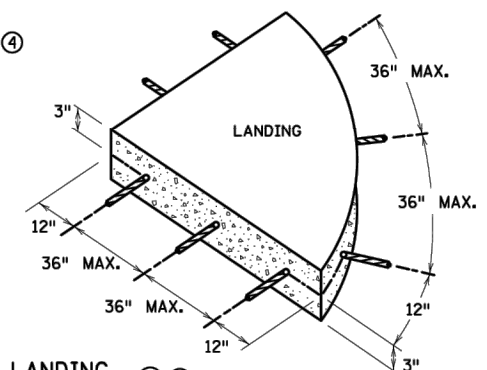
CURB RAMP REINFORCEMENT DETAILS ② ④



SEPARATE LANDING
POUR REINFORCEMENT ① ②



CURB AND GUTTER
REINFORCEMENT ③



GENERAL NOTES:

"TABLING" OF CROSSWALKS MEANS MAINTAINING LESS THAN 2% CROSS SLOPE WITHIN A CROSSWALK, IS REQUIRED WHEN A ROADWAY IS IN A STOP OR YIELD CONDITION AND THE PROJECT SCOPE ALLOWS.

RECONSTRUCTION PROJECTS: ON FULL PAVEMENT REPLACEMENT PROJECTS "TABLING" OF ENTIRE CROSSWALK SHALL OCCUR WHEN FEASIBLE.

MILL & OVERLAY PROJECTS: "TABLING" OF FLOW LINES, IN FRONT OF THE PEDESTRIAN RAMP, IS REQUIRED WHEN THE EXISTING FLOW LINE IS GREATER THAN 2%. WARPING OF THE BITUMINOUS PAVEMENT CAN NOT EXTEND INTO THE THROUGH LANE. TABLE THE FLOW LINE TO 2% OR AS MUCH AS POSSIBLE WHILE ADHERING TO THE FOLLOWING CRITERIA:

- 1) 1.0% MIN. CROSS-SLOPE OF THE ROAD
- 2) 5.0% MAX. CROSS-SLOPE OF THE ROAD
- 3) "TABLE" FLOW LINE UP TO 4% CHANGE FROM EXISTING SLOPE IN FRONT OF PEDESTRIAN RAMP
- 4) UP TO 2% CHANGE IN FLOW LINE FROM EXISTING SLOPE BEYOND THE PEDESTRIAN CURB RAMP

STAND-ALONE ADA RETROFITS: FOLLOW MILL & OVERLAY CRITERIA ABOVE HOWEVER ALL PAVEMENT WARPING IS DONE WITH BITUMINOUS PATCHING ON BITUMINOUS ROADWAYS AND FULL-DEPTH APRON REPLACEMENT ON CONCRETE ROADWAYS.

RAISING OF CURB LINES SHOULD OCCUR IN VERTICALLY CONSTRAINED AREAS. RAISE THE CURB LINES ENOUGH TO ALLOW COMPLIANT RAMPS OR AS MUCH AS POSSIBLE WHILE ADHERING TO THE FOLLOWING CRITERIA:

- 1) 1.0% MIN. AND 5.0% MAXIMUM CROSS-SLOPE OF THE ROAD
- 2) 1.0% MIN. FLOW LINE (ON EITHER SIDE OF PEDESTRIAN RAMP) TO MAINTAIN POSITIVE DRAINAGE
- 3) 5.0% RECOMMENDED MAX. FLOW LINE
- 4) LONGITUDINAL THROUGH LANE ROADWAY TAPERS SHOULD BE 1" VERTICAL PER 15' HORIZONTAL

NOTES:

- ① TO ENSURE RAMPS AND LANDINGS ARE PROPERLY CONSTRUCTED, ALL INITIAL LANDINGS AT A TOP OF A RAMPED SURFACE (RUNNING SLOPE GREATER THAN 2%) SHALL BE FORMED AND PLACED SEPARATELY IN AN INDEPENDENT CONCRETE POUR. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON THIS SHEET FOR ALL SEPARATELY POURED INITIAL LANDINGS.
- ② DRILL AND GROUT NO. 4 12" LONG REINFORCEMENT BARS (EPOXY COATED) AT 36" MAXIMUM CENTER TO CENTER MINIMUM 12" SPACING FROM CONSTRUCTION JOINTS. BARS TO BE ADJUSTED TO MATCH RAMP GRADE. BARS TO BE PAID BY EACH.
- ③ DRILL AND GROUT 2 - NO. 4 X 12" LONG (6" EMBEDDED) REINFORCEMENT BARS (EPOXY COATED). REINFORCEMENT REQUIRED FOR ALL CONSTRUCTION JOINTS. BARS TO BE PAID BY EACH.
- ④ THIS CURB LINE REINFORCEMENT DETAIL SHALL BE USED ON BITUMINOUS ROADWAYS. FOR CONCRETE ROADWAYS, SEE NOTE 6.
- ⑤ CONSTRUCT WITH EXPANSION MATERIAL PER MNDOT SPECIFICATION 3702 TYPES A-E. EXPANSION MATERIAL SHALL MATCH FULL HEIGHT OF ADJACENT CONCRETE.
- ⑥ USE AN APPROVED TYPE F (1/4 INCH THICK) SEPARATION MATERIAL. SEPARATION MATERIAL SHALL MATCH FULL HEIGHT DIMENSION OF ADJACENT CONCRETE.

REVISION:
APPROVED: 11-04-2021
<i>Jeff J. Perkins</i>
JEFFREY PERKINS
OPERATIONS DIVISION

m
MINNESOTA
DEPARTMENT OF TRANSPORTATION

STANDARD PLAN 5-297.250	6 OF 6
<i>Tom Styrbicki</i>	APPROVED: 11-04-2021
THOMAS STYRBICKI	REVISED:
STATE PROJ. NO.	(TH) SHEET NO. OF SHEETS

PEDESTRIAN CURB RAMP DETAILS



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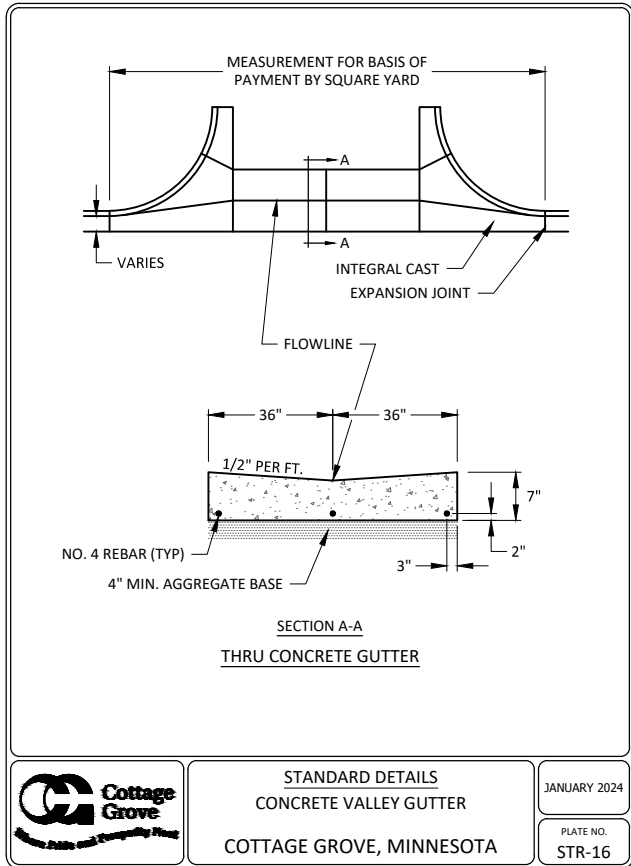
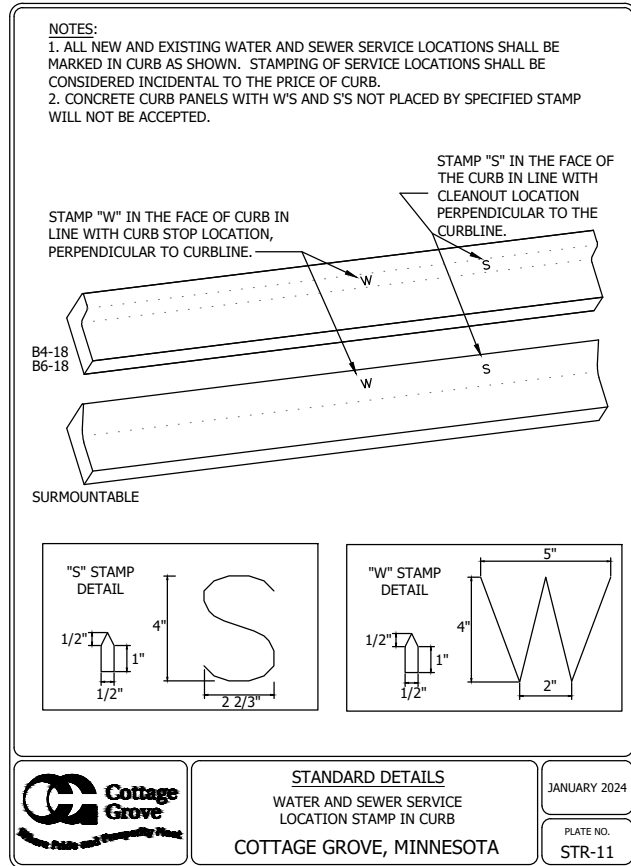
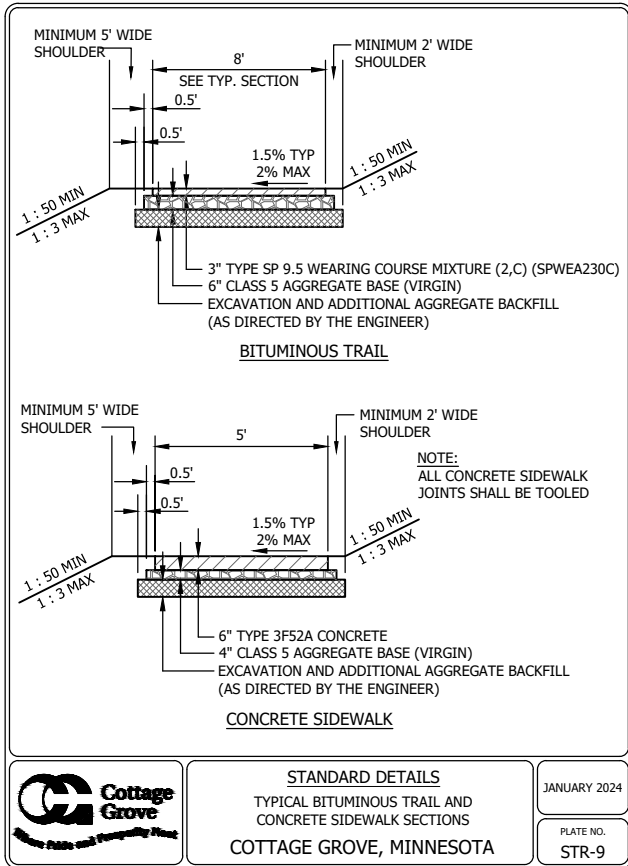
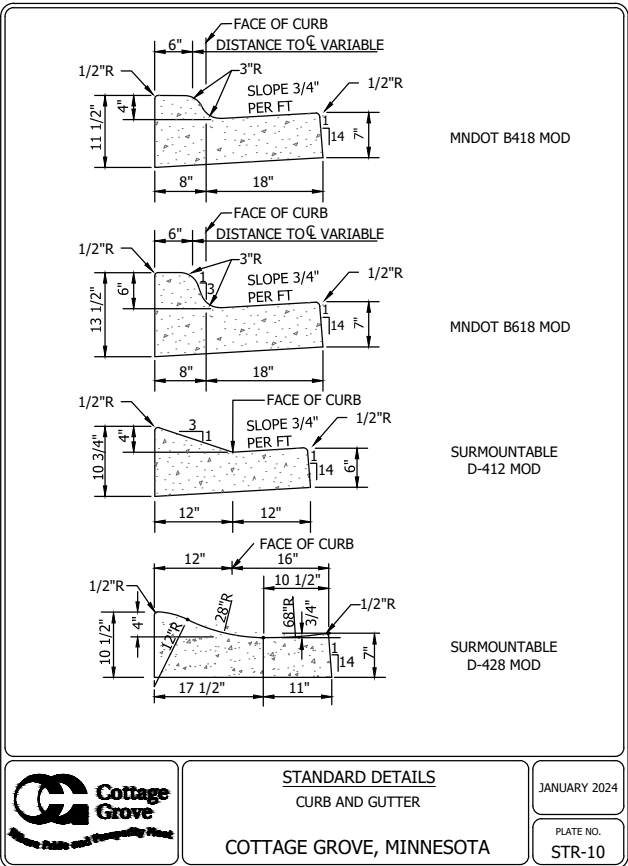
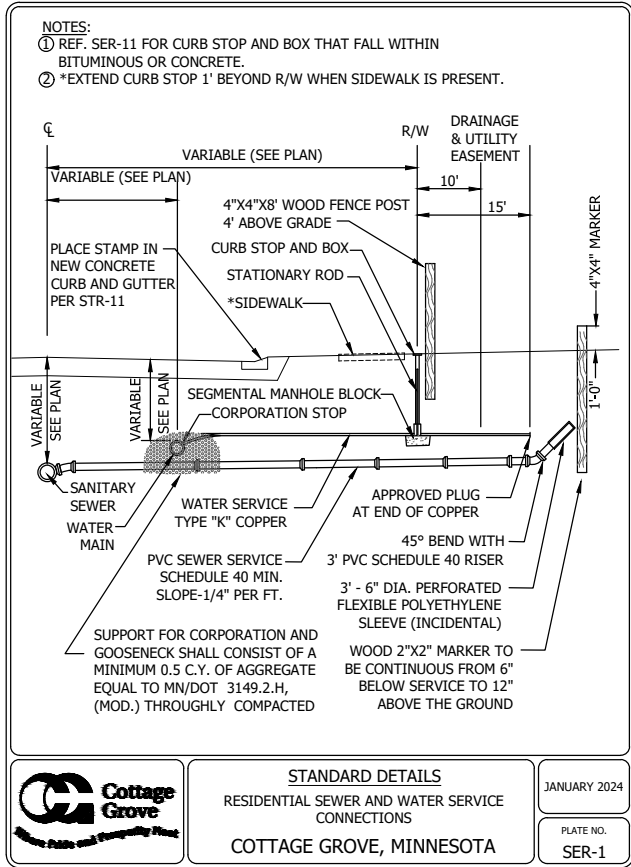
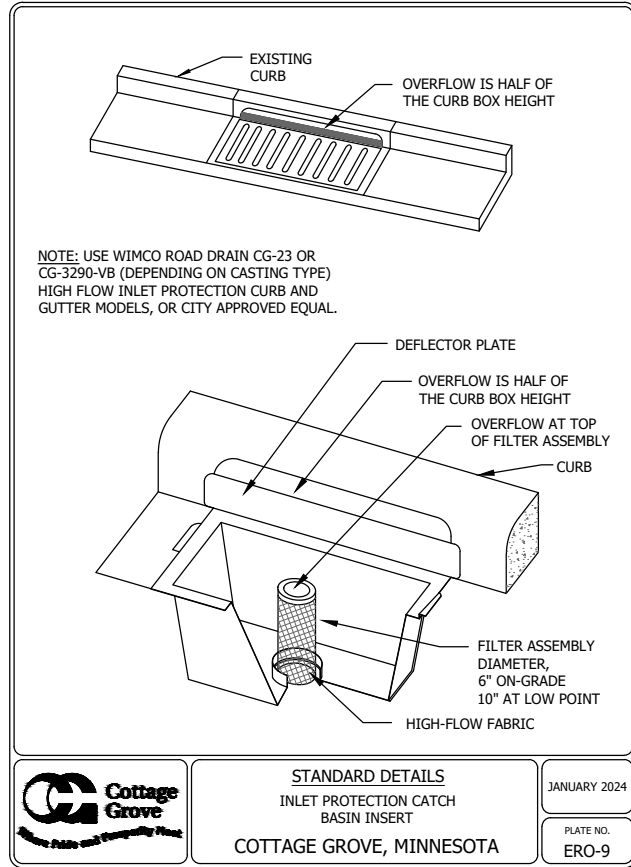
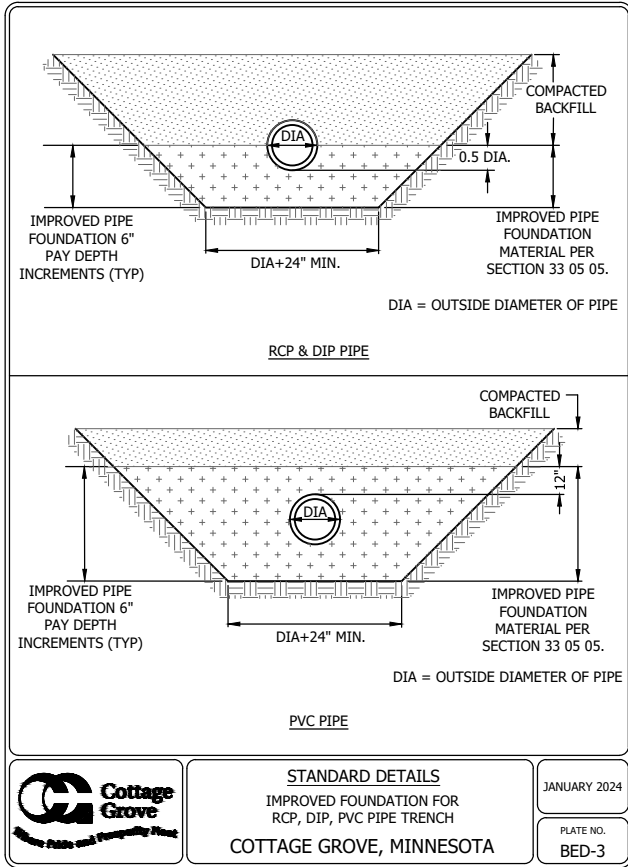
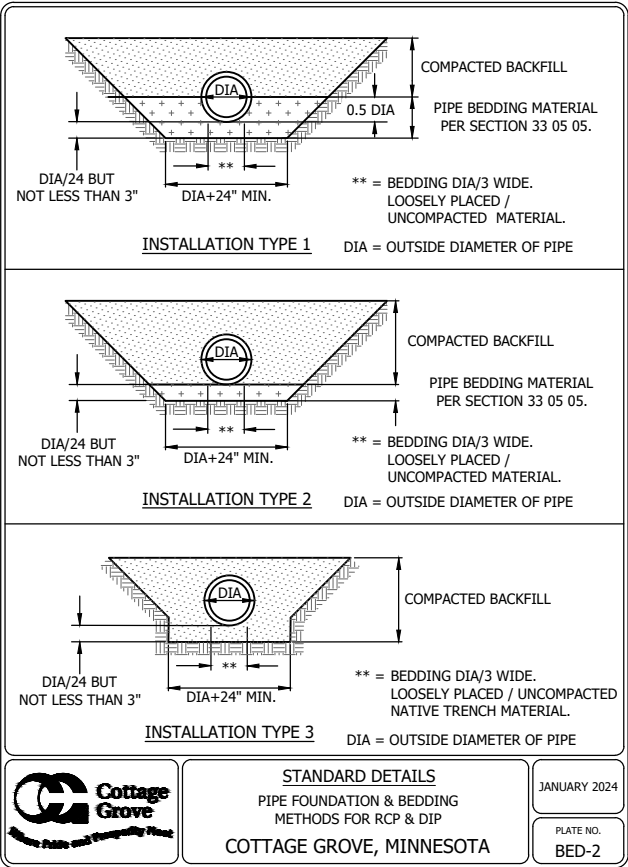
CITY OF COTTAGE GROVE, MINNESOTA

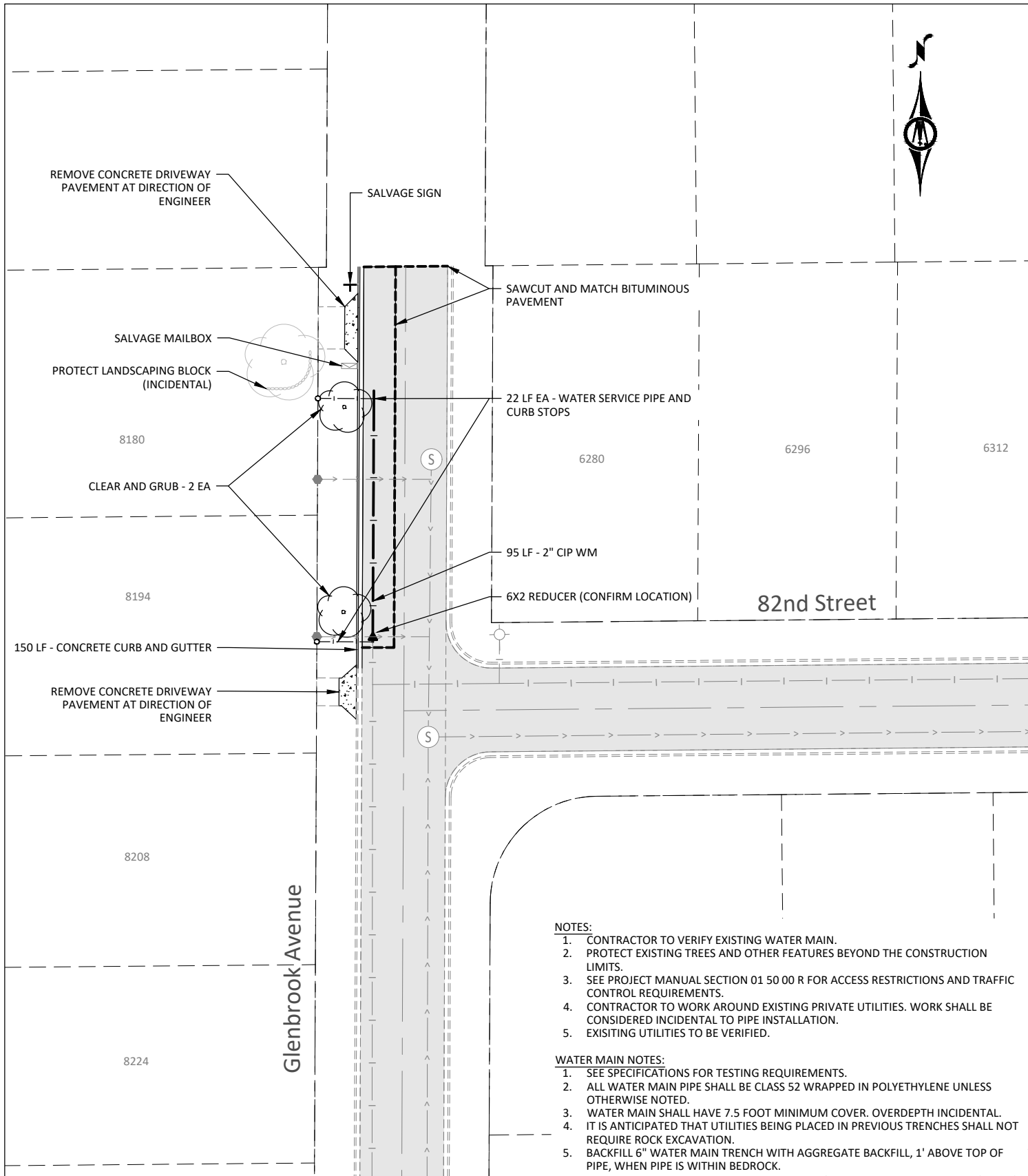
2024 MILL AND OVERLAY

MNDOT PEDESTRIAN CURB RAMP DETAILS

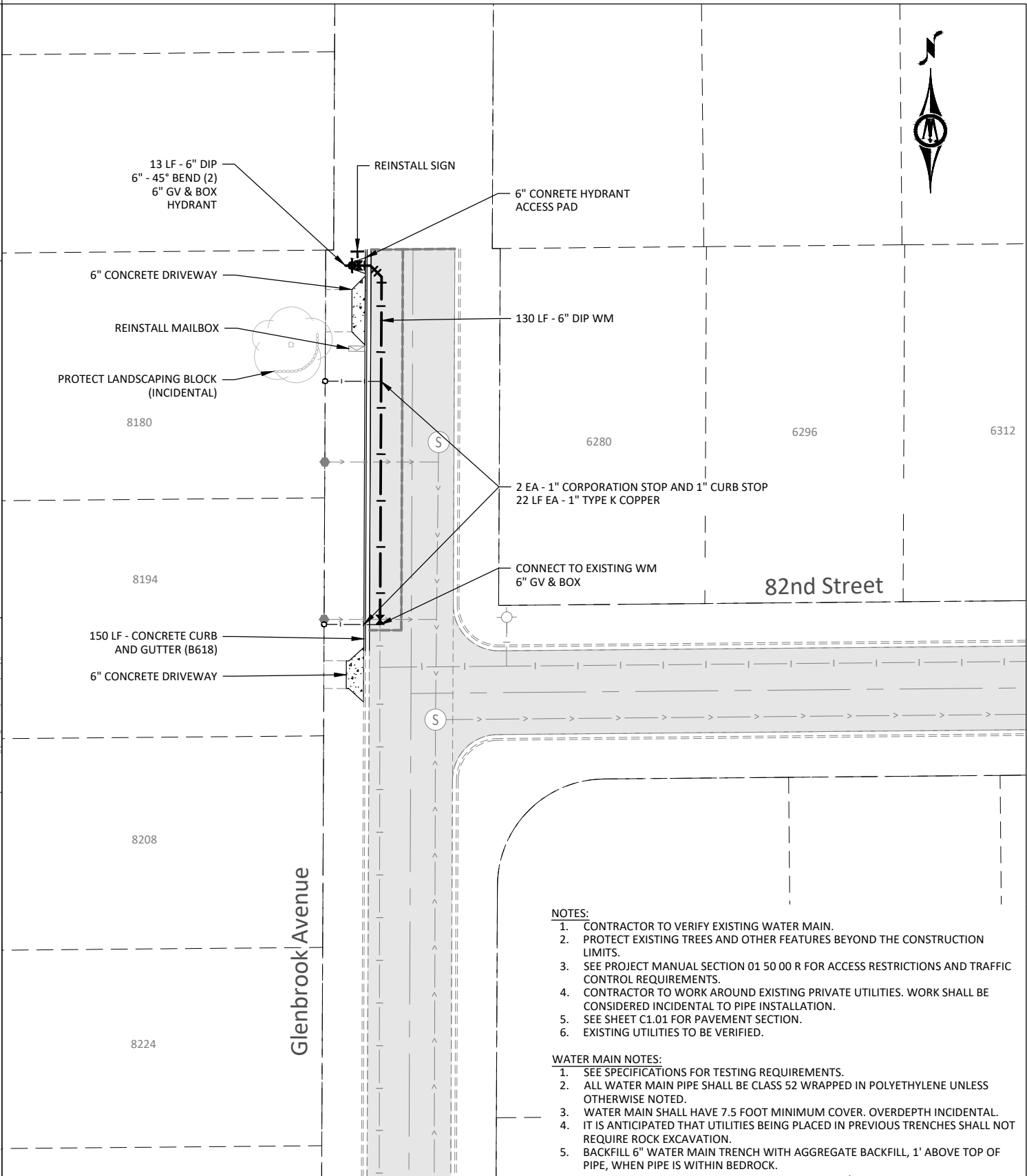
SHEET

C1.07





REMOVALS



PROPOSED

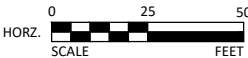
- NOTES:
1. CONTRACTOR TO VERIFY EXISTING WATER MAIN.
 2. PROTECT EXISTING TREES AND OTHER FEATURES BEYOND THE CONSTRUCTION LIMITS.
 3. SEE PROJECT MANUAL SECTION 01 50 00 R FOR ACCESS RESTRICTIONS AND TRAFFIC CONTROL REQUIREMENTS.
 4. CONTRACTOR TO WORK AROUND EXISTING PRIVATE UTILITIES. WORK SHALL BE CONSIDERED INCIDENTAL TO PIPE INSTALLATION.
 5. EXISTING UTILITIES TO BE VERIFIED.

- WATER MAIN NOTES:
1. SEE SPECIFICATIONS FOR TESTING REQUIREMENTS.
 2. ALL WATER MAIN PIPE SHALL BE CLASS 52 WRAPPED IN POLYETHYLENE UNLESS OTHERWISE NOTED.
 3. WATER MAIN SHALL HAVE 7.5 FOOT MINIMUM COVER. OVERDEPTH INCIDENTAL.
 4. IT IS ANTICIPATED THAT UTILITIES BEING PLACED IN PREVIOUS TRENCHES SHALL NOT REQUIRE ROCK EXCAVATION.
 5. BACKFILL 6" WATER MAIN TRENCH WITH AGGREGATE BACKFILL, 1' ABOVE TOP OF PIPE, WHEN PIPE IS WITHIN BEDROCK.

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 4. CONTRACTOR TO WORK AROUND EXISTING PRIVATE UTILITIES. WORK SHALL BE CONSIDERED INCIDENTAL TO PIPE INSTALLATION.
 5. SEE SHEET C1.01 FOR PAVEMENT SECTION.
 6. EXISTING UTILITIES TO BE VERIFIED.

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Andrew N Olson
ANDREW N OLSON
LIC. NO. 59327 DATE 01/30/2024



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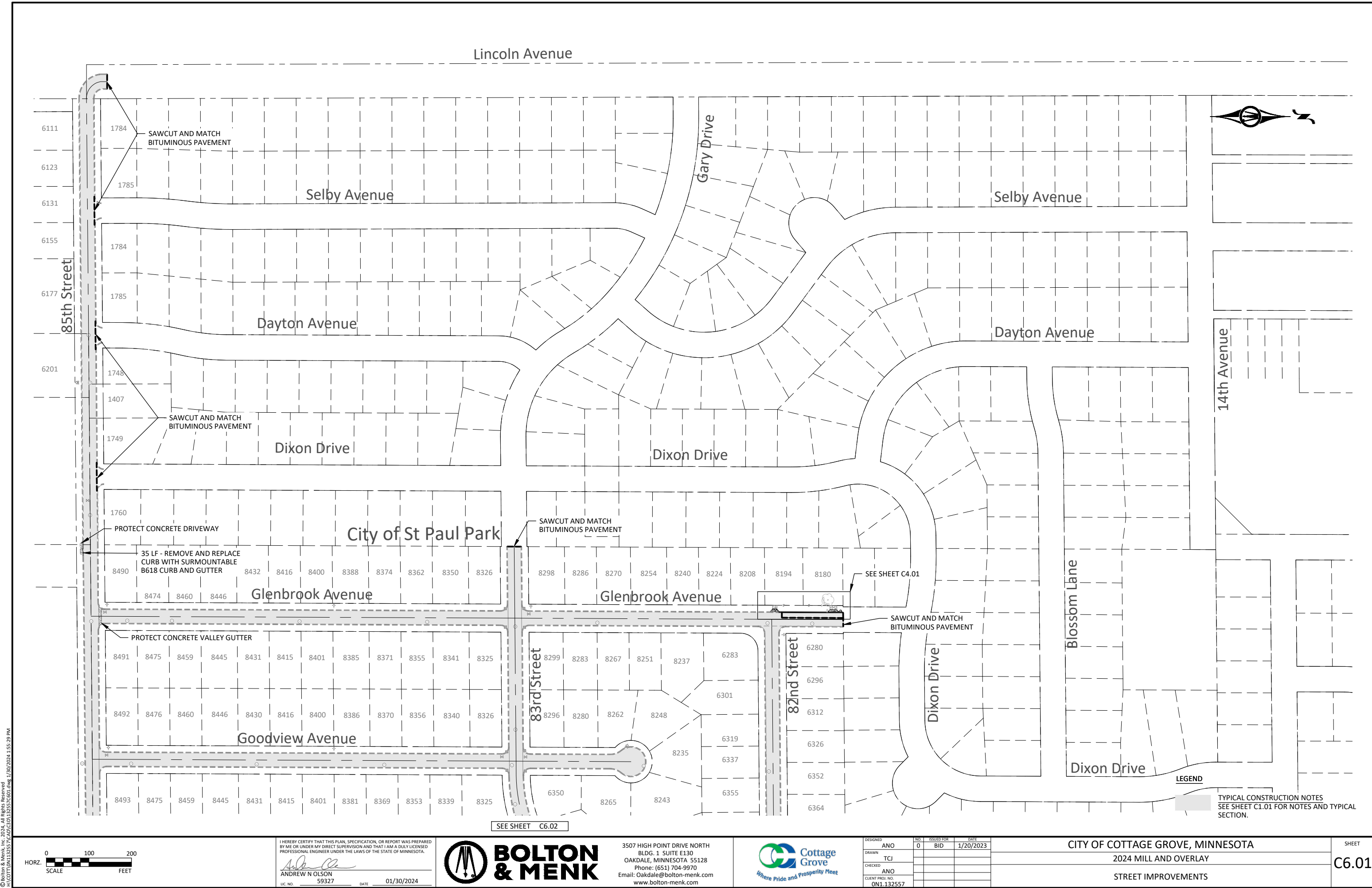


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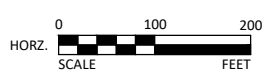
CITY OF COTTAGE GROVE, MINNESOTA
2024 MILL AND OVERLAY
WATER MAIN IMPROVEMENTS

SHEET

C4.01



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Andrew N Olson
ANDREW N OLSON
LIC. NO. 59327 DATE 01/30/2024



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CITY OF COTTAGE GROVE, MINNESOTA

2024 MILL AND OVERLAY

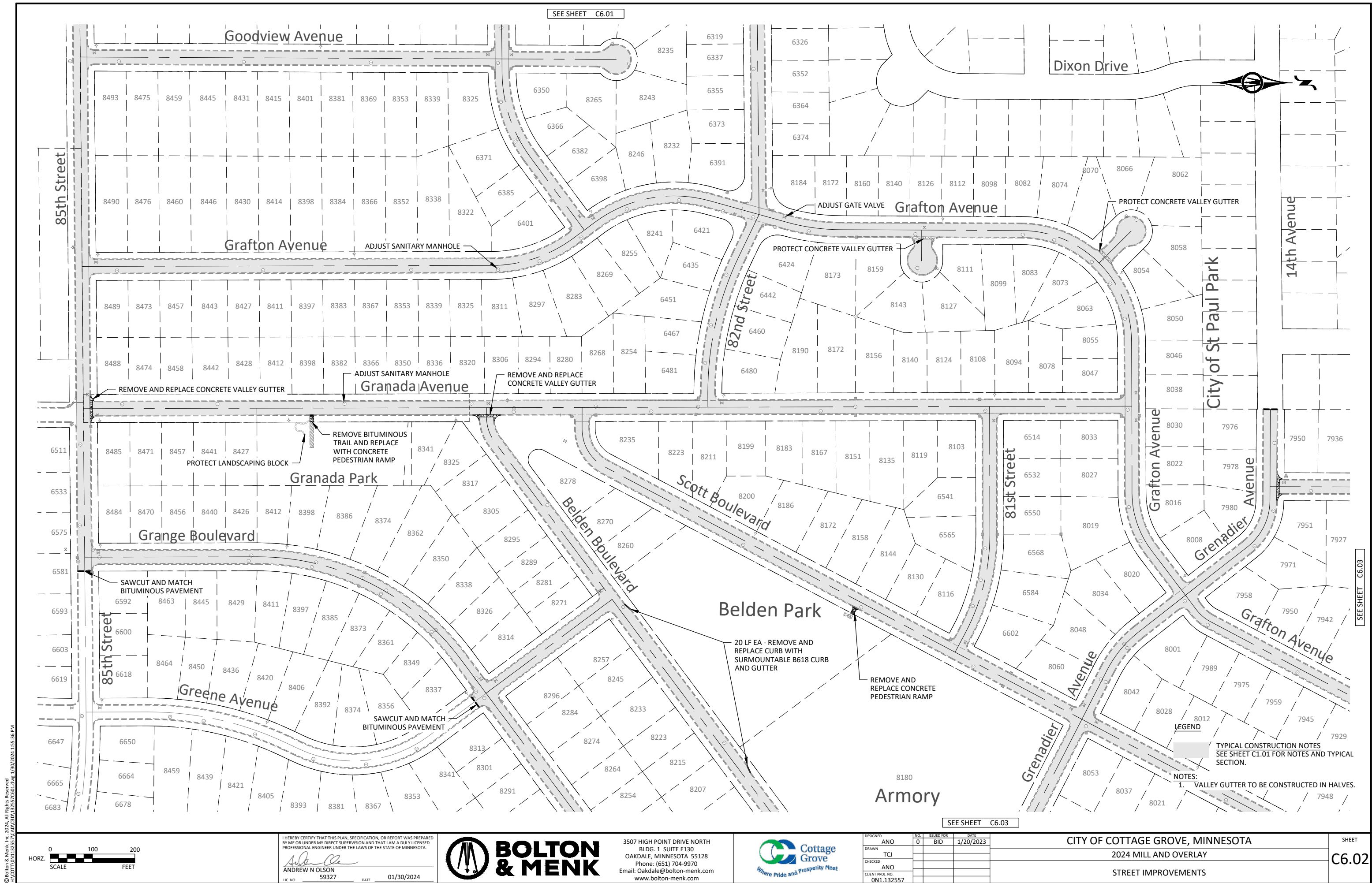
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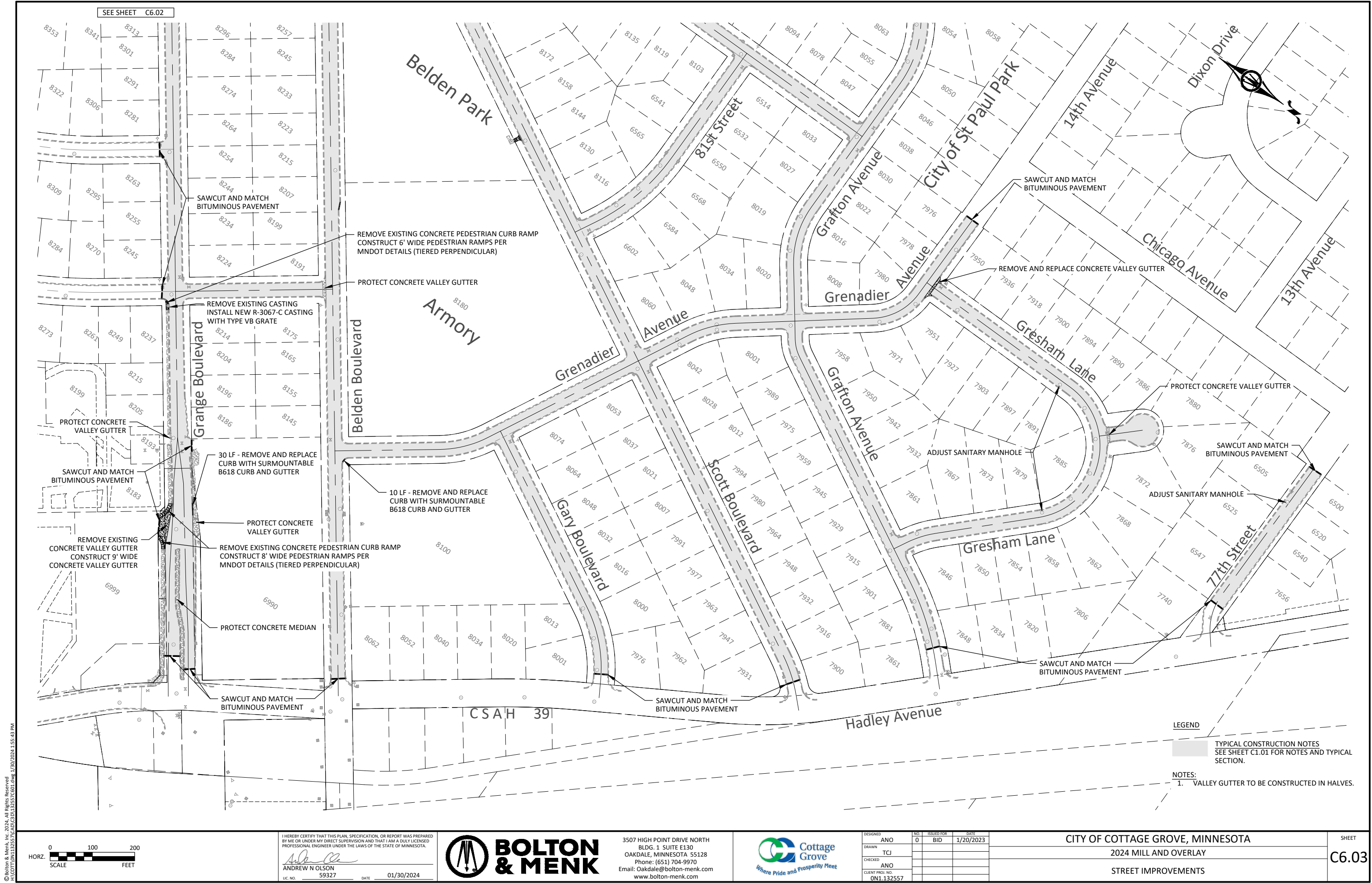
LEGEND

TYPICAL CONSTRUCTION NOTES
SEE SHEET C1.01 FOR NOTES AND TYPICAL SECTION.

SHEET

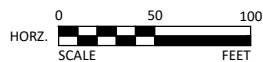
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LIC. NO. 59327 DATE 01/30/2024



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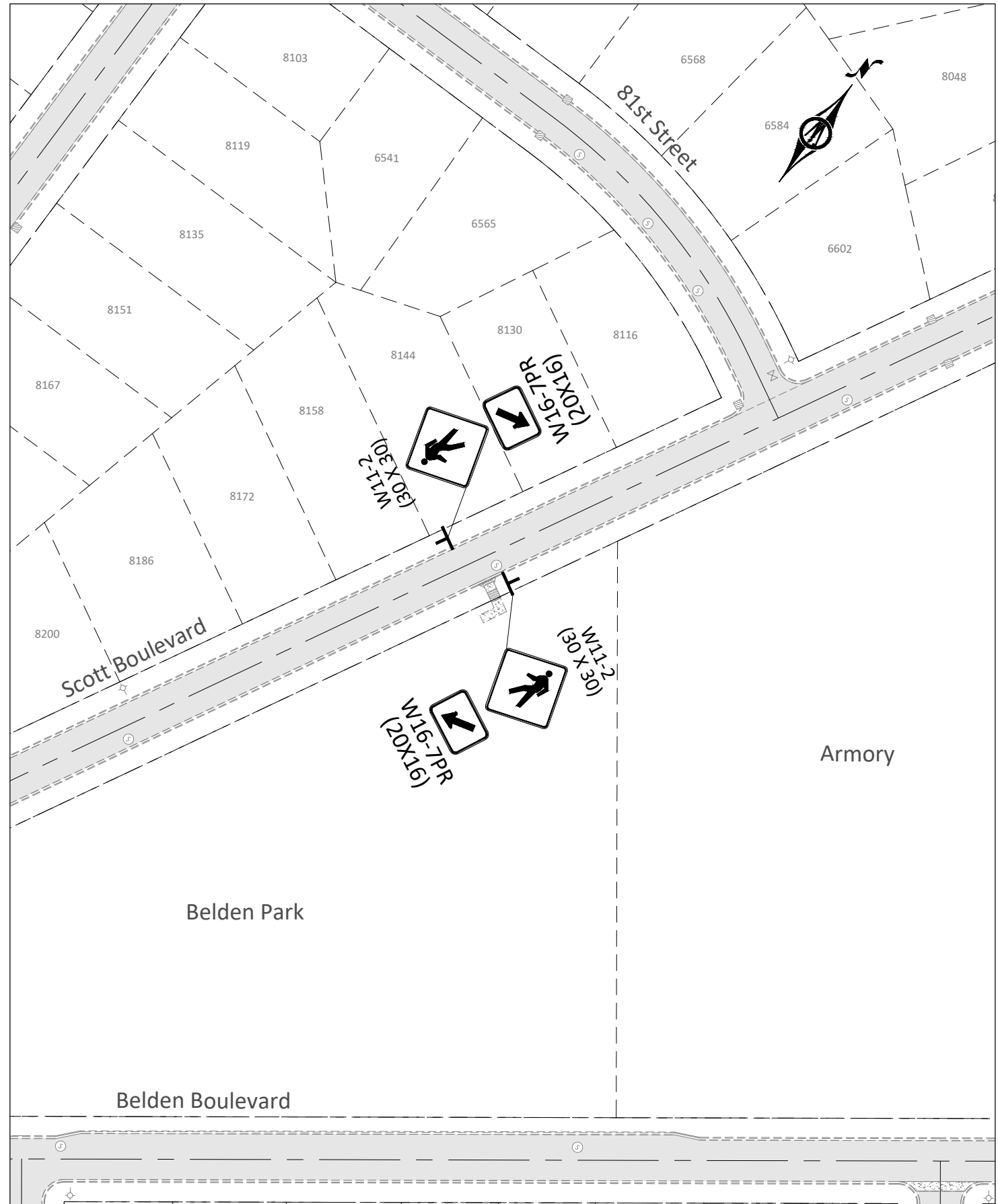
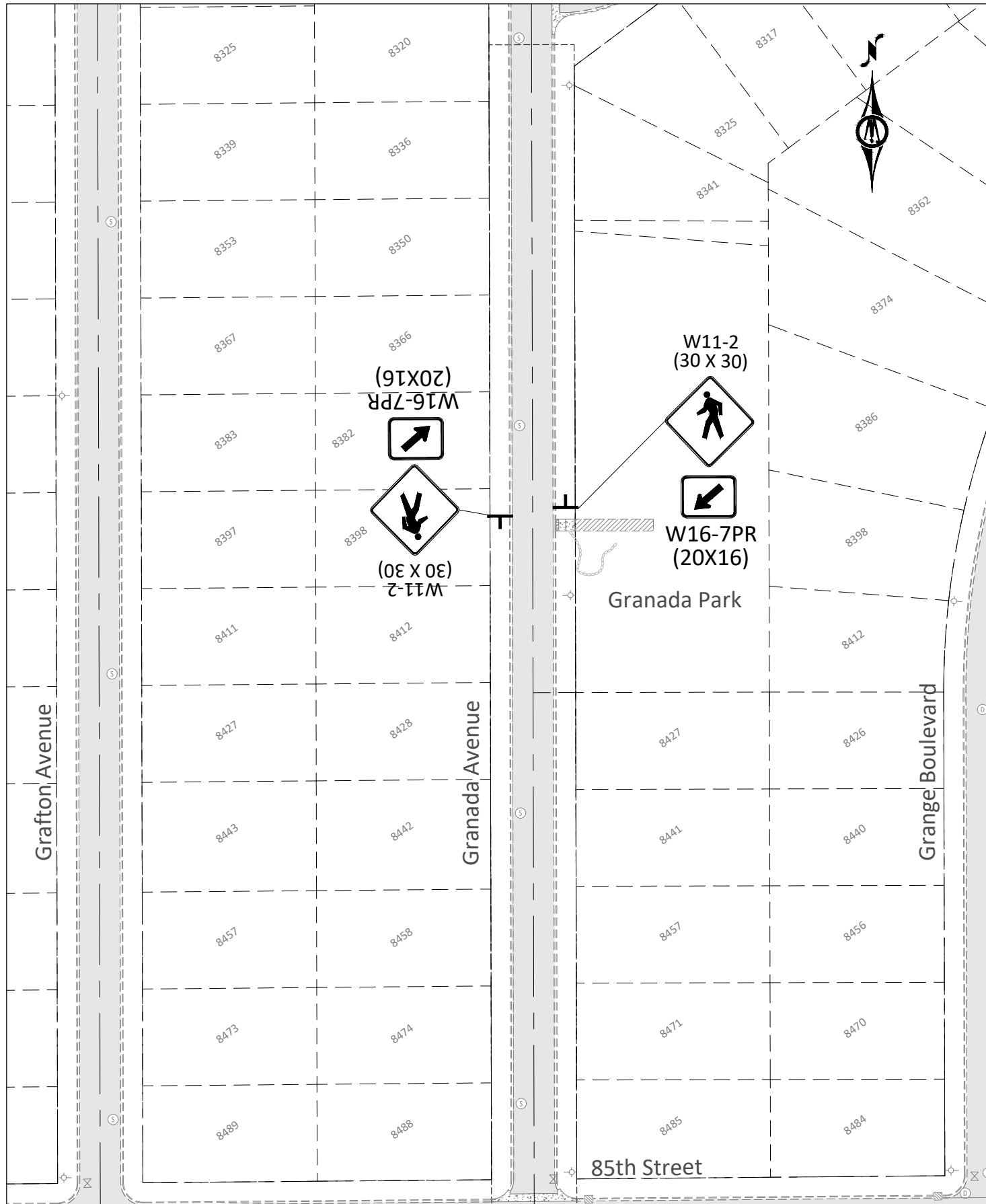
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CITY OF COTTAGE GROVE, MINNESOTA
2024 MILL AND OVERLAY

SIGNING

SHEET

C7.01





City Council Action Request

8.A.

Meeting Date 2/7/2024

Department Finance

Agenda Category Action Item

Title Approve Disbursements

Staff Recommendation Approve disbursements from 1/11/2024 through 2/1/2024 in the amount of \$4,785,633.50.

Budget Implication N/A

Attachments

1.	Expense Approval Report 02-07-2024 Council Meeting Meeting (1)
2.	COUNCIL CHECK REGISTER CK 01.25.24 (1)



City Council Action Request

9.A.

Meeting Date	2/7/2024						
Department	Public Works						
Agenda Category	Action Item						
Title	2024 Pavement Management – Hold Public Hearing and Order Project						
Staff Recommendation	Adopt Resolution 2024-019 ordering the 2024 Pavement Management Project.						
Budget Implication	\$1,170,018.26 - Assessments, Utility Funds, General Levy						
Attachments	<table><tr><td>1.</td><td>2024 Pavement Mgmt CC Memo</td></tr><tr><td>2.</td><td>2024 Pavement Mgmt Project Map</td></tr><tr><td>3.</td><td>2024 Pavement Mgmt Resolution</td></tr></table>	1.	2024 Pavement Mgmt CC Memo	2.	2024 Pavement Mgmt Project Map	3.	2024 Pavement Mgmt Resolution
1.	2024 Pavement Mgmt CC Memo						
2.	2024 Pavement Mgmt Project Map						
3.	2024 Pavement Mgmt Resolution						



To: Honorable Mayor and City Council
Jennifer Levitt, City Administrator

From: Crystal Raleigh, PE, Assistant City Engineer

Date: January 30, 2024

Re: 2024 Pavement Management – Hold Public Hearing and Order Project

Background

On May 17, 2023, the City Council authorized a feasibility report for the 2024 Pavement Management Project as outlined in the Capital Improvement Plan, which was discussed at a Council Workshop on August 16, 2023. Feasibility Reports allow staff to review areas in further detail to better understand the current state, needs, and economic feasibility of the proposed areas. As noted during the Council workshop, staff understood that with the addition of Jamaica Avenue from 80th Street to 90th Street, there would not be sufficient funding to complete all of the roadways that were identified as part of authorizing the feasibility report.

On January 3, 2024, a workshop was held with Council to discuss findings of the field review of the proposed project areas. After taking cores and evaluating the areas further, it was determined that the roadways in the Thompson Grove Estates neighborhood had enough structural stability to last another three to five years. Staff walked through three possible project area scenarios with Council and were provided direction to move forward with the following area to be included in the 2024 Pavement Management project:

- **Prestige Estates Neighborhood (1st & 2nd Additions and Prestige Estates on the Park):** Streets include Jenner Avenue from 80th Street to Jocelyn Avenue; Jocelyn Avenue from 80th Street to Jenner Avenue; and 79th Street from Jocelyn Avenue to Jocelyn Avenue.

The Prestige Estates roadways listed above are 29 to 34 years old. They were recently examined in a variety of ways to determine their condition as part of the Feasibility Report process. Pavement cores were drilled and extracted in selected areas to analyze bituminous and aggregate thickness and the structural condition of the pavement section, and Ground Penetrating Radar (GPR) testing was performed.

In a 2023 visual inspection of Prestige Estate, the roadways showed extensive cracking, raveling, and continuous patching. The pavement cores showed asphalt stripping and severe degradation. The GPR provided more thorough data on the pavement thickness profile throughout the neighborhood. Excessive cracking was noted on road surfaces that would typically reflect through within a year if a mill and overlay project were completed at this time. The curb and gutter are in poor condition with approximately 40 percent of curb requiring replacement.

As with previous pavement management projects, utilities within the project limits were examined for necessary maintenance. Overall, the utilities were found to be in good condition, but some maintenance work is required. The top sections of sanitary and storm manhole structures will be upgraded to meet current City standards, corroded valves will be replaced as necessary, hydrants will be reconditioned and repainted as necessary, and concrete hydrant pads will be installed. Additionally, the condition of street light infrastructure was evaluated, and some improvements are proposed.

A special benefit appraisal was completed in accordance with the City's policy for those properties with direct access to the streets included in the project area. A neighborhood meeting was held on January 30, 2024 to discuss the various improvements proposed, the findings of the special benefit appraisal, and the proposed assessments.

Discussion

Summary of Road and Infrastructure Improvements: The rehabilitation method proposed for the residential roadways in the Prestige Estates 1st, 2nd, and Prestige Estates on the Park Additions is to remove the existing asphalt surface and replace it with a new surface. This new surface will consist of two lifts of bituminous totaling 3.5 inches of pavement. Full curb replacement throughout the area will also be completed. Finally, minor utility improvements for sanitary sewer, water, stormwater, and lighting systems will also be included. The total estimated project cost for the neighborhood is \$1,170,018.26.

Assessments for this project will be based on the "Infrastructure Maintenance Task Force Special Assessment Policy for Public Improvements," dated September 30, 2005, revised October 31, 2023. The feasibility report recommends that all properties adjacent to the Prestige Estates project be assessed. The policy allows 45 percent of adjacent costs to be assessed to residential properties.

The estimated assessment for the Prestige Estates improvements listed above based on the City's Assessment Policy is \$6,647.65 per residential building lot equivalent (RBLE). Single-family residential is assessed at a rate of 1.0 of the RBLE. The special benefit appraisal that was completed showed a benefit of \$7,500 per residential unit, which supports the proposed assessment.

Project Funding Analysis: As noted above, the total estimated project cost for the street and utility work in the Prestige Estates neighborhood is \$1,170,018.26. According to the City's policy, 45 percent of the total project cost for road work and utilities is assessed against the benefiting residential properties. As such, the improvements in the Prestige Estates 1st, 2nd, and Prestige Estates on the Park Additions would be assessed following this policy. The total project value that is assessed is \$525,164.19. The remainder of the project costs are proposed to be funded through utility funds and the general levy. The Cost Estimate Summary can be viewed in Appendix B of the Feasibility Report.

Project Option Discussion

Option #1: Order the Prestige Estates project as outlined in the feasibility report.

Total estimated project cost – \$1,170,018.26

Total anticipated assessments – \$525,164.19

The benefit of proceeding with the project is that soliciting for bids this winter will provide a stable bidding environment, which reduces the burden to the general taxpayers and the residents adjacent to the project who are paying assessments. Another result of the new pavement is reduced maintenance costs associated with the streets in the project area. Those maintenance dollars and resources can then be reallocated to other parts of the community, which is a greater benefit to the general taxpayer. There are also similar benefits related to the repairs to the utilities in the project area.

The CIP outlines a fiscally responsible plan to rehabilitate roads and utilities within the community. By ordering the project, those plans stay true to that document and the Council's direction given in the development of the CIP.

Option #2: Do not order the project as outlined in the feasibility report.

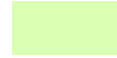
If the improvements related to the 2024 Pavement Management Project are not ordered, the roads will continue to deteriorate, which will result in increased maintenance costs. Those costs are borne by all taxpayers, not just the property owners that live on those streets. Future project costs will also be increased by 2.5 percent to 8 percent annually as a result of the construction index. When a pavement management project is delayed, it creates a domino effect by delaying all future pavement management projects. The cost of the domino effect is hard to capture, since there are pavement management projects planned each year into the future. The City's approach since 1994 has been to ensure a safe condition and preserve the structural integrity of roads in a fiscally responsible manner. Independent third-party benefit appraisals conducted since 2007 have concluded that this program improves property values within the project areas, as compared to the existing deteriorated condition.

It should be noted to Council per Minnesota State Statute 429.031 that the resolution must be adopted by four-fifths vote for the project to be ordered and the project to proceed.

Recommendation

It is recommended the City Council adopt Resolution 2024-019 ordering the 2024 Pavement Management Project.

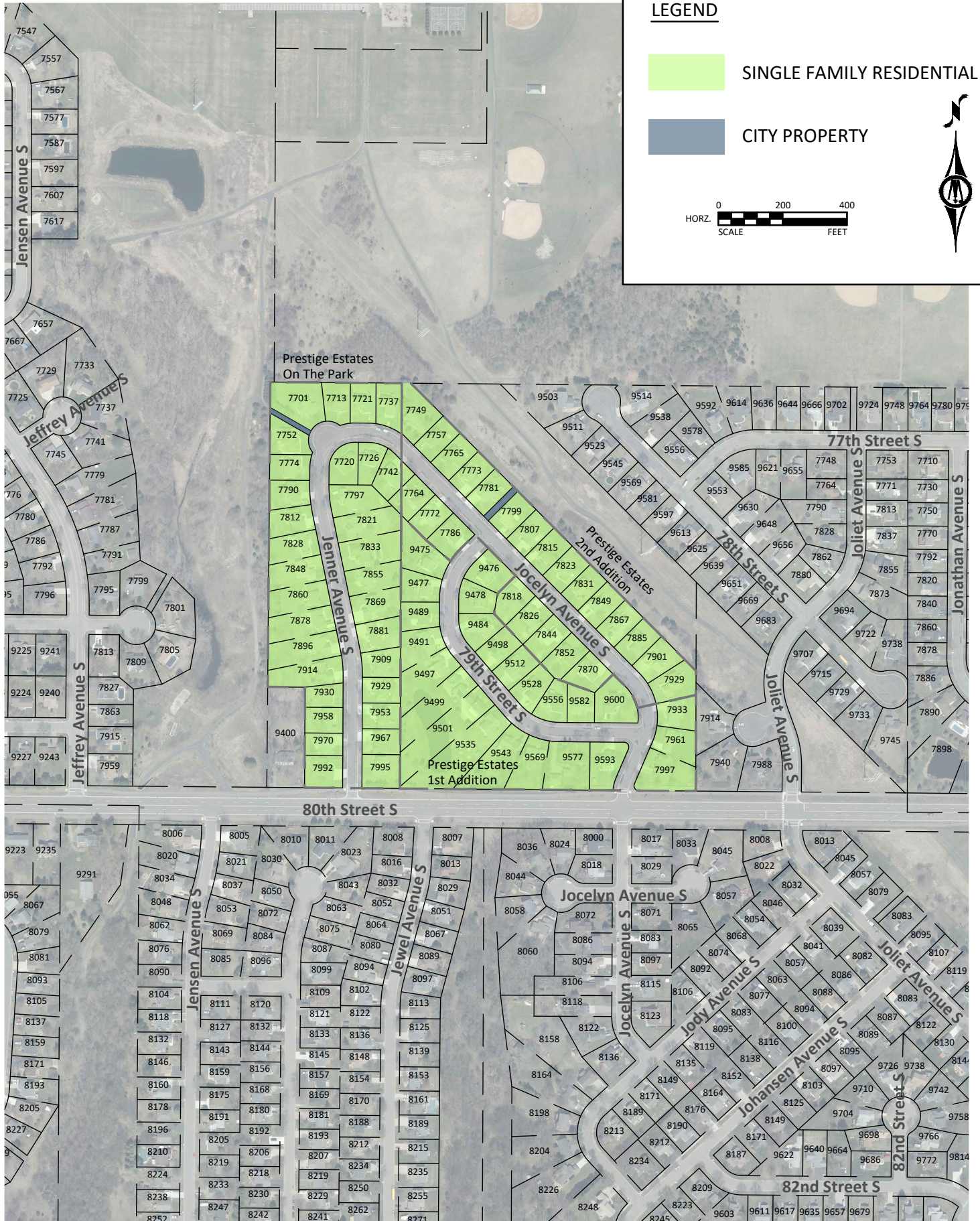
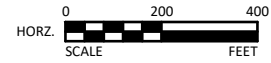
LEGEND



SINGLE FAMILY RESIDENTIAL



CITY PROPERTY



CITY OF COTTAGE GROVE, MINNESOTA
CITY COUNCIL
RESOLUTION 2024-019

**A RESOLUTION ORDERING THE
2024 PAVEMENT MANAGEMENT PROJECT**

WHEREAS, a resolution of the City Council adopted on January 17, 2024, fixed a date for the Council to hold a public hearing, pursuant to Minn. Stat. Chapter 429.011 to 429.111, on the proposed improvement benefitting properties that include:

- **Prestige Estates Neighborhood (1st & 2nd Additions and Prestige Estates on the Park):** Streets include Jenner Avenue from 80th Street to Jocelyn Avenue; Jocelyn Avenue from 80th Street to Jenner Avenue; and 79th Street from Jocelyn Avenue to Jocelyn Avenue.

WHEREAS, ten days mailed notice and notice of the hearing was published twice per Minnesota Statutes Chapter 429, and the hearing was held, at which all persons desiring to be heard were given an opportunity to be heard thereon; and

WHEREAS, the City desires to assess the cost of said improvements to all benefited properties, other than for properties not proposed for assessment.

NOW THEREFORE BE IT RESOLVED, the City Council of the City of Cottage Grove, County of Washington, State of Minnesota:

1. Such improvement is necessary, cost-effective, and feasible as detailed in the feasibility report. The improvement shall include road rehabilitation, street lighting, sanitary sewer, water main, and storm sewer.
2. Such improvement is hereby ordered.
3. The City Council declares its official intent to reimburse itself for the costs of the improvement from the proceeds of the tax exempt bond.

Passed this 7th day of February 2024.

Myron Bailey, Mayor

Attest:

Tamara Anderson, City Clerk



City Council Action Request

11.A.

Meeting Date 2/7/2024

Department Community Development

Agenda Category Action Item

Title Proposed Discount Tire Facility at 8647/8649 East Point Douglas Road South – Conditional Use Permit

Staff Recommendation Adopt Resolution 2024-017 approving the Conditional Use Permit for a minor automotive repair use for Discount Tire to be located at 8647/8649 East Point Douglas Road South.

Budget Implication N/A

Attachments

1.	Discount Tire CC Memo
2.	Discount Tire Exhibit A. Narrative
3.	Discount Tire Exhibit B. Architectural Elevations
4.	Discount Tire Exhibit C. Engineering Plans
5.	Discount Tire Resolution

TO: Honorable Mayor and City Council
Jennifer Levitt, City Administrator

FROM: Conner Jakes, Associate Planner

DATE: January 29, 2024

RE: Proposed Discount Tire Facility at 8647/8649 East Point Douglas Road South –
Conditional Use Permit

Introduction

Halle Properties, LLC (Applicant) has submitted an application for a Conditional Use Permit (CUP) at 8647/8649 East Point Douglas Road South. The Applicant is proposing to utilize the existing building and site layout for a minor automobile repair use onsite. The proposed project is located on a .98-acre parcel of land to the southwest of the current Wendy's restaurant and northwest of the current Target site.



Site Location

Review Schedule

Application Received: December 12, 2023
Application Accepted: December 12, 2023
Planning Commission Meeting: January 22, 2024
City Council Meeting: February 7, 2024
60-Day Review Deadline: February 10, 2024

Planning Commission

The Planning Commission reviewed the Conditional Use Permit request at their January 22, 2024, meeting. The Commission asked for clarification on the following:

- The previous use was an automotive repair use, which is the same as the proposed use. Why is a Conditional Use Permit required?
 - Staff stated at the time the parcel was originally developed the site was zoned B-3, which permitted automotive repair uses by right. The parcel is now zoned Mixed Use and a minor automotive repair use is permitted with a Conditional Use Permit. To align with current standards, a Conditional Use Permit is required.

No residents participated in the public hearing. The Planning Commission unanimously (6-to-0 vote) recommended approval of the application.

Background

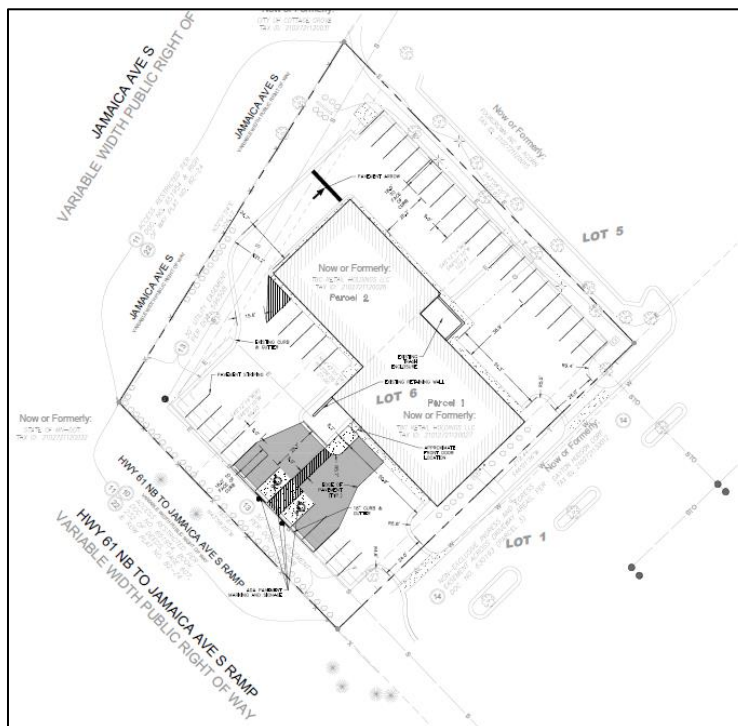
The subject site has been occupied by an automotive repair use since the original approvals in 1991 and was most recently occupied by Big O Tires. In 1992 an application for a simple lot division was submitted and approved. The intent at the time was to create two parcels allowing the user to separate the automotive use from potential office space for additional tenants. However, the entire site has been most recently occupied by one tenant and the only onsite use was automotive repair. Approvals for an automobile car wash were granted in March of 2023; however, the applicant for the automobile car wash withdrew the application. A condition of approval will require the two lots be combined into one lot.



2022 Aerial Photo

Proposal

The Applicant is proposing to utilize the existing building and site layout for a minor automotive repair use with updates to the architectural elevations, parking lot stalls, and site landscaping. Daily activities onsite include only the selling, installing, and servicing of tires and wheels. There will not be automotive repair, oil changes, or any body work occurring onsite as the focus of the business is solely on tires. The proposed hours of operation are Monday through Friday from 8:00 a.m. to 6:00 p.m., and Saturday from 8:00 a.m. to 5:00 p.m.



Proposed Site Plan

Planning Considerations

Zoning and Comprehensive Plan

The subject site is zoned MU, Mixed-Use District, and is guided as Mixed Use in the 2040 Comprehensive Plan. The proposed use is consistent with the City's zoning ordinance and land use plan. Minor automobile repair uses are permitted with a Conditional Use Permit (CUP) within the Mixed-Use Zoning District.

Conditional Use Permit

City Code requires a CUP for a minor automotive repair use within the Mixed-Use District. The Applicant is proposing to operate a minor automotive repair use solely focused on selling, installing, and servicing tires. The criteria for issuance of a CUP are as follows:

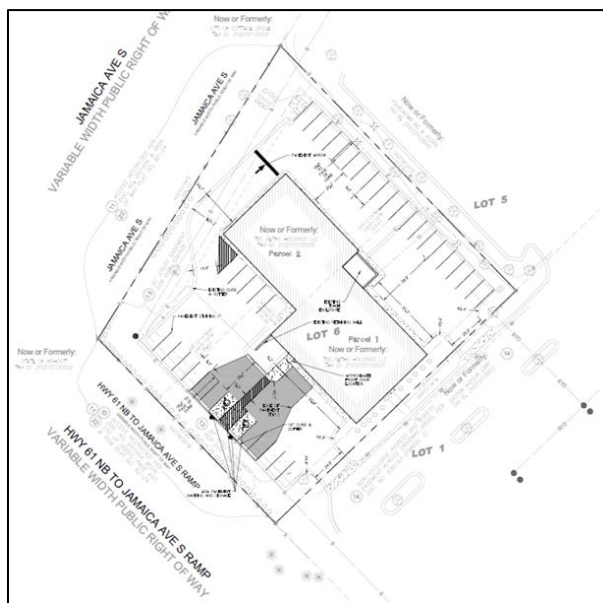
1. *The proposed use shall be consistent with the Comprehensive Plan.*
2. *The proposed use shall not negatively impact the health, safety and general welfare of occupants of surrounding lands.*

3. *Adequate public facilities and services shall be able to be provided to the site where the use is proposed, and/or existing infrastructure shall be able to absorb the additional demand for public services such as utilities, streets, parks, schools, etc.*
4. *Incompatible impacts of the proposed use shall be screened and buffered from adjacent property and the surrounding neighborhood. The City Council may require additional landscaping or screening above that required in the Zoning Code.*
5. *The site or building associated with the proposed use meets or exceeds the architectural design and landscaping standards for the district in which it is located. The City Council may require additional architectural standards above those required in the Zoning Code.*
6. *The use is consistent with the purposes of the Zoning Code and the purposes of the zoning district in which the applicant intends to locate the proposed use.*
7. *The generation and characteristics of traffic associated with the use and its impact on traffic volumes and safety associated with driveway locations, existing and proposed capacity on adjacent roads, sidewalks, and trail connections can be adequately mitigated.*
8. *Floodplain standards shall follow City Code Title 11, Chapter 10.*

Upon review of the application, the proposed use meets the forementioned criteria.

Parking

City Code Title 11-3-4 states that auto repair uses require 3 parking stalls per auto bay, plus 1 parking stall per employee. The Applicant has indicated a total of 4 auto bays and staffing of 15 employees; therefore, the minimum number of required stalls is 27. The proposed site plan indicates a total of 38 parking stalls, thus meeting the minimum required number of stalls. The existing parking lot layout consists of 34 total stalls. The Applicant is proposing to restripe the parking lot, which will result in an increase in the number of stalls by 4. This is due to the change of diagonal stalls to straight stalls along the northeastern property line.



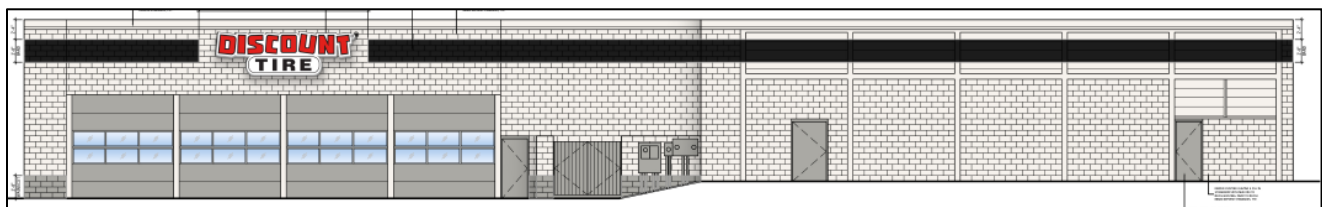
Proposed Site Plan with Updated Parking Stall Striping

Architecture

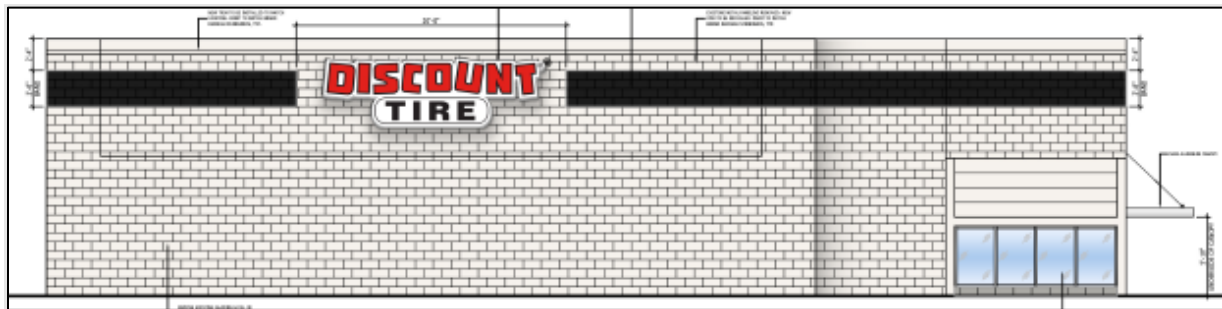
The Applicant is proposing to utilize the existing building but will provide minor architectural elevation updates. These updates include new paint, trim, and an updated storefront with a metal canopy overhang.



Southwest Building Elevation



Northeast Building Elevation



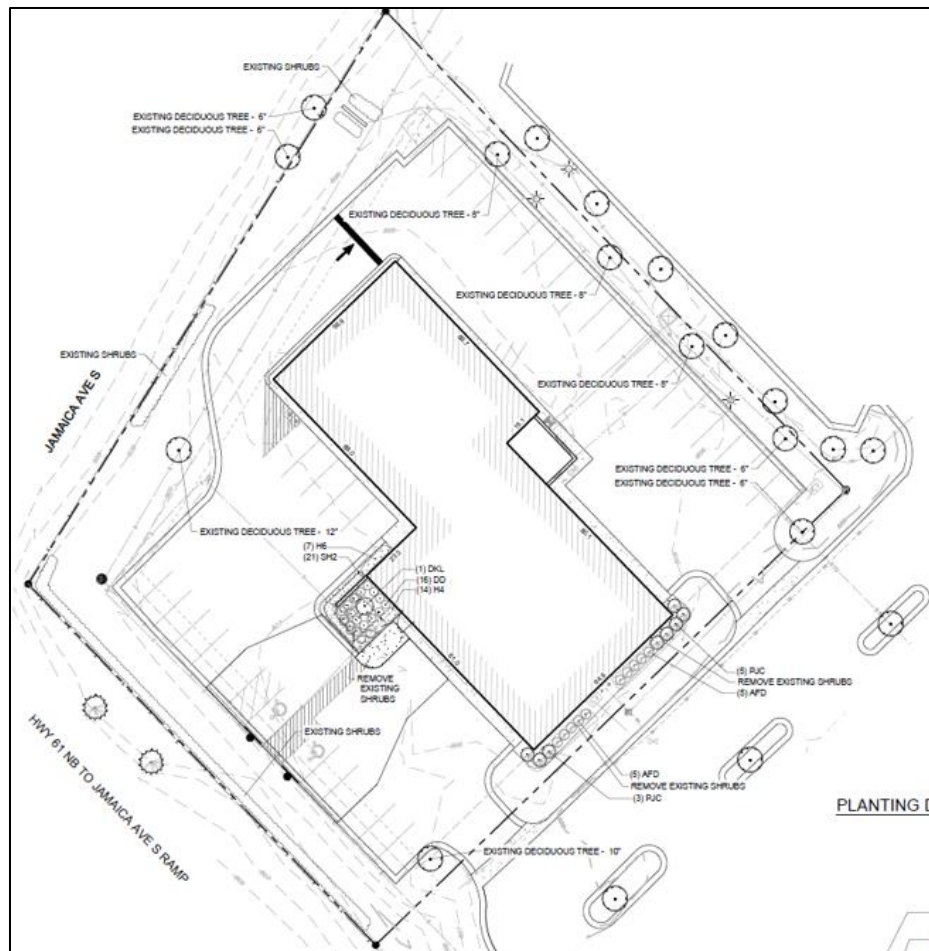
Southeast Building Elevation



Northwest Building Elevation

Landscaping

The Applicant is proposing to utilize the existing site layout but has submitted a detailed landscape plan. The plan indicates the planting of 35 shrubs, 21 ornamental grasses, and 21 perennials. In addition, the Applicant has indicated the intent to preserve existing trees onsite that are in good health.



Landscape Plan

Utilities

The subject property is located within the Metropolitan Urban Service Area (MUSA). The property is already connected to City utilities and no changes are being proposed for utility connections on the site.

Surface Water Management/Grading

The site is currently graded to meet the surface water management requirements established by the State, Watershed District, and the City's Surface Water Management Plan. No changes are proposed to site grading or site imperviousness therefore changes to site stormwater management are unnecessary.

Development Fees

All applicable development fees have been paid at the time of original development; therefore, no additional development fees are required as part of this proposal.

Public Hearing Notices

The public hearing notice for the January 22, 2024, Planning Commission meeting was published in the *Saint Paul Pioneer Press* and mailed on January 10, 2024, to 13 property owners that are within 500 feet of the proposed project. Staff has not received any comments at the time of writing the report.

Recommendation

That the City Council adopt Resolution 2024-017 approving the Conditional Use Permit for a minor automotive repair use to be located at 8647/8649 East Point Douglas Road South.

Attachments

- Narrative
- Architectural Elevations
- Engineering Plans

November 1, 2023

On behalf of Halle Properties, L.L.C., R.A. Smith, Inc. is pleased to present the attached material for a Conditional Use Permit for a Discount Tire store to be located at 8647 & 8649 East Point Douglas Road South. A Conditional Use Permit is required for the operation of a tire store.

The exiting building is a former Big O's tire store, roughly 9,212 square feet in size. Discount Tire proposes to reimage the building to its current corporate standards. New signage, fresh coat of paint on the exterior and considerable work on the interior. New tire storage will be indoors via a racking system adjacent to the service bays. Used tire storage is segregated in its own storage area and no tires are stored outside. Generally new tires are delivered twice a week via a tractor trailer, and used tires are removed twice a week by a local recycling contractor using a box truck.

Discount Tire only sells, installs and services tires and wheels. No automotive repair, oil changes or body work is ever done at a Discount Tire location. The focus is solely on tires, wheels and world class customer service. As a benefit to the general public, this store will provide complimentary air checks for any driver who pulls in and requests the service.

This location that Halle Properties has selected meets their internal site selection criteria and will be complimentary to nearby commercial developments. With limited business hours and low traffic volumes, open Monday to Friday from 8 AM to 6 PM and Saturday from 8 AM to 5 PM, it's anticipated that the proposed store will not have a negative impact on traffic.

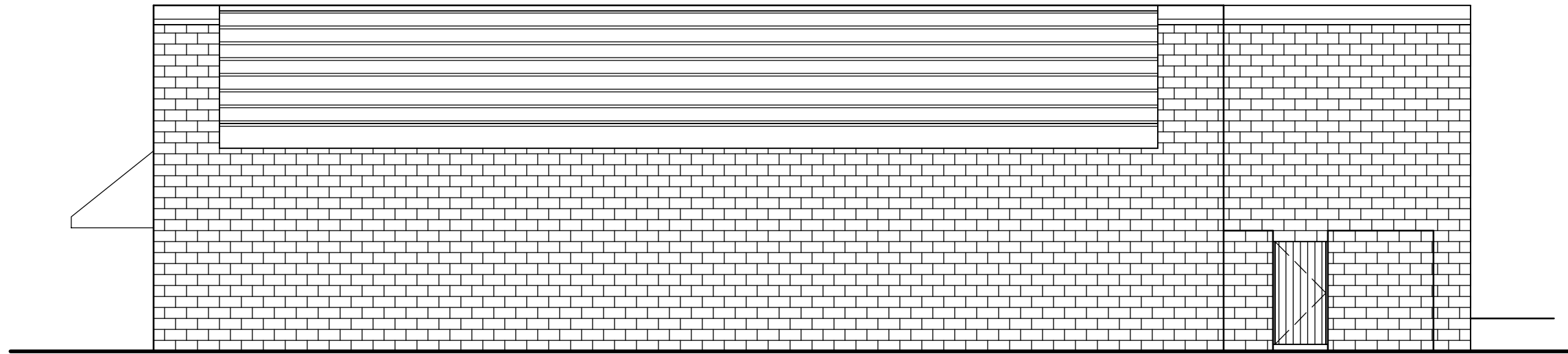
Staffing for this store is typically 6-8 sales/managerial and 8-12 technicians, with the busiest shifts being on Friday and Saturday. The site is designed to accommodate employee vehicles as well as those of customers dropping their vehicles off for service and those who elect to wait to have their tires installed.

At your convenience, R.A. Smith will be more than happy to answer any questions or comments.

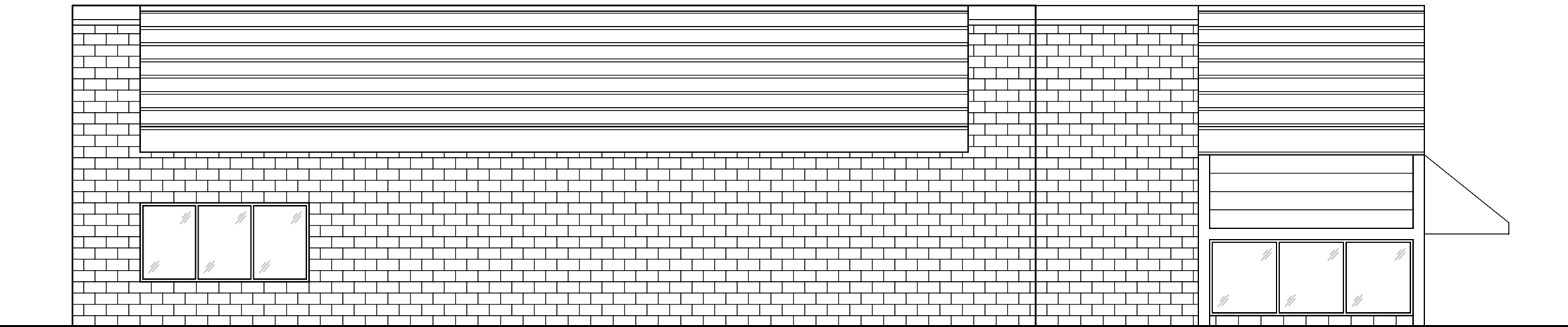
Respectfully,



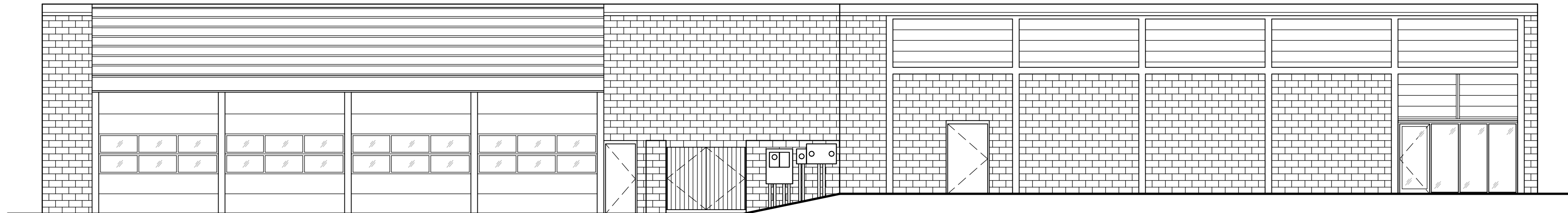
Steven McCleary
Site Development Specialist



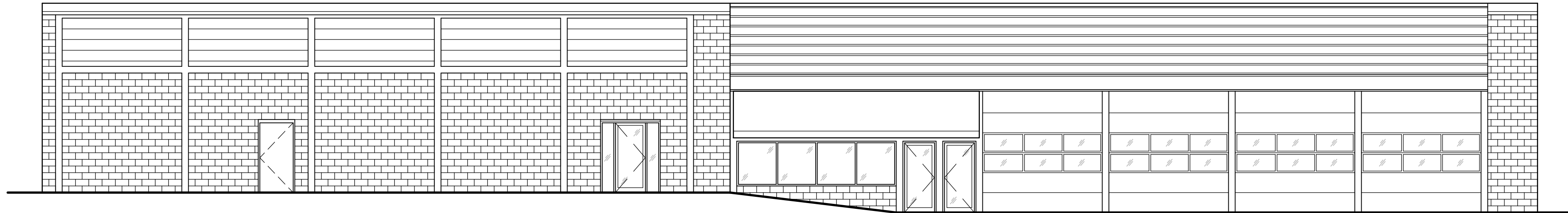
5 EXISTING NORTH ELEVATION
1/8" = 1'-0"



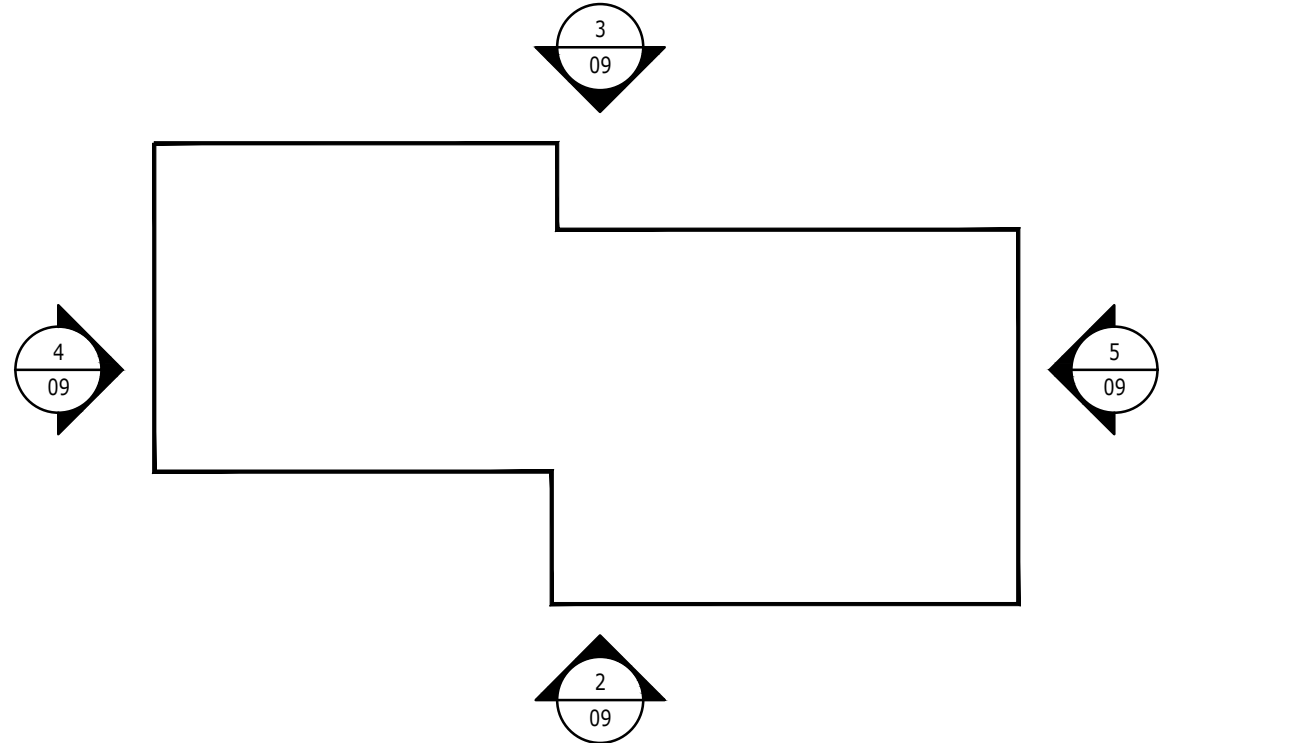
4 EXISTING SOUTH ELEVATION
1/8" = 1'-0"



3 EXISTING EAST ELEVATION
1/8" = 1'-0"



2 EXISTING WEST ELEVATION
1/8" = 1'-0"

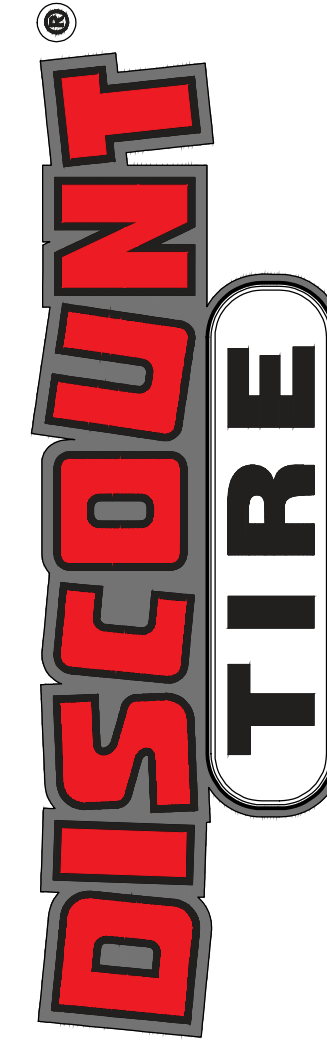


1 ELEVATION KEY PLAN
N.T.S.

Design Forum Architects Inc.

2056 BYERS RD
Miamisburg, OH 45342
Tel: (844) 804-7700

Donald J. Rathman
Architect in Charge
License: xxxx



MTM 13043
8647 E Point Douglas Road S
Cottage Grove, MN 55016

FOR REVIEW ONLY
NOT FOR CONSTRUCTION

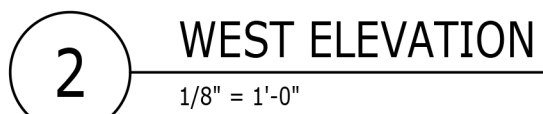
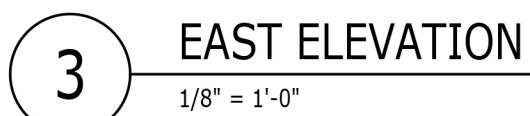
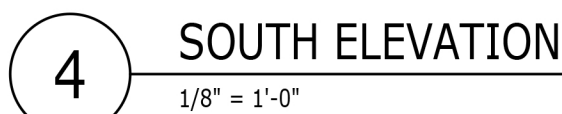
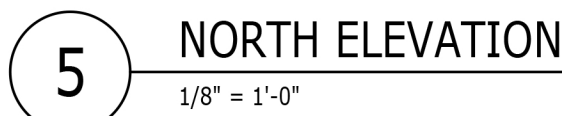
© 2022 CHANGEUP INC.

No.	Description	Date

PROJECT NUMBER	DTXXXXX
DATE	10/25/2023
DRAWN BY	DL
CHECKED BY	XXX / XXX

SHEET NAME
EXISTING EXTERIOR ELEVATIONS

SHEET #
01



SHEET NOTES

1. MAINTAIN EXISTING EIFS, CMU, AND/OR OTHER BUILDING MATERIAL, UNLESS OTHERWISE NOTED; PAINT AS INDICATED TO MATCH BRAND REFRESH STANDARDS
2. NEW SIGNAGE TO BE INSTALLED
3. EXISTING OVERHANG AND/OR CANOPY TO BE REMOVED; UPDATE AND PAINT AS INDICATED
4. NEW ALUMINUM CANOPY TO BE INSTALLED
5. NEW STOREFRONT TO BE INSTALLED



Design Forum Architects Inc.

2056 BYERS RD
Miamisburg, OH 4534
Tel: (844) 804-7700

Donald J. Rethman
Architect In Charge
License: xxxx



MTM 13043
8647 E Point Douglas Road S
Cottage Grove, MN 55016

FOR REVIEW ONLY
NOT FOR CONSTRUCTION

© 2022 CHANGEUP INC

[illegible]

PROJECT NUMBER	DTXXXXX
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DATE 10/25/2023

DRAWN BY DL

CHECKED BY XXX / XXX

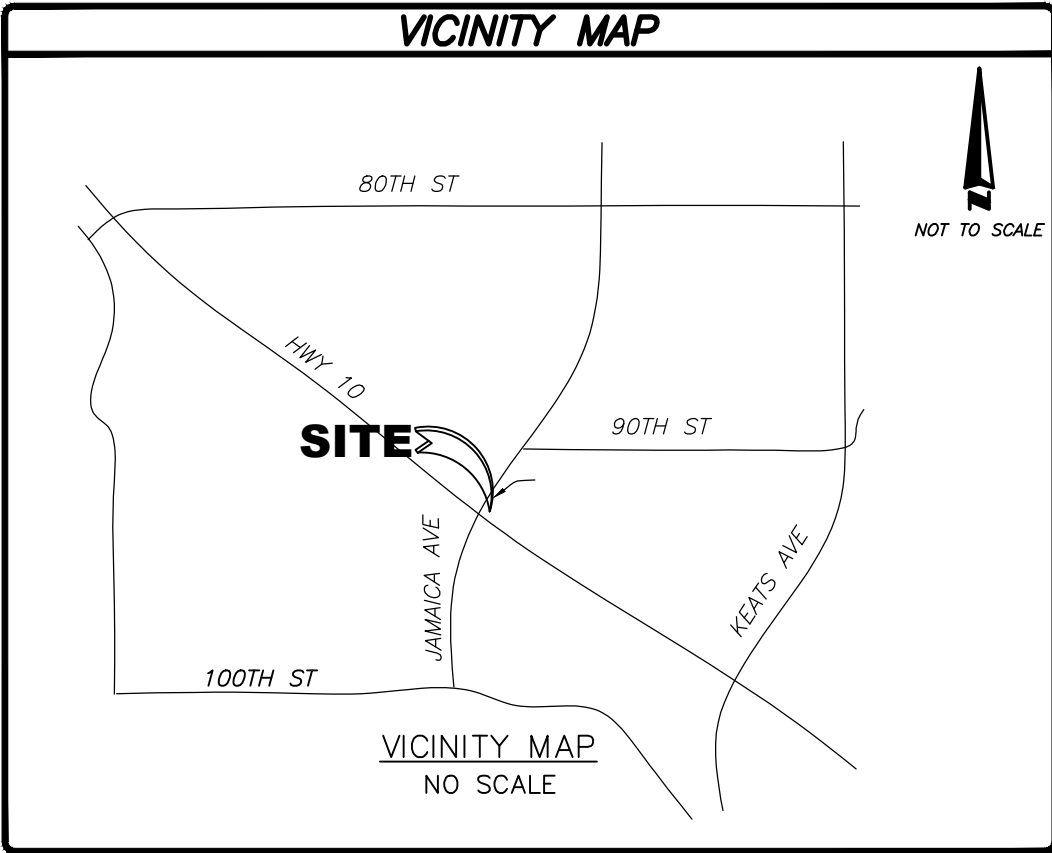
SHEET NAME

EXTERIOR ELEVATIONS

SHEET #

09

C000



ZONING INFORMATION		
ITEM	REQUIRED	CONTACT: CONNER JAKE
ZONING DESIGNATION	MU (MIXED-USE)	REPORT DATE: 10/12/2023
MINIMUM LOT AREA (SQ. FT.)	N/A	REPORT #:
MINIMUM FRONTAGE	N/A	
MINIMUM LOT WIDTH	100'	
MAX IMPERVIOUS COVERAGE	70%	PARKING REQUIREMENTS:
MAX BUILDING HEIGHT	55'	City Code Title 11-3-4 does not list a specific number of parking stalls required for the proposed automobile car wash use.
MINIMUM SETBACKS	N/A	
FRONT	25 FEET	
SIDE	25 FEET	
REAR/SIDE	10 FEET	

NOTE: Proposed Carwash Facility at 8647/8649 East Point Douglas Road South – Site Plan Review, Planned Unit Development, Conditional Use Permit

SURVEYOR'S NOTES

PER TABLE A ITEM 1: MONUMENTS HAVE BEEN PLACED AT ALL MAJOR CORNERS OF THE BOUNDARY OF THE SURVEYED PROPERTY, UNLESS OTHERWISE SHOWN HEREON

PER TABLE A ITEM 2: 647-8649 E. POINT DOUGLAS RD, COTTAGE GROVE, MN WAS DISCLOSED IN DOCUMENTS PROVIDED AND OBSERVED AS POSTED AT THE TIME OF THE SURVEY.

PER TABLE A ITEM 4: PROPERTY CONTAINS: 0.98 ACRES (42,845 SQ. FT.) OF GROSS LAND AREA

PER TABLE A ITEM 5: ELEVATIONS WERE DERIVED USING THE MNDOT VRS NETWORK NAVD(83) DATUM.

PER TABLE A ITEM 6: SUBSTANTIAL ABOVE GROUND FEATURES THAT WERE OBSERVED ON THE SUBJECT PARCEL, SUCH AS PARKING AREAS, DRIVES, WALKS, PLANTERS/LANDSCAPE AREAS AND OTHER, HAVE BEEN LOCATED AS SHOWN HEREON. NOTE: THERE WERE NO OBSERVED SUBSTANTIAL AREAS OF REFUSE ON THE SUBJECT PARCEL PER THE DATE OF THIS SURVEY.

PER TABLE A ITEM 9: THERE ARE 32 STANDARD PARKING SPACES, 2 HANDICAPPED PARKING SPACES, FOR A TOTAL OF 34 PARKING SPACES WITHIN SUBJECT PROPERTY

PER TABLE A ITEM 10: THERE WERE NO PARTY WALLS OBSERVED WITH RESPECT TO ADJOINING PROPERTIES

PER TABLE A ITEM 11: THE SURVEY SHOWS THE LOCATION OF UTILITIES EXISTING ON OR SERVING THE SURVEYED PROPERTY AS DETERMINED BY OBSERVED EVIDENCE COLLECTED PURSUANT TO ALTA SECTION 5 E IV TOGETHER WITH EVIDENCE FROM PLANS REQUESTED BY THE SURVEYOR AND OBTAINED FROM THE UTILITY COMPANIES, OR PROVIDED BY THE CLIENT AND MARKINGS REQUESTED BY THE SURVEYOR PURSUANT TO A 811 UTILITY LOCATE OR SIMILAR REQUEST

PER TABLE A ITEM 13: ADJOINING OWNERSHIP INFORMATION SHOWN HEREON WAS OBTAINED FROM THE WASHINGTON COUNTY WEBSITE. OWNERSHIP INFORMATION IS SUBJECT TO REVISION UPON RECEIPT OF A TITLE SEARCH BY A TITLE INSURANCE COMPANY.

PER TABLE A ITEM 16: THERE WAS NO EVIDENCE OF RECENT EARTH MOVING, WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS OBSERVED AT THE TIME OF THE SURVEY.

PER TABLE A ITEM 17: THERE WAS NO EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS AND WE ARE NOT AWARE OF ANY PROPOSED CHANGES IN STREET RIGHT OF WAY LINES.

PER TABLE A ITEM 18: PLOTTABLE OFFSITE APPURTENANT EASEMENTS DISCLOSED IN DOCUMENTS PROVIDED HAVE BEEN SHOWN HERE IF APPLICABLE.

1. BASED ON OBSERVED EVIDENCE ONLY, THE SITE DOES NOT CONTAIN ANY CEMETERIES, BURIAL GROUNDS, OR INDIVIDUAL GRAVE SITES.

2. BASED ON OBSERVED EVIDENCE ONLY THERE IS NO EVIDENCE OF LAKES, CREEKS OR STREAMS WITHIN SUBJECT PROPERTY.

3. ALL STATEMENTS WITHIN THE CERTIFICATION, AND OTHER REFERENCES LOCATED ELSEWHERE HEREON, RELATED TO: UTILITIES, IMPROVEMENTS, STRUCTURES, BUILDINGS, PARTY WALLS, PARKING, EASEMENTS, SERVITUDES, AND ENCROACHMENTS; ARE BASED SOLELY ON ABOVE GROUND, VISIBLE EVIDENCE, UNLESS ANOTHER SOURCE OF INFORMATION IS SPECIFICALLY REFERENCED HEREON.

4. THE RECORD DESCRIPTIONS OF THE SUBJECT PROPERTY FORM A MATHEMATICALLY CLOSED FIGURE WITH NO GAPS, OR GORES.

5. THIS BEARING SYSTEM IS BASED ON WASHINGTON COUNTY COORDINATE SYSTEM / NAD83(2011).

6. PROPERTY HAS DIRECT AND PHYSICAL ACCESS TO AND FROM E. POINT DOUGLAS ROAD, VIA EASEMENT AGREEMENT PER DOC. NO. 630193 & 658517 (PARCEL 3), A DULY DEDICATED PUBLIC RIGHT OF WAY.

FLOOD INFORMATION

BY GRAPHIC PLOTTING ONLY THIS PROPERTY LIES WITHIN ZONE "X" AS SHOWN ON THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 271630410E, WHICH BEARS AN EFFECTIVE DATE OF 2/3/2010, AND IS NOT IN A SPECIAL FLOOD HAZARD AREA. NO FIELD SURVEYING WAS PERFORMED TO DETERMINE THIS ZONE. ZONE "X" DENOTES AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

NOTES CORRESPONDING TO SCHEDULE "B" ITEMS

THE BELOW IS A LIST OF NONE SURVEY RELATED SCHEDULE B ii ITEMS;

1. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I—Requirements are met. (NO PLOTTABLE INFORMATION)

2. Rights or claims of parties in possession not shown by the Public Records. (NO PLOTTABLE INFORMATION)

3. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the Land. (NO PLOTTABLE INFORMATION)

4. Easements, or claims of easements, not shown by the Public Records. (NO PLOTTABLE INFORMATION)

5. Any lien, or right to a lien, for services, labor, or material heretofore or hereafter furnished, imposed by law and not shown by the Public Records. (NO PLOTTABLE INFORMATION)

6. Taxes or special assessments which are not shown as existing liens by the Public Records. (NO PLOTTABLE INFORMATION)

7. General and special taxes and assessments as hereafter listed, if any (all amounts shown being exclusive of interest, penalties and costs):

A. Real estate taxes payable in 2023 are \$19,016.00 and are half paid. Base tax \$18,870.92 Property Identification No. 21.027.21.12.0027 (Parcel 1)

Real estate taxes payable in 2023 are \$13,336.000 and are half paid. Base tax \$13,212.76 Property Identification No. 21.027.21.12.0026 (Parcel 2)

NOTE: There are no delinquent taxes of record.

NOTE: The above tax amount may include annual recurring fees charged by the municipality and/or county, which are automatically certified to the real estate taxes.

NOTE: First half are due and payable on or before May 15, 2023; second half are due and payable on or before October 15, 2023.

B. Levied or pending assessments of record if any.

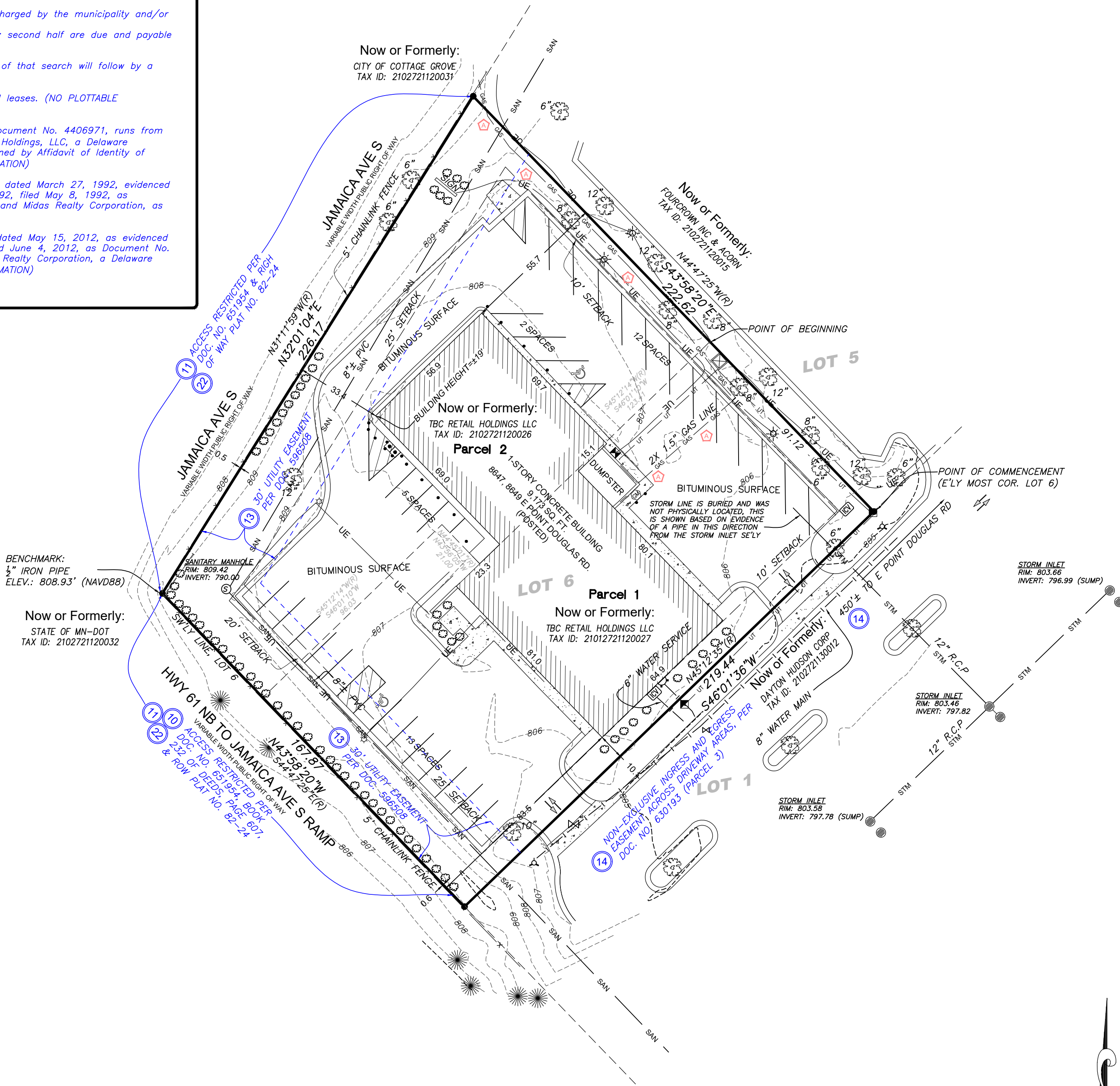
NOTE: An assessment search has been requested and the results of that search will follow by a commitment supplement.

8. Rights of tenants in possession under the terms of unrecorded leases. (NO PLOTTABLE INFORMATION)

9. Warranty Deed dated May 26, 2023, filed May 30, 2023, as Document No. 4406971, runs from NTW, LLC, a Delaware limited liability (sic), Grantor, to TBC Retail Holdings, LLC, a Delaware corporation. This should be corrected by corrective deed or explained by Affidavit of Identity of record as appropriate. (AFFECTS PROPERTY, NO PLOTTABLE INFORMATION)

17. Terms and conditions of unrecorded Optional Lease Agreement dated March 27, 1992, evidenced in Memorandum of Optional Lease Agreement dated March 27, 1992, filed May 8, 1992, as Document No. 694531, by and between Peter Houser, as Lessor, and Midas Realty Corporation, as Lessee. (AFFECTS PROPERTY, NO PLOTTABLE INFORMATION)

21. Terms and conditions of unrecorded Option and Shop Lease dated May 15, 2012, as evidenced Memorandum of Option and Shop Lease dated May 15, 2012, filed June 4, 2012, as Document No. 3891074, by and between Peter R. Houser, as Lessor, and Midas Realty Corporation, a Delaware corporation, as Lessee. (AFFECTS PROPERTY, NO PLOTTABLE INFORMATION)



SIGNIFICANT OBSERVATIONS

⬮ GAS MAIN CROSSES ONTO SUBJECT PROPERTY WITHOUT THE BENEFIT OF A KNOWN EASEMENT

LEGEND

- | | |
|--|----------------------------|
| ⊠ ELECTRIC TRANSFORMER | ⚡ FIRE HYDRANT |
| ⊞ ELECTRIC METER | ⚙ AUTO SPRINKLER |
| ⊞ UTILITY PEDESTAL | ⚙ WATER VALVE |
| ⊞ AC UNIT | ⊞ IRRIGATION CONTROL VALVE |
| ⊞ LIGHT POLE | ⊞ STORM INLET ROUND |
| ⊞ BOLLARD POST | ⊞ SANITARY MANHOLE |
| ⊞ GAS METER | ⊞ HANDICAPPED PARKING |
| ⊞ TREE-DECIDUOUS | ⊞ NO PARKING |
| ⊞ TREE-EVERGREEN | ⊞ SITE ACCESS |
| ⊞ SHRUBS | ⊞ CONCRETE |
| ⊞ IRON MONUMENT FOUND | |
| — SAN — SAN — SANITARY SEWER | |
| — UE — UE — UE — UNDERGROUND ELECTRIC | |
| — UT — UT — UT — UT — UNDERGROUND UTILITY (CABLE/TELE) | |
| — GAS — GAS — GAS — GAS — UNDERGROUND GAS | |

TITLE DESCRIPTION

Parcel 1:
All of that part of Lot 6, Block 1, Cottage Grove Plaza, lying Southeastly of the following described line: Commencing at the most Easterly corner of said Lot 6; thence North 44 degrees 47 minutes 25 seconds West, assumed bearing along the Northeastly line of said Lot 6, a distance of 91.12 feet to the point of beginning; thence South 45 degrees 12 minutes 14 seconds West, 123.41 feet; thence North 44 degrees 45 minutes 01 seconds West, a distance of 21.00 feet; thence South 45 degrees 12 minutes 14 seconds West, a distance of 96.03 feet to the Southwestly line of said Lot 6 and there terminating. Washington County, Minnesota

Abstract Property

Parcel 2:

All that part of Lot 6, Block 1, Cottage Grove Plaza, lying Northwestly of the following described line: Commencing at the most Easterly corner of said Lot 6; thence North 44 degrees 47 minutes East 25 seconds West, assumed bearing along the Northeastly line of said Lot 6, a distance of 91.12 feet to the point of beginning; thence South 45 degrees 12 minutes East 14 seconds West, a distance of 123.41 feet; thence North 44 degrees 45 minutes 01 seconds West, a distance of 21.00 feet; thence South 45 degrees 12 minutes 14 seconds West, a distance of 96.03 feet to the Southwestly line of said Lot 6 and there terminating. Washington County, Minnesota

Abstract Property

Parcel 3:

Ingress and egress easement contained in Operation and Easement Agreement dated April 30, 1990, filed May 8, 1990, as Document No. 630193. Amended by First Amendment to Operation and Easement Agreement dated March 22, 1991, filed April 25, 1991, as Document No. 658517.

THE SURVEYED PROPERTY IS THE SAME PROPERTY AS SHOWN ON FIDELITY NATIONAL TITLE INSURANCE COMPANY COMMITMENT NO. CP72596 HAVING AN EFFECTIVE DATE OF SEPTEMBER 4, 2023.

NOTES CORRESPONDING TO SCHEDULE "B" ITEMS

9. Warranty Deed dated May 26, 2023, filed May 30, 2023, as Document No. 4406971, runs from NTW, LLC, a Delaware limited liability (sic), Grantor, to TBC Retail Holdings, LLC, a Delaware corporation. This should be corrected by corrective deed or explained by Affidavit of Identity of record as appropriate. (AFFECTS PROPERTY, NO PLOTTABLE INFORMATION)

10. Right of access to Trunk Highway No. 61, acquired by the State of Minnesota, contained in Final Certificate dated July 27, 1960, filed September 20, 1960, in Book 232 of Deeds, Page 607. (AFFECTS PROPERTY, PLOTTED AND SHOWN HEREON)

11. Right of access to and from Trunk Highway No. 61 and Jamaica Avenue, acquired by the State of Minnesota, contained in Partial Final Certificate dated April 1, 1985, filed January 28, 1991, as Document No. 651954, and as evidenced on Minnesota Department of Transportation Right of Way Plat No. 82-22 filed September 11, 1978, as Document No. 379983. (PLOTTED AND SHOWN HEREON)

12. Terms and conditions of Amended and Restated Declaration dated August 17, 1989, filed August 23, 1989, as Document No. 608060.

Being an amendment and restatement of the following:
Declaration dated December 15, 1988, filed December 21, 1988, as Document No. 590319. (AFFECTS SUBJECT PROPERTY, NO PLOTTABLE INFORMATION. BLANKET IN NATURE. SEE DOCUMENT FOR DETAILS)

13. Easement for utility and related purposes in favor of the City of Cottage Grove contained in Utility Easement Deed dated February 25, 1989, filed March 16, 1989, as Document No. 596508. (AFFECTS PROPERTY, PLOTTED AND SHOWN HEREON)

14. Terms, conditions, covenants, restrictions and provisions of and easements contained in Operation and Easement Agreement dated April 30, 1990, filed May 8, 1990, as Document No. 630193.

Amended by First Amendment to Operation and Easement Agreement dated March 22, 1991, filed April 25, 1991, as Document No. 658517. (AFFECTS SUBJECT PROPERTY, ALLOWS FOR ACCESS TO AND FROM PROPERTY VIA ADJACENT PARCEL, "COMMON AREAS" THIS AGREEMENT IS NOT MATHEMATICALLY CONFINED THEREFOR NOT PLOTTED. SEE DOCUMENT FOR DETAILS. SEE SHEET 2 OF 2)

15. Restriction contained in that certain Warranty Deed dated March 31, 1991, filed April 25, 1991, as Document No. 658519. (AFFECTS SUBJECT PROPERTY, NO PLOTTABLE INFORMATION. BLANKET IN NATURE)

16. Terms and conditions of Development Agreement dated April 25, 1990, filed May 8, 1990, as Document No. 630192. (AFFECTS SUBJECT PROPERTY, NO PLOTTABLE INFORMATION. BLANKET IN NATURE)

17. (NOT SURVEY RELATED)

18. Terms, conditions and restrictions contained in Use Restrictions and Covenants dated March 27, 1992, filed May 8, 1992, as Document No. 694532. (AFFECTS SUBJECT PROPERTY, BLANKET IN NATURE)

19. Terms and conditions of Resolution No. 92-87 filed July 10, 1992, as Document No. 702080. (AFFECTS SUBJECT PROPERTY, BLANKET IN NATURE)

20. Terms and conditions of and easements for ingress, egress and temporary vehicular parking contained in Declaration of Driveway and Parking Easement dated October 23, 1995, filed October 23, 1995, as Document No. 859742. (AFFECTS SUBJECT PROPERTY BLANKET IN NATURE OVER PARCEL 1 AND PARCEL 2, SEE DOCUMENT FOR ADDITIONAL DETAILS)

21. (NOT SURVEY RELATED)

22. Minnesota Department of Transportation Right of Way Plat No. 82-24 filed as Document No. 385536 (Amendment to Right of Way Plat No. 82-22). (AFFECTS SUBJECT PROPERTY, ACCESS RESTRICTED ALONG SOUTHERLY AND WESTERLY PROPERTY LINES)

ALTA/NSPS Land Title Survey

for
Discount Tire
NWS Project No. 23769
8647-8649 E. POINT DOUGLAS RD
COTTAGE GROVE, MN

BASED UPON TITLE COMMITMENT NO. 67353
OF STEWART TITLE GUARANTY COMPANY
BEARING AN EFFECTIVE DATE OF JANUARY 11, 2023

Surveyor's Certification

To: The Reinolt-Thomas Corporation, a Michigan corporation, Halle Properties, L.L.C., an Arizona limited liability company, including their subsidiaries, affiliates, successors and assignees and STEWART TITLE GUARANTY COMPANY.

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 5, 7a, 7b, 7c, 8, 9, 10, 11a, 11b, 13, 14, 16, 17, 18, 19 and 20 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON 09/29/2023.

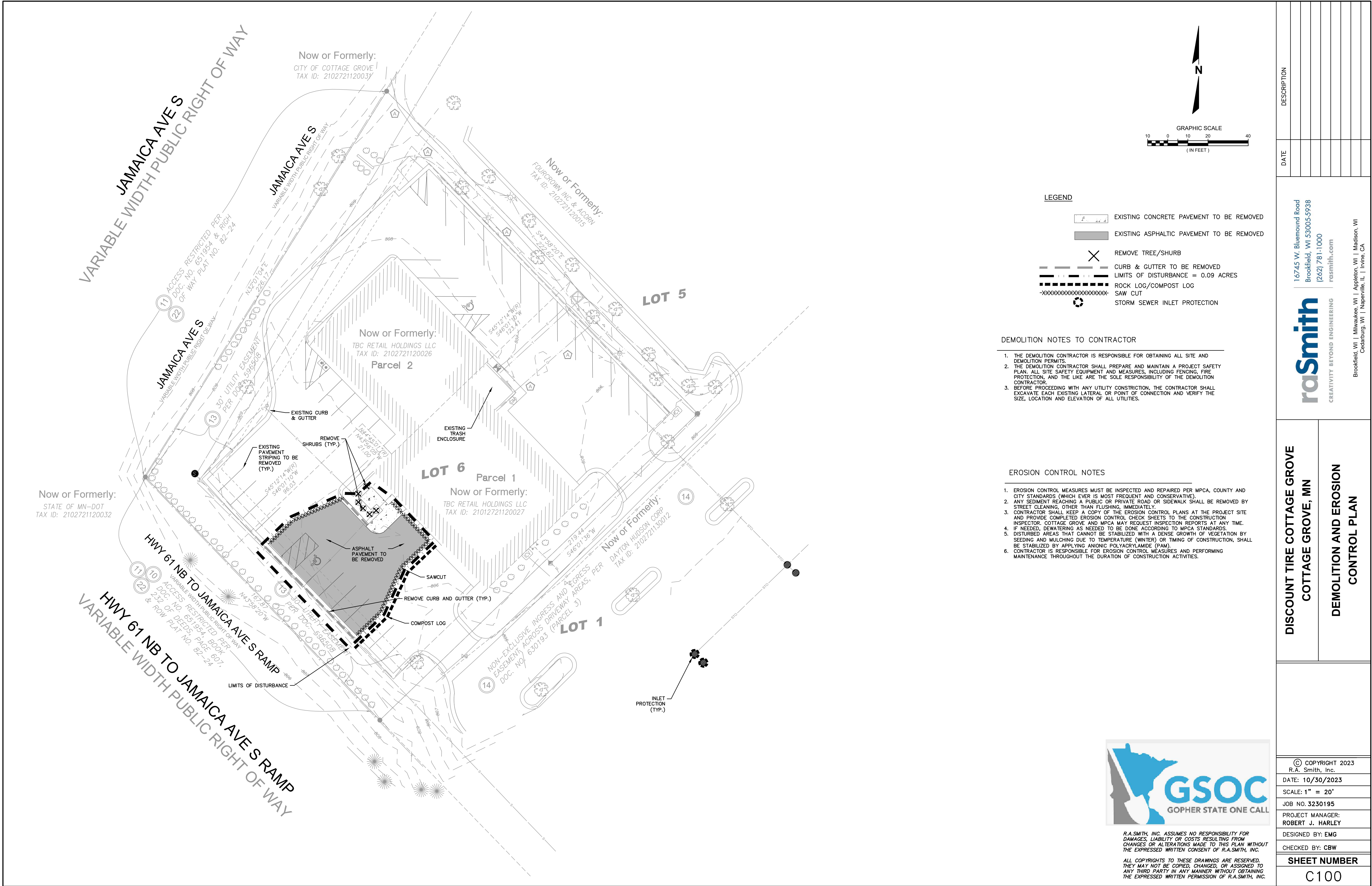
KALEB J. KADELBACH
LICENSE NO.: 57070
IN THE STATE OF MINNESOTA
DATE OF FIELD SURVEY: 09/29/2023
DATE OF LAST REVISION: 10/13/2023
NWS PROJECT NO.: 23769

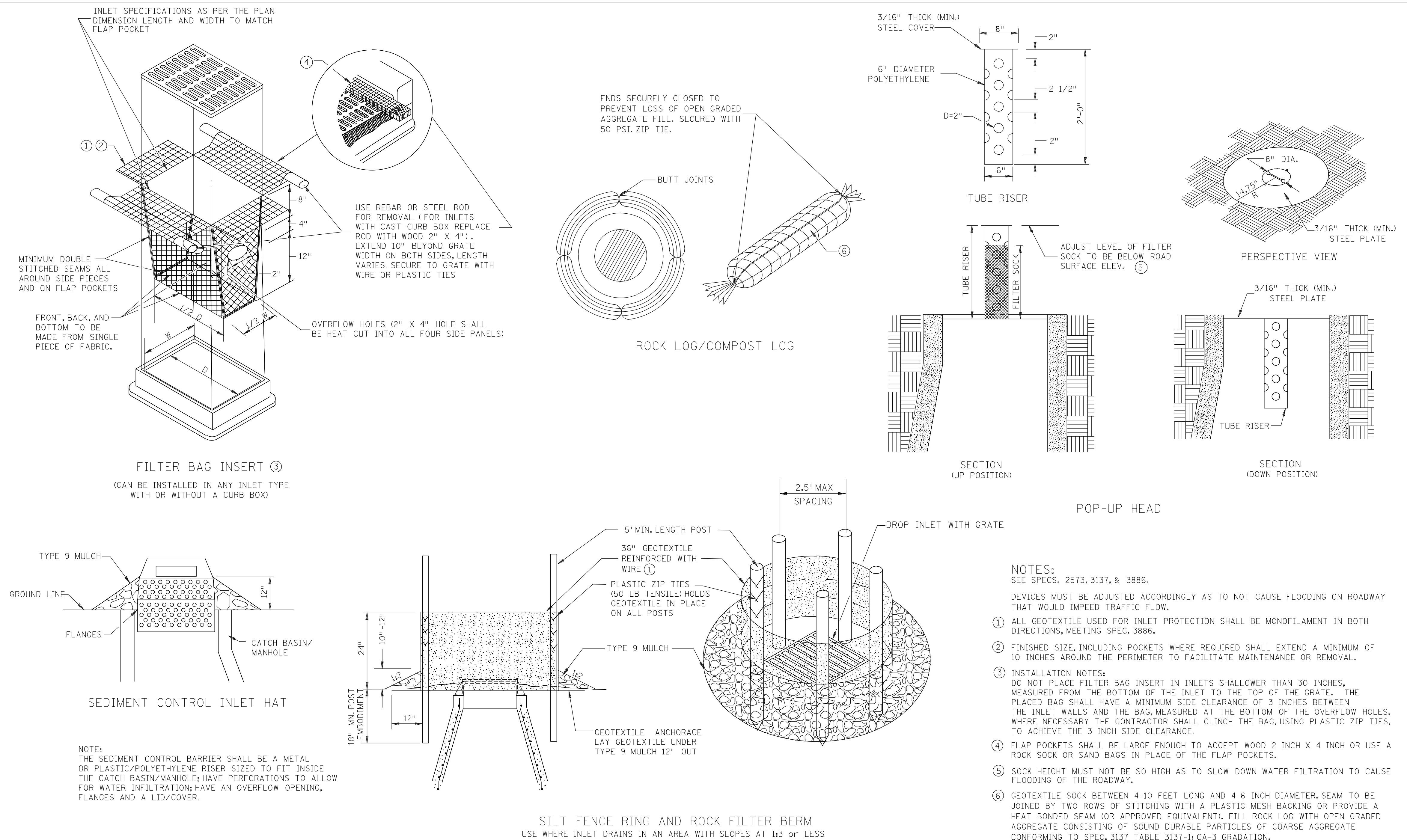
DATE

SHEET 1 OF 2



N:\3230195\Drawings\3230195_DP01.dwg, DEMOLITION PLAN, 10/30/2023 2:56:44 PM, emg2





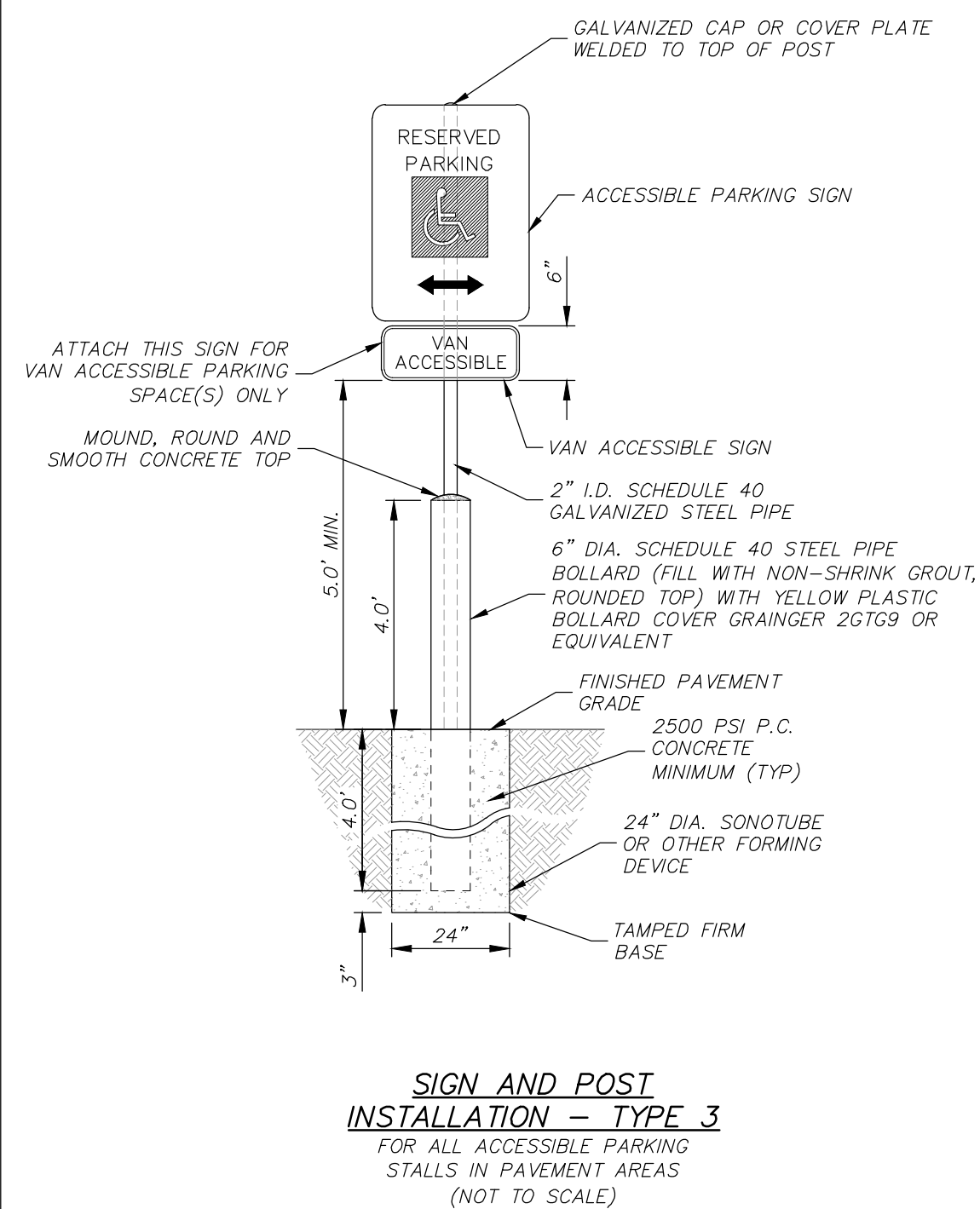
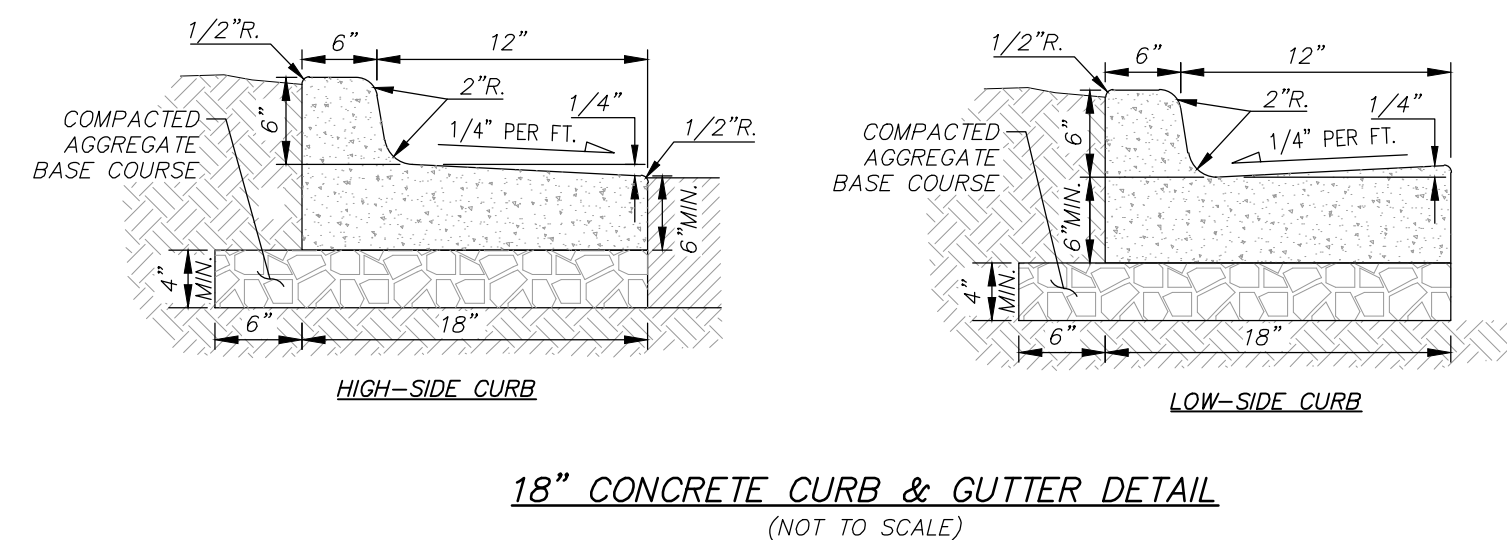
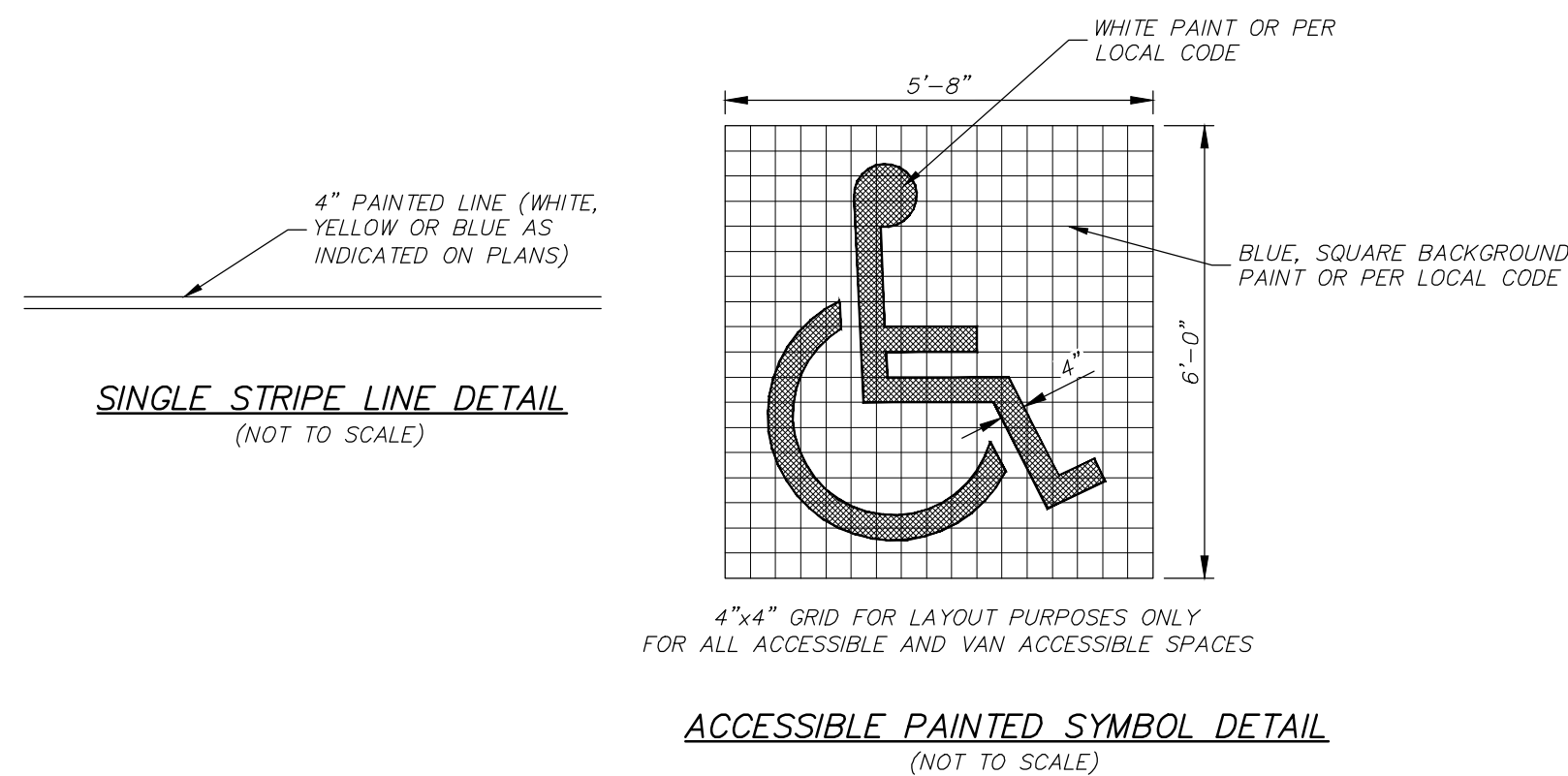
REVISION:

APPROVED: 2-28-2017



CHIEF ENVIRONMENTAL OFFICER

 DEPARTMENT OF TRANSPORTATION	STANDARD PLAN 5-297.405	4 OF 8	TEMPORARY SEDIMENT CONTROL		
	 STATE DESIGN ENGINEER	APPROVED: 2-28-2017 REVISED:	STATE PROJ. NO.	(T.H.)	SHEET NO. OF SHEETS

[illegible]



R.A.SMITH, INC. ASSUMES NO RESPONSIBILITY FOR DAMAGES, LIABILITY OR COSTS RESULTING FROM CHANGES OR ALTERATIONS MADE TO THIS PLAN WITHOUT THE EXPRESSED WRITTEN CONSENT OF R.A.SMITH, INC.

ALL COPYRIGHTS TO THESE DRAWINGS ARE RESERVED. THEY MAY NOT BE COPIED, CHANGED, OR ASSIGNED TO ANY THIRD PARTY IN ANY MANNER WITHOUT OBTAINING THE EXPRESSED WRITTEN PERMISSION OF R.A.SMITH, INC.

DISCOUNT TIRE COTTAGE GROVE COTTAGE GROVE, MN		 CREATIVITY BEYOND ENGINEERING 16745 W. Bluemound Road Brookfield, WI 53005-5938 (262) 781-1000 rasmith.com	DATE	DESCRIPTION
LANDSCAPE PLAN				
© COPYRIGHT 2023 R.A. Smith, Inc. DATE: 10/30/2023 SCALE: 1" = 20' JOB NO. 3230195 PROJECT MANAGER: ROBERT J. HARLEY DESIGNED BY: NJW CHECKED BY: REW		Brookfield, WI Milwaukee, WI Appleton, WI Madison, WI Cedarburg, WI Naperville, IL Irvine, CA		
SHEET NUMBER				
L100				

CITY OF COTTAGE GROVE, MINNESOTA
CITY COUNCIL
RESOLUTION 2024-017

**A RESOLUTION APPROVING A CONDITIONAL USE PERMIT FOR
A MINOR AUTOMOBILE REPAIR USE TO BE LOCATED AT
8647/8649 EAST POINT DOUGLAS ROAD SOUTH**

WHEREAS, Halle Properties, LLC applied for a Conditional Use Permit for a minor automobile repair use, at the property legally described below:

Parcel: 2102721120027:

THAT PT LT 6 BLK 1 LYING SELY OF FOLL DESC LN COM AT MOST ELY COR SD LT THN N44DEG47'25" W ASM BRG ALG NELY LN SD LT 91.12FT TO POB THN S45DEG12'14 "W 123.41FT THN N44DEG45'01"W 21FT THN S45DEG12'14"W 96.03FT TO SWLY LN SD LT & THERE TERM SUBJECT TO MUTUAL PERP DRVWY/PRK EASE PER DOC #859742 SUBDIVISIONNAME COTTAGE GROVE PLAZA LOT 6 BLOCK 1 SUBDIVISIONCD 27229

Commonly known as 8647 East Point Douglas Road South, Cottage Grove, Washington County, State of Minnesota.

Parcel: 2102721120026

SUBDIVISIONNAME COTTAGE GROVE PLAZA LOT 6 BLOCK 1 SUBDIVISIONCD 27229 ALL TH T PART OF LOT 6, BLOCK 1, COTTAGE GROVE PLAZA, ACCORDING TO THE PLAT THEREOF ON FILE AND OF RECORD IN THE OFFICE OF THE COUNTY RECORDER, WASHINGTON COUNTY, MINNESOTA, LYING NORTHWESTERLY OF THE FOLLOWING DESCRIBED LINE: COMMENCING AT THE MOST EASTERLY CORNER OF SAID LOT 6; THENCE NORTH 44 DEGREES 47 MINUT E 25 SECONDS WEST, ASSUMED BEARING ALONG THE NORTHEASTERLY LINE OF SAID LOT 6, A DISTANCE OF 91.12 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 45 DEGREES 12 MINUT E 14 SECONDS WEST, A DISTANCE OF 123.41 FEET; THENCE NORTH 44 DEGREES 45 MINUTES 01 SECONDS WEST, A DISTANCE OF 21.00 FEET; THENCE SOUTH 45 DEGREES 12 MINUTES 14 SECONDS WEST A DISTANCE OF 96.03 FEET TO THE SOUTHWESTERLY LINE OF SAID LOT 6 AND THERE TERMINATING; SUBJECT TO THE PROVISIONS OF WASHINGTON COUNTY RECORDER DOCUMENT NO 859742.

Commonly known as 8649 East Point Douglas Road South, Cottage Grove, Washington County, State of Minnesota

WHEREAS, public hearing notices were mailed to property owners within 500 feet of the property and a public hearing notice was published in the St. Paul Pioneer Press; and

WHEREAS, a planning staff report, which detailed specific information on the property, and the application request was prepared and presented; and

WHEREAS, the public hearing was open for public testimony. No public testimony was received. The applicant attended the public hearing and staff answered questions from the Planning Commission; and

WHEREAS, the Planning Commission unanimously (6-to-0 vote) recommended that the City Council approve the Conditional Use Permit applications for the proposed minor automobile repair use at their January 22, 2023, meeting.

NOW, THEREFORE BE IT RESOLVED, the City Council of the City of Cottage Grove, Washington County, Minnesota, hereby approves the conditional use permit for a proposed minor automobile repair use at the property legally described above, subject to the following conditions:

1. The project shall be completed in accordance with the plans submitted as amended by the conditions of approval. Any significant changes to the plans, as determined by the planning staff, shall require review and approval by the Planning Commission and City Council.
2. The Conditional Use Permit approvals shall expire one (1) year from the date of City Council approval unless a building permit has been requested or a time extension has been granted by the City Council. The City Council may extend the expiration date of such approval upon written application by the person to whom the approval was granted.
3. Prior to the issuance of a building permit, the two lots shall be combined, and a copy of the executed lot combination supplied to the City.
4. All applicable permits (i.e.; building, electrical, grading, right of way and mechanical) and a commercial plan review packet must be completed, submitted, and approved by the City prior to the commencement of any construction activities. Detailed construction plans must be reviewed and approved by the Building Official and Fire Marshal.
5. The grading and erosion control plan for the site must comply with NPDES II Permit requirements. Erosion control devices must be installed prior to commencement of any grading activity. Erosion control must be performed in accordance with the recommended practices of the "Minnesota Construction Site Erosion and Sediment Control Planning Handbook" and the conditions stipulated in Title 9-7-1, Erosion Control During Construction, of the City's Subdivision Ordinance. The Applicant shall be responsible for the costs for the City to inspect the site in relation to erosion control conformance.
6. Rubbish, waste, and recycling containers shall be stored within an appropriately sized enclosed structure compliant with City ordinance screening requirements and shall always be maintained so as not cause odors or other public nuisances.
7. The Applicant is responsible for removing debris from all adjacent public and private roadways during their grading and construction process. The adjacent streets shall be swept clean daily or as needed.
8. Signage is not approved as part of this application. All signage shall meet the requirements of the sign ordinance and require a separate building permit.

9. Exterior storage of tires, wheels, and other items/materials is prohibited.
10. An ingress and egress easement shall be maintained at all times between property owners to allow for access to the site.

Passed this 7th day of February 2024.

Myron Bailey, Mayor

Attest:

Tamara Anderson, City Clerk



City Council Action Request

13.A.

Meeting Date	2/7/2024		
Department	Public Safety		
Agenda Category	Action Item		
Title	Police Annual Use of Force Report		
Staff Recommendation	Receive the annual use of force presentation and abbreviated annual SWAT report from Deputy Director Brad Petersen and Sergeant Nicholas Bailey.		
Budget Implication	N/A		
Attachments	<table border="1"><tr><td>1.</td><td>Police Use of Force Workshop 01.29.2024</td></tr></table>	1.	Police Use of Force Workshop 01.29.2024
1.	Police Use of Force Workshop 01.29.2024		



To: Honorable Mayor and City Council
Jennifer Levitt, City Administrator

From: Peter J Koerner, Director of Public Safety

Date: January 29, 2024

Subject: **WORKSHOP - POLICE ANNUAL USE OF FORCE REPORT**

Introduction

The Cottage Grove Police Department is proudly and boldly leading police reforms by adapting to evolving community expectations and implementing best practices. Furthermore, CGPD is dedicated to professionalism, transparency, and accountability. We continuously strive to improve services, safety, and trust. We accomplish these goals with a comprehensive approach to use of force review and analysis, training, reporting, and community input.

In 2019, CGPD implemented a progressive use of force review policy which mandates that every use of force incident is reviewed, data is collected and analyzed, and an annual report is presented. Each use of force incident is reviewed by our Use of Force Review & Training Committee. Each incident is examined for opportunities to improve our decisions, tactics, policy, and equipment. Use of force data, along with law and nationally recognized best practices, drives our training, tactics, policy development, and equipment acquisitions. The annual use of force report identifies trends in use of force data along with training, equipment, and policy recommendations. The annual report is presented to the Chief of Police, Council, and community stakeholders providing an opportunity to inform and solicit input.

Presentation

Deputy Director Brad Petersen and Sergeant Nicholas Bailey will present the annual use of force report. Additionally, they will present an abbreviated annual SWAT report.