CITY COUNCIL REGULAR MEETING
St. Francis Area Schools District Office, 4115 Ambassador Blvd. NW
Monday, May 01, 2023 at 6:00 PM

AGENDA

1. **CALL TO ORDER/PLEDGE OF ALLEGIANCE**
2. **ROLL CALL**
3. **APPROVAL OF AGENDA**
4. **CONSENT AGENDA**
   - A. City Council Minutes - April 17, 2023
   - B. URRWO Annual Budget
   - C. Declare Engine 2 Surplus Property
   - D. Police Department UAV Program
   - E. Dust Control Maintenance
   - F. St. Francis Lions Club Temporary On-Sale License for Pioneer Days 2023
   - G. Payment of Claims
5. **MEETING OPEN TO THE PUBLIC**
6. **SPECIAL BUSINESS**
7. **PUBLIC HEARING**
8. **OLD BUSINESS**
9. **NEW BUSINESS**
   - A. Comprehensive Plan Amendment, Rezoning

     Resolution 2023-15 approving the Comprehensive Plan Amendment for land located north of Bridgestone Road NW and south of Seelye Brook and authorizing submission amendment to the Metropolitan Council for review

     Ordinance 312 approving the rezoning land located north of Bridgestone Road and south of Seelye Brook from A-2 to RR

   - B. Approve updated Private Development Standards

   - C. Code Revisions – Parking, Roadways, and Stormwater – First Reading

     Ordinance 313 approving amendments to Division 7 Development Standards of the Zoning Code as presented by Staff

     Ordinance 314 approving amendments to Division 8 Stormwater of the Zoning Code as presented by Staff

     Ordinance 315 approving amendments to Section 8, 11-43-02 Streets of the Subdivision Code as presented by Staff
10. **MEETING OPEN TO THE PUBLIC**
11. **REPORTS**
    - A. Fire Department Monthly Report - March 2023
12. **COUNCIL MEMBER REPORTS**
13. **UPCOMING EVENTS**

May 1 - City Council Meeting
May 3 - Economic Development Authority Meeting
May 8 - City Council Work Session
May 17 - City Council Meeting
May 29 - City Offices Closed in Observance of Memorial Day

14. ADJOURNMENT

CITY OF ST. FRANCIS
CITY COUNCIL AGENDA
St. Francis Area Schools District Office 4115 Ambassador Blvd. NW
April 17, 2023
6:00 p.m.

1. CALL TO ORDER/PLEDGE OF ALLEGIANCE

The regular City Council meeting was called to order at 6:00 p.m. by Mayor Pro Tem Joe Muehlbauer.

2. ROLL CALL

Members Present: Councilmembers Kevin Robinson, Sarah Udvig, and Joe Muehlbauer.

Members Absent: Mayor Steve Feldman and Councilmember Robert Bauer.

Also present: City Administrator Kate Thunstrom, Deputy City Administrator/City Clerk Jenni Wida, Community Development Director Colette Baumgardner, Assistant City Attorney Dave Schaps (Barna, Guzy & Steffen), Public Works Director Paul Carpenter, Fire Chief Dave Schmidt, Liquor Store Manager John Schmidt, Finance Director Darcy Muvihill, City Engineer Craig Jochum (Hakanson Associates, Inc.), Police Chief Todd Schwieger

3. APPROVAL OF AGENDA

MOTION BY: UDVIG SECOND: ROBINSON APPROVING THE REGULAR CITY COUNCIL AGENDA

Ayes: Udvig, Robinson, and Muehlbauer. Nays: None
Motion carries: 3-0

4. CONSENT AGENDA

A. City Council Minutes - April 3, 2023
B. Authorization for Partial Joint Response and Training with Bethel
C. URRWMO Annual Report
D. Rental License Approvals
E. Payment of Claims

MOTION BY: ROBINSON SECOND: UDVIG APPROVING THE REGULAR CITY COUNCIL CONSENT AGENDA

Ayes: Udvig, Robinson, and Muehlbauer. Nays: None
Motion carries: 3-0

5. MEETING OPEN TO THE PUBLIC

Mayor Pro Tem Muehlbauer asked City Clerk Wida if they had anyone wanting to speak. She said they did not.

6. SPECIAL BUSINESS

7. PUBLIC HEARINGS – NONE

8. OLD BUSINESS - NONE

9. NEW BUSINESS

A. Bottle Shop Market Study

City Administrator Thunstrom reviewed the Staff report and proposal for contract services for the market study at the municipal bottle shop. She explained that this study would evaluate the site and general facility overview, including financial and orientation access and visibility. She stated that they will also look at demographics to identify competition and the market share.

Robinson stated that he is not for this market study. He said that part of the study is to evaluate the location, which cannot be changed. He stated that he would like to move this discussion to a work session and have Liquor Store Manager Schmidt share his opinions. He asked Schmidt if he had seen a decline in sales. Schmidt stated that sales continue to grow, but not at the rates he would like to see. Robinson shared that this could be due to the cost of having full time employees and being farther out of the pandemic where everyone has at home. He stated that he would like to see some more consistent social media marketing. He noted that they are also coming out of a cold winter into the summer and the sales should pick up. He reiterated that he would like to table this item and move it to a work session. He stated that Schmidt is doing a great job at running the store.

Udvig agreed with Robinson that the location of the store cannot be changed so the study may not be beneficial. She asked if anything like this study has been done in the past. Thunstrom explained that this has not been done in the past to this degree. She stated that with a new store on Highway 47, but there is also a new one being built on County Road 7 and the study could help understand the impacts of the liquor store. Udvig stated that she would like to see this moved to a work session so there can be more discussion surrounding this.

Robinson asked for more information on the new store of County Road 7. Liquor Store Manager John Schmidt stated that the city of Anoka is building a new store across from the Anoka Ice Arena.

Mayor Pro Tem Muehlbauer shared that a lot of the issues seems to be the cost, or representation of higher costs. He stated that if this moves forward, it is always good to have more information.

MOTION BY: ROBINSON SECOND: UDVIG TO TABLE THIS DISCUSSION TO

BE MOVED TO A WORK SESSION

Ayes: Udvig, Robinson, and Muehlbauer. Nays: None
Motion carries: 3-0

B. Police Department UAV Program

Police Chief Todd Schwieger reviewed the Staff report and more information in regard to the Unmanned Aerial Vehicle program. He discussed the enhanced capabilities and the benefit that this will have to the safety of the City.

Police Sergeant Larson added that this is an excellent tool that can be used for public safety as well as the Public Works department and Fire Department. He shared two examples of times in just the last week that this device would have been beneficial.

Udvig stated that since the funding is available now seems like a good time for this. She said that even if it only helps save one resident then it will be well worth it. She also wanted to make sure that the police officers feel confident and stay safe in the field. She added that she does not see the Police Department abusing this tool as some residents expressed concerns with. She shared that she has heard from residents that they are excited at the possibility of bringing this tool to the City.

Robinson stated that he would like this to be tabled until the two absent members are present in order to also get their input. He asked how many of these devices Anoka County currently has. Schwieger stated that he believes the County has two drones. Robinson stated that if other departments can use this device, he would be in favor of a shared cost and shared training of this device. He shared concern that the forfeiture fund is a special source of revenue and is wondering if there are other things the department might need down the road more than a drone. He asked about the battery life of the drone. Schwieger explained that the battery life is around 42 minutes and after that the batteries need to be changed. Robinson asked if the drone will be insured. Thunstrom stated that she was not sure about the insurance. Schwieger added that this is something that they could pursue.

Robinson reiterated the concern with the Police Department spending all of their funds on this when there could be something that is more needed down the road. He added that there are legal fees associated with processing the forfeiture funds.

Mayor Pro Tem Muehlbauer shared that he is always in favor of small government. He asked what the ramifications if the State Statute is violated. Schwieger stated that it would depend on how the Statute was violated, but it could come down to criminal penalties. Mayor Pro Tem Muehlbauer asked if the department is flying the drone and looking for a person and they happen to see something else, but they do not have a warrant, would this discovery be grounds for getting a warrant. Schwieger said it would be a rare occasion but the possibility would be there. He explained that the steps would be deferred to investigations to see how to proceed

with this. He noted that they would not be stumbling across any of these sorts of things intentionally.

Udvig asked how this would differ from police being able to see things on the ground. Schwieger stated that it is due to this device being in the air, which is a very new concept and there is not hundreds of years of evidence to rely on like there is with police work on the ground.

Mayor Pro Tem Muehlbauer asked if there are any ramifications if this is tabled to another meeting. He asked if there is more information that can be brought forward. He shared that he loves the idea that this can be used by different departments. Schwieger stated that there is no timeline for this and the discussion can wait until the full Council is present. Schwieger reiterated the need for this device. Mayor Pro Tem Muehlbauer asked if structures can be seen into with the thermal capabilities of the device. Schwieger said no.

MOTION BY: ROBINSON SECOND: UDVIG TO CONTINUE THIS DISCUSSION TO A WORK SESSION OR UPCOMING COUNCIL MEETING

Ayes: Udvig, Robinson, and Muehlbauer. Nays: None
Motion carries: 3-0

10. MEETING OPEN TO THE PUBLIC – NONE

11. REPORTS

A. Police Department - First Quarter Report

Schwieger reviewed the Police Department quarterly report, highlighting the addition of two new officers, 1,427 incident crime reports, and 195 hours of training in this quarter. He noted the success of community outreach events like Winning With Cops, and noted the upcoming events of Citizens Academy, Bike Rodeo, Cone with a Cop and National Night Out.

Robinson commended Schwieger for the great community outreach as it brings confidence to the residents. He added that it is great to see new officers come on board. He said to keep up the good work and stated that the City is lucky to have Schwieger and his staff.

Udvig shared that it was a good report and stated. She stated that she was intrigued by the prescription drug disposal and ammunition disposal numbers and shared how beneficial this is. She said the department does such an excellent job and shared that she has seen several of the officers out and about and they are always willing to engage with the public.

Mayor Pro Tem Muehlbauer thanked Schwieger and his department for all that they do. He asked how many participants there are for the Citizens Academy this year. Schwieger shared that they are up to 13 participants. Mayor Pro Tem

Muehlbauer thanked the department for all that they do, including their community outreach.

Robinson asked if there has been any more discussion with the new superintendent about an SRO. Schwieger stated that they met in February and discussed the top and the superintendent seems in favor of putting an SRO back in the school and he was going to have the financial discussions with the board and would follow up with him. He stated that the likelihood of having one in place for this upcoming school year is slim, but they will look towards having one by the beginning of the 2024 school year. Robinson asked if there have been an increase in calls or challenges since the SRO had been taken away. Schwieger stated that everything was to be expected with over 260 incidents reported from the schools. He stated that each call at the school takes quite a long time. Robinson noted the work that SROs do behind the scenes for prevention.

B. Public Works - First Quarter Report

Public Works Director Paul Carpenter reviewed the Public Works quarterly report, highlighting the plowing of City street, totaling over 1257 miles. He noted that repairs bills were also very high at over $42,000. He stated that ice rink numbers were up substantially this year. He mentioned that the Spring Recycling Event was coming up on April 29th and this event will add recycled oil, given that the necessary equipment arrives in time. He shared that they are currently working on redesigning the stormwater website. He added that they are working on three projects including the Dellwood River project with the Anoka Conservation District and the Upper Rum River Watershed District, a project with St. Francis High School for the area between Rum River Boulevard and the school, and the stormwater retrofit project in the River Shores Neighborhood. He stated that they are still waiting to hear on the MS4 permit. He thanked the wastewater department for their work. He noted that some of the fire hydrants in town have red bags over them and that those will be removed when the hydrants are flushed the second week of May. He stated that the yearly cleaning of the tank at the water plant was finished. He stated that the backwash flow rate controller at the water plant needed to be replaced. He shared that they are continuing to work with Bethel and things are going well. He highlighted that the St. Francis wastewater operators received the MPCA award for excellence.

Udvig stated that it was a great report and awesome to see wastewater operators get such a great award. She thanked the department for all of their work with plowing this season.

Robinson acknowledged how great it was that the operators received such a great award. He noted the enthusiasm of these workers. He stated he is glad to hear that the ice rink attendance this season was very high. He added that he did not realize the Bethel assistance consumed so much time and asked if they are being compensated for this. Carpenter said yes and that this is a great learning experience. Robinson asked Carpenter to thank his Staff for all that they do and

showed his appreciation for them.

Mayor Pro Tem Muehlbauer stated that it is awesome to see that they got such a great award. He said that working with Bethel helps the City in other departments as well to create a neighborly feel. He thanked Carpenter for all he does.

C. Community Development - First Quarter Report

Community Development Director Colette Baumgardner revered the Community Development department quarterly report highlighting the economic development projects of the Bridge Street corridor, Highway 47 corridor, and the addition of the farmer's markets this summer. She noted that they are still looking for more vendors for the farmer's markets. She shared that there are currently 72 vacant lots in the City, 30 of which are buildable but none are currently for sale. She discussed the five residential developments that are to take place in the City, The Bluffs of Rum River, Eagle Point/Vista Prairie - Senior Living Project, Rivers Edge Development, Serenity at Seelye Brook, and Turtle Ponds 6th Addition. She also noted the two commercial developments projects, Meadows 4th Addition and Patriots Parkway. She noted that there have been five new construction permits in the first quarter, which is slightly behind the number of new permits from 2021 and 2022. She stated that there have been 70 permits submitted in the first quarter. She said that there are 21 properties that are active within Code Enforcement. She explained that the rental and vacant program has seen an increase in the first quarter. She stated that there are three vacant buildings within the City. She added that the Planning Commission met twice in the first quarter and most of the items discussed at these meetings have already come forward to the Council. She shared the two administrative projects that the department has been working on, the BS&A Transition and closing permits.

Robinson thanked Baumgardner for a thorough report. He asked if the department looks at houses that are currently for sale or houses that have recently closed. Baumgardner stated that she does pay attention to what the listings look like within the City and she added that the sales seem to be comparable to the surrounding communities. Robinson asked if Baumgardner feels good about any of the other vendors that she has communicated with who have interest in the farmer's market. Baumgardner stated that there are three more vendors that she feels confident will come forward with an application in the next few weeks. She added that one of the challenges is that they have implemented the requirement for having general liability insurance. Robinson asked if there is any benefit to going out and talking to existing businesses in town as a way to extend the welcoming hand from the City. Baumgardner stated that this is something she would like to do and would like to add this into the list of duties for the Community Development department.

Udvig stated that it was an excellent report. She shared that there is quite a bit of buzz on Facebook surrounding the farmer's market and hopes that will continue. She stated that the word of mouth will be a benefit for this once the farmer's markets get going. She added that it is great that Baumgardner goes out and has

open communication with businesses within the City.

Mayor Pro Tem Muehlbauer noted that he is interested to see what happens with the farmer's markets. He asked about the issue with financing for Vista Prairie. Baumgardner stated that the issue was with banking at the end of last year, and in the new year she is not sure what the financing issue is. Mayor Pro Tem Muehlbauer asked if there are any concerns with them. Baumgardner explained that she will not have any concerns once Vista Prairie has secured their financing.

12. COUNCIL MEMBER REPORTS

Udvig shared that she helped with the Community Egg Hunt on April 8th and she thanked the St. Francis ambassadors who were there helping with this event. She stated that she attended the work session on April 11th. She reminded the residents about Pioneer Days and noted that the City is still looking for parade participants and they still need volunteers.

Robinson stated that he also attended the last work session. He added that he attended the Bethel fire meeting and stated that this program will aid in public safety and benefit both communities. He stated that he attended the building meeting where they had the discussion with five members from Stahl, the construction company working on the City Hall Fire Station project. He noted that there is another work session scheduled for this Monday.

Mayor Pro Tem Muehlbauer shared that he attended the meeting with Stahl, as well as the previous work session. He shared his appreciation for all Staff and all that they do in their departments.

13. UPCOMING EVENTS

April 19 - Planning Commission Meeting
April 24 - City Council Work Session
April 22 - National Prescription Drug Take-Back Day
April 29 - Recycling Event
May 1 - City Council Meeting
May 3 - Economic Development Authority Meeting
May 8 - City Council Work Session

14. ADJOURNMENT

MOTION BY: UDVIG SECOND: ROBINSON TO ADJOURN THE MEETING.

Ayes: Udvig, Robinson, and Muehlbauer. Nays: None
Motion carries: 3-0

There being no further business, Mayor Pro Tem Muehlbauer adjourned the regular City Council at 7:31 p.m.

_____
Jennifer Wida, City Clerk

City of St. Francis

CITY COUNCIL AGENDA REPORT

TO: Mayor and Council
FROM: Kate Thunstrom, City Administrator
SUBJECT: URRWO Annual Budget
DATE: May 1, 2023

OVERVIEW:

This item is for the ratification of the 2024 URRWMO annual budget.

ACTION TO BE CONSIDERED:

Council to review and approve the annual budget

Attachments:

- URRWMO Draft 2024 Budget

UPPER RUM RIVER
Watershed Management Organization

COSTS BY CITY

2024 DRAFT Budget 3/8/2023

Notes:

Budget was developed 2019-2028 URRWMO Watershed Management Plan.

Community contributions are based on land area and market valuations, per the current Upper Rum River WMO joint powers agreement.

The community contributions were updated with the most recent market valuations in 2021. This update is done every five years.

		Bethel	East Bethel	Ham Lake	Nowthen	Oak Grove	St. Francis	TOTAL
	% non-operating cost	1.04%	23.85%	1.68%	22.81%	30.48%	20.14%	100.00%
	% operating costs -->	16.67%	16.67%	16.67%	16.67%	16.67%	16.67%	100.00%
Row Labels	Sum of 2024 Budget							
Non-operating	**$30,686.00**	**$319.13**	**$7,318.61**	**$515.52**	**$6,999.48**	**$9,353.09**	**$6,180.16**	**$30,686.00**
Collaboration/Planning	**$0.00**	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**
Education and Public Outreach	**$3,531.00**	$36.72	$842.14	$59.32	$805.42	$1,076.25	$711.14	**$3,531.00**
Non-Operating General	**$3,098.00**	$32.22	$738.87	$52.05	$706.65	$944.27	$623.94	**$3,098.00**
Water Quality Improvement Projects	**$16,557.00**	$172.19	$3,948.84	$278.16	$3,776.65	$5,046.57	$3,334.58	**$16,557.00**
Water Monitoring	**$7,500.00**	$78.00	$1,788.75	$126.00	$1,710.75	$2,286.00	$1,510.50	**$7,500.00**
Studies	**$0.00**	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**
Operating	**$11,128.00**	**$1,854.67**	**$1,854.67**	**$1,854.67**	**$1,854.67**	**$1,854.67**	**$1,854.67**	**$11,128.00**
Operating Expenses	**$11,128.00**	$1,854.67	$1,854.67	$1,854.67	$1,854.67	$1,854.67	$1,854.67	**$11,128.00**
Grand Total	**$41,814.00**	**$2,173.80**	**$9,173.28**	**$2,370.19**	**$8,854.14**	**$11,207.76**	**$8,034.83**	**$41,814.00**

UPPER RUM RIVER
Watershed Management Organization

BUDGET DETAIL

2024 DRAFT Budget Detail 3/8/2023

Notes:
Budget was developed 2020-2029 SRWMO Watershed Management Plan.

	Row Labels	Sum of 2021 Budget	Sum of 2022 Budget	Sum of 2023 Budget	Sum of 2024 Watershed Plan	Sum of 2024 Budget
1	**Non-operating**					
2	**Collaboration/Planning**					
3	Aerial photos	$0.00	$0.00	$0.00	$0.00	$0.00
4						
5	**Education and Public Outreach**					
6	Anoka Co Outreach Coordinator Position	$1,000.00	$1,000.00	$1,250.00	$0.00	$1,500.00
7	Website operations/maintenance	$685.00	$715.00	$745.00	$905.00	$900.00
8	Rum River biomonitoring with St. Francis High School	$0.00	$0.00	$0.00	$0.00	$0.00
9	Website platform update	$0.00	$0.00	$0.00	$0.00	$0.00
10	URRWMO public education and outreach	$1,051.00	$1,077.00	$1,104.00	$1,131.00	$1,131.00
11						
12	**Non-Operating General**					
13	Watershed Coordinator - Facilitate Technical Advisory Committee (TAC)	$2,550.00	$1,723.00	$425.00	$1,810.00	$1,810.00
14	Watershed Coordinator - WRAPS review	$0.00	$0.00	$500.00	$0.00	$0.00
15	Watershed Coordinator - Grant applications	$3,782.00	$3,877.00	$1,071.00	$4,073.00	$1,288.00
16	5-year Watershed Plan Amendment per BWSR Requirement	$0.00	$0.00	$0.00	$0.00	$0.00
17	URRWMO JPA Update				$0.00	$0.00
18						
19	**Water Quality Improvement Projects**					
20	Projects as detailed in the URRWMO 10-year Plan	$15,375.00	$15,759.00	$16,153.00	$16,557.00	$16,557.00
21						
22	**Water Monitoring**					
23	Lake Level Monitoring	$1,200.00	$1,200.00	$1,400.00	$1,400.00	$1,400.00
24	Lake Water Quality Monitoring	$1,900.00	$0.00	$2,060.00	$2,400.00	$2,400.00
25	Reference Wetland Hydrology Monitoring	$1,950.00	$1,950.00	$2,100.00	$2,465.00	$2,465.00
26	Stream Water Quality Monitoring	$0.00	$4,350.00	$4,650.00	$0.00	$0.00
27	Water Monitoring Fund	$2,450.00	$0.00	$0.00	$1,228.00	$1,235.00
28						
29	**Studies**					
30	Subwatershed Assessment Studies (SWAs) for priority waterbodies	$1,537.50	$0.00	$2,000.00	$0.00	$0.00
31						
32	**Operating**					
33	**Operating Expenses**					
34	Advertise Bids for Pro Services (req'd in odd yrs)	$0.00	$0.00	$0.00	$0.00	$0.00
35	Liability Insurance	$2,416.00	$2,477.00	$2,539.00	$2,602.00	$2,300.00
36	Recording Secretary services	$1,261.00	$1,292.00	$1,400.00	$1,358.00	$1,225.00
37	Watershed Coordinator - Facilitate regular URRWMO mtgs	$3,362.00	$3,446.00	$3,532.00	$3,621.00	$3,621.00
38	Watershed Coordinator - Annual Report to State Auditor	$672.00	$689.00	$706.00	$724.00	$724.00
39	Watershed Coordinator - Annual Report to BWSR	$1,345.00	$1,378.00	$1,413.00	$1,448.00	$1,448.00
40	Watershed Coordinator - Other - see desc.	$1,681.00	$1,723.00	$1,766.00	$1,810.00	$1,810.00
41						
42	**Grand Total**	**$44,217.50**	**$42,656.00**	**$44,814.00**	**$43,532.00**	**$41,814.00**

City of St. Francis

CITY COUNCIL AGENDA REPORT

TO: Kate Thunstrom- City Administrator

FROM: Dave Schmidt- Fire Chief

SUBJECT: Declare Engine 2 Surplus Property

DATE: May 1, 2023

OVERVIEW:

In September of 2022, the fire department took delivery of the new Engine 1. Since that time we placed Engine 2 in reserve until training and service reliability of Engine 1 was established. It is now the appropriate time to declare Engine 2 surplus property for the purpose of selling and removing Engine 2 from the fire department fleet. We expect the value of Engine 2 to be no more than $5000.00.

ACTION TO BE CONSIDERED:

Declare Engine 2 as surplus property for the purpose of liquidation.

BUDGET IMPLICATION:

Funds from the sale of Engine 2 to be placed in to the fire department Capital Plan.

City of St. Francis

CITY COUNCIL AGENDA REPORT

TO: Kate Thunstrom, City Administrator

FROM: Todd Schwieger, Police Chief

SUBJECT: Police Department UAV Program

DATE: May 1, 2023

OVERVIEW:

The St. Francis Police Department is researching the purchase and utilization of an Unmanned Aerial Vehicle (UAV) in efforts to enhance the public safety capabilities of the department. A UAV would aid the department in areas including search and rescue efforts, information gathering in response to criminal activity, emergency management, event threat assessment, and public event monitoring. In Minnesota, before a law enforcement agency purchases or uses a UAV, state law requires that there are opportunities for public comment. At a minimum, the agency must accept public comment submitted electronically or by mail, and the governing body with jurisdiction over the budget of the law enforcement agency must provide an opportunity for public comment at a regularly scheduled meeting. In developing and adopting the policy, the law enforcement agency must also provide for public comment and input. The first public comment period occurred from March 30th, 2023 through April 9th, 2023 in which several comments were received electronically. No comments were received by mail. The second public comment period occurred at the April 17th City Council meeting following a UAV presentation. City Council determined that further discussion was needed and input should be received from Councilman Bauer and Mayor Feldman who were both absent at the April 17th meeting.

A work session was held on April 24th where the UAV program was further discussed with all City Council members present. Following the additional discussion consensus was reached amongst all City Council members for the police department to move forward with the purchase of the DJI Matrice 30T and fully implement the UAV program.

ACTION TO BE CONSIDERED:

City Council approval to purchase the DJI Matrice 30T in the amount of $18,190.00 and proceed with full implementation of the police department UAV program.

BUDGET IMPLICATION:

The UAV program equipment, licensing, and training will primarily be funded by the police department forfeiture fund and supplemented by existing capital funds.

City of St. Francis

CITY COUNCIL AGENDA REPORT

TO: Kate Thunstrom, City Administrator

FROM: Paul Carpenter, Public Works Director

SUBJECT: Dust Control Maintenance

DATE: May 1, 2023

OVERVIEW:

The City has identified certain high-volume gravel roads. The spraying of calcium chloride helps us maintain these roads during the summer months keeping the dust to a minimum. Dust control is routine maintenance and is budgeted yearly.

ACTION TO BE CONSIDERED:

Authorize the acceptance of the bid from NSI Inc. in the amount of $1.40 per gallon.

BUDGET IMPLICATION:

The Dust Control Maintenance will be paid for out of the Street Fund (405).

Attachments:

1. Quote from Knife River
2. Quote from NSI Inc.
3. Area map of the treated areas.

City of St. Francis
Public Works Department

4058 St. Franci
St. Francis, Minne
7 3 -233-5200
FAX7 3 -233-5205

Agenda Item # 4E.

Quotes for Dust Control – 2023

The City of St. Francis will accept quotes for the furnishing and application of materials for dust control until April 21st. 2023. All quotes must be submitted on this document and shall be signed and dated.

The City anticipates the use of approximately 18,500 gallons of chloride solution, City wide. Someone from the City will ride with each applicator truck to facilitate the application. Application widths will be approximately 18 to 20 feet.

The City of St. Francis will require the work to be completed by June 22nd 2023, weather permitting.

The following identifies the required concentration of materials and application rates:

- For Calcium Chloride: 38% calcium chloride concentration applied.
  - Required application rate of 0.30 gallons per square yard.
- For Magnesium Chloride: 32% magnesium chloride concentration applied.
  - Required application rate of 0.30 gallons per square yard.

A final quantity of material has not been determined. Please provide a unit cost for each of the 2 Tiers associated with the material and the corresponding quantities listed below. Unit costs provided below shall include all costs associated with delivery and application of product as well as any applicable sales tax. City residents occasionally request that chloride solution be applied in front of their properties. City residents must be able to contact your company for chloride applications while you are completing the work within the City and the same unit prices would apply.

Please quote the cost of materials furnished and applied:

ESTIMATED COST:

	ITEM	QUANTITY	UNIT COST
Tier I.	Calcium Chloride	0 – 10,000 gal	$1.75 / gallon
Tier II.	Calcium Chloride	10,000 + gal	$1.60 / gallon
Tier I.	Magnesium Chloride	0 – 10,000 gal	N/A
Tier II.	Magnesium Chloride	10,000 + gal	N/A

Name of Company KNIFE RIVER CORPORATION – NORTH CENTRAL

Address 4787 SHADOW WOOD DR NE
SAUK RAPIDS MN 56379

Phone Number (320) 251-9472

Signature Mark Mag Date 04/21/2023
Mark Magnuson, Vice President

KNIFE RIVER CORPORATION-NORTH CENTRAL CORPORATE 1966 SEAL MINNESOTA

City of St. Francis
Public Works Department

4058 St. F
St. Francis, M
763-233-5200
FAX 763-233-5205

Quotes for Dust Control – 2023

The City of St. Francis will accept quotes for the furnishing and application of materials for dust control until April 21st. 2023. All quotes must be submitted on this document and shall be signed and dated.

The City anticipates the use of approximately 18,500 gallons of chloride solution, City wide. Someone from the City will ride with each applicator truck to facilitate the application. Application widths will be approximately 18 to 20 feet.

The City of St. Francis will require the work to be completed by June 22nd 2023, weather permitting.

The following identifies the required concentration of materials and application rates:

- For Calcium Chloride: 38% calcium chloride concentration applied.
  - Required application rate of 0.30 gallons per square yard.
- For Magnesium Chloride: 32% magnesium chloride concentration applied.
  - Required application rate of 0.30 gallons per square yard.

A final quantity of material has not been determined. Please provide a unit cost for each of the 2 Tiers associated with the material and the corresponding quantities listed below. Unit costs provided below shall include all costs associated with delivery and application of product as well as any applicable sales tax. City residents occasionally request that chloride solution be applied in front of their properties. City residents must be able to contact your company for chloride applications while you are completing the work within the City and the same unit prices would apply.

Please quote the cost of materials furnished and applied:

ESTIMATED COST:

ITEM	QUANTITY	UNIT COST
Tier I. Calcium Chloride	0 – 10,000 gal	$1.398
Tier II. Calcium Chloride	10,000 + gal	$1.398
Tier I. Magnesium Chloride	0 – 10,000 gal	N/A
Tier II. Magnesium Chloride	10,000 + gal	N/A

Name of Company: Northern Salt, Inc.

Address: 20920 Forest Road North
Forest Lake, Minnesota 55025

Phone Number: 651-363-2787

Signature: _____ Date: April 21st,2023

Legend
1000 ft
Road Names
Dust Control

City of St. Francis

Dust Control

241st Ave

240th Ln

Roanoke St.

Germainium St

Erkium St

238th Ave

Barium St.

Xkimo St

Nacre St.

233rd Ave

Spring Hill Rd.

Variolite St.

229th Ave

Dogwood St. and 245th Ave

Tamarack St.

CITY COUNCIL AGENDA REPORT

TO: Mayor and Council

FROM: Jenni Wida, City Clerk

SUBJECT: St. Francis Lions Club Temporary On-Sale License for Pioneer Days 2023

DATE: May 1, 2023

OVERVIEW:

We have received an application for a Temporary On-Sale Liquor License from the St. Francis Lions Club for Pioneer Days 2023. In the past, council has waived the permit fee for community events.

ACTION TO BE CONSIDERED:

Motion to approve the license and waive permit fees associated with Pioneer Day applicants.

City of St. Francis

CITY COUNCIL AGENDA REPORT

TO: Kate Thunstrom, City Administrator

FROM: Darcy Mulvihill, Finance Director
Natalie Santillo, Accounting Tech/Deputy Clerk

SUBJECT: Payment of Claims

DATE: May 1, 2023

OVERVIEW:

Attached are the bills received since the last council meeting. Total checks to be written are $231,365.35 plus any additional bills that are handed out at council meeting.

Other Payments to be approved:

Debt service payments –N/A

Direct Transfers from Previous Month-N/A

Credit Card Payment- N/A

Manual Checks-N/A

ACTION TO BE CONSIDERED:

Approved under consent agenda to allow the Finance Director to draft checks or ACH withdrawals for the attached bill list. Please note additional bills may be handed out at the council meeting.

BUDGET IMPLICATION:

City bills

Attachments:

- 05-01-2023 Packet List-$231,365.35

CITY OF ST FRANCIS

*Claim Register©

AP 05-01-2023

April 2023

Claim Type

Claim# 18202 *ALWAYS BRIGHT LIGHTS LTD*

Cash Payment	E 101-45200-311	Contract	INSTALL SUMMER BANNERS		$350.00
Invoice 1034					

Transaction Date 4/26/2023 Due 4/26/2023 CASH 10100 **Total** $350.00

Claim Type

Claim# 18201 *ANOKA COUNTY TREASURY DEPT*

Cash Payment	E 101-42110-321	Telephone	BROADBAND		$37.51
Invoice B230417P					
Cash Payment	E 101-42210-321	Telephone	BROADBAND		$37.51
Invoice B230417P					
Cash Payment	E 101-43100-321	Telephone	BROADBAND		$37.51
Invoice B230417P					
Cash Payment	E 101-45200-321	Telephone	BROADBAND		$37.51
Invoice B230417P					
Cash Payment	E 601-49440-321	Telephone	BROADBAND		$37.51
Invoice B230417P					
Cash Payment	E 602-49490-321	Telephone	BROADBAND		$37.45
Invoice B230417P					

Transaction Date 4/26/2023 Due 4/26/2023 CASH 10100 **Total** $225.00

Claim Type

Claim# 18132 *ARK TOWING AND RECOVERY*

Cash Payment	E 101-42110-441	Miscellaneous	SFPD FORFEITURE		$264.00
Invoice 94784					

Transaction Date 4/18/2023 CASH 10100 **Total** $264.00

Claim Type

Claim# 18163 *ASPEN MILLS*

Cash Payment	E 101-42110-437	Uniforms	UNIFORMS-BULERA		$13.60
Invoice 312668					

Transaction Date 4/25/2023 CASH 10100 **Total** $13.60

Claim Type

Claim# 18207 *BAUER SERVICES*

Cash Payment	E 101-42400-311	Contract	RUM RIVER INN - EMERGENCY SECURING		$3,034.00
Invoice .04272023					

Transaction Date 4/27/2023 CASH 10100 **Total** $3,034.00

Claim Type

Claim# 18162 *BERNICK COMPANIES, THE*

Cash Payment	E 609-49751-252	Beer	BEER		$896.10
Invoice 10067787					
Cash Payment	E 609-49751-255	N/A Products	NON-ALCHOLIC PRODUCTS		$73.80
Invoice 10067787					

Transaction Date 4/25/2023 CASH 10100 **Total** $969.90

Claim Type

Claim# 18161 *BRAUN, JODI*

Cash Payment	E 601-49440-444	Refund & Reimbursement	REFUND ACCT#2322		$330.42
Invoice .04252023					

Transaction Date 4/25/2023 Due 4/25/2023 CASH 10100 **Total** $330.42

Claim Type

Claim# 18160 *BREAKTHRU BEVERAGE*

CITY OF ST FRANCIS

*Claim Register©

AP 05-01-2023

April 2023

Cash Payment	E 609-49751-206	Freight		FREIGHT			$132.19
Invoice 348663859							
Cash Payment	E 609-49751-251	Liquor		LIQUOR			$14,626.53
Invoice 348663859							
Transaction Date	4/25/2023			CASH	10100	**Total**	$14,758.72

Claim Type

Claim#	18139	*BROTHERS FIRE & SECURITY*					
Cash Payment	E 101-43100-401	Buildings Maintenance		2023 ANNUAL ALARM INSPECTION			$90.00
Invoice W25042							
Cash Payment	E 101-45200-401	Buildings Maintenance		2023 ANNUAL ALARM INSPECTION			$90.00
Invoice W25042							
Cash Payment	E 101-42110-401	Buildings Maintenance		2023 ANNUAL ALARM INSPECTION			$90.00
Invoice W25042							
Cash Payment	E 601-49440-401	Buildings Maintenance		2023 ANNUAL ALARM INSPECTION			$90.00
Invoice W25042							
Cash Payment	E 602-49490-401	Buildings Maintenance		2023 ANNUAL ALARM INSPECTION			$90.00
Invoice W25042							
Transaction Date	4/20/2023		Due 4/20/2023	CASH	10100	**Total**	$450.00

Claim Type

Claim#	18206	*BRUNTON ARCHITECTS & ENGINE*					
Cash Payment	E 404-41400-589	City Hall/Fire Station		PROGRESS BILLING-DESIGN DEVELOPMENT			$86,400.00
Invoice 22293							
Transaction Date	4/27/2023		Due 4/27/2023	CASH	10100	**Total**	$86,400.00

Claim Type

Claim#	18138	*COMPASS MINERALS AMERICA, I*					
Cash Payment	G 101-14100	Inventory of Material/Supply		BULK SALT			$4,338.70
Invoice 1162073							
Transaction Date	4/20/2023		Due 4/20/2023	CASH	10100	**Total**	$4,338.70

Claim Type

Claim#	18205	*CORE & MAIN*					
Cash Payment	E 405-43100-303	Engineering Fees		COLD PATCH - STREETS DEPT			$3,971.00
Invoice S659495							
Transaction Date	4/27/2023		Due 4/27/2023	CASH	10100	**Total**	$3,971.00

Claim Type

Claim#	18159	*DAHLHEIMER DIST. CO. INC.*					
Cash Payment	E 609-49751-252	Beer		BEER			$18,508.58
Invoice 1881709							
Cash Payment	E 609-49751-255	N/A Products		NON-ALCOHOLIC PRODUCTS			$289.90
Invoice 1881709							
Transaction Date	4/25/2023			CASH	10100	**Total**	$18,798.48

Claim Type

Claim#	18200	*DELL MARKETING L.P.*					
Cash Payment	E 402-43100-580	Computers		COMPUTERS- JEN			$1,316.01
Invoice 10658852250							
Cash Payment	E 402-41400-560	Computers		COMPUTERS			$1,452.75
Invoice 10667997720							
Transaction Date	4/26/2023			CASH	10100	**Total**	$2,768.76

Claim Type

Claim#	18199	*DRIVER & VEHICLE SERVICES*

CITY OF ST FRANCIS

*Claim Register©

AP 05-01-2023

April 2023

Cash Payment	E 101-42110-221	Vehicle Maintenance	MN 100 CLUB EMERGENCY PLATES			$45.00
Invoice .04262023						
Transaction Date	4/26/2023		CASH	10100	**Total**	$45.00

Claim Type

Claim# 18196 *ECM PUBLISHERS, INC.*

Cash Payment	E 101-41400-351	Legal Notices Publishing	ORDINANCE NO 309			$53.75
Invoice 943611						
Cash Payment	E 101-41400-351	Legal Notices Publishing	RESOLUTION 2023-14			$86.00
Invoice 943610						
Cash Payment	E 101-41400-351	Legal Notices Publishing	MAY 3 PH CITY HALL/FIRE STATION			$48.37
Invoice 943609						
Transaction Date	4/26/2023	Due 4/26/2023	CASH	10100	**Total**	$188.12

Claim Type

Claim# 18137 *FEDERATED COOP*

Cash Payment	E 101-45200-419	Turf/Fertilizer/Weed Contr	FERTILIZER			$870.86
Invoice 1176080						
Cash Payment	E 601-49440-419	Turf/Fertilizer/Weed Contr	FERTILIZER			$870.86
Invoice 1176080						
Cash Payment	E 602-49490-419	Turf/Fertilizer/Weed Contr	FERTILIZER			$870.86
Invoice 1176080						
Transaction Date	4/20/2023		CASH	10100	**Total**	$2,612.58

Claim Type

Claim# 18136 *FERRELLGAS*

Cash Payment	E 101-43210-441	Miscellaneous	RENTAL			$52.62
Invoice 2031586529						
Transaction Date	4/20/2023		CASH	10100	**Total**	$52.62

Claim Type

Claim# 18192 *HAKANSON ANDERSON ASSOC., I*

Cash Payment	E 101-41910-303	Engineering Fees	MS4 PERMIT			$944.00
Invoice 50452						
Cash Payment	G 803-22001	Turtle Ponds 6th-2022	TURTLE PONDS 6TH ADDITION			$383.50
Invoice 50449						
Cash Payment	E 405-43100-441	Miscellaneous	MUNICIPAL STATE AID 2023 - CERTIFICATION OF MILEAGE			$369.00
Invoice 50450						
Cash Payment	E 603-49490-303	Engineering Fees	ROUTINE RETAINER			$800.00
Invoice 50454						
Cash Payment	E 101-42400-303	Engineering Fees	BUILDING PERMIT REVIEWS 2023			$147.00
Invoice 50455						
Cash Payment	E 405-43100-809	Patriot Parkway	PATRIOT PARKWAY			$1,286.00
Invoice 50451						
Cash Payment	E 603-49490-303	Engineering Fees	GENERAL ENGINEERING			$619.50
Invoice 50453						
Transaction Date	4/26/2023	Due 4/26/2023	CASH	10100	**Total**	$4,549.00

Claim Type

Claim# 18171 *HAWKINS, INC.*

Cash Payment	E 602-49490-216	Chemicals	CHEMICALS			$12,206.88
Invoice 6453327						
Cash Payment	E 601-49440-216	Chemicals	CHEMICALS			$7,404.32
Invoice 6453674						

CITY OF ST FRANCIS

*Claim Register©

AP 05-01-2023

April 2023

Transaction Date	4/25/2023		CASH	10100	**Total**	$19,611.20
Claim Type						
Claim# 18169	*JEFFERSON FIRE & SAFETY INC.*					
Cash Payment	E 101-42210-437 Uniforms		UNIFORMS			$571.90
Invoice IN301923						
Transaction Date	4/25/2023		CASH	10100	**Total**	$571.90
Claim Type						
Claim# 18168	*JOHNSON BROS WHLSE LIQUOR*					
Cash Payment	E 609-49751-206 Freight		FREIGHT			$29.12
Invoice 2277069						
Cash Payment	E 609-49751-206 Freight		FREIGHT			$9.10
Invoice 2277070						
Cash Payment	E 609-49751-251 Liquor		LIQUOR			$1,994.50
Invoice 2277069						
Cash Payment	E 609-49751-253 Wine		WINE			$383.00
Invoice 2277070						
Transaction Date	4/25/2023		CASH	10100	**Total**	$2,415.72
Claim Type						
Claim# 18203	*LAW ENFORCEMENT LABOR SVC*					
Cash Payment	G 101-21707 Union Dues		OFFICER DUES - MAY 2023			$675.00
Invoice .05012023						
Transaction Date	4/26/2023	Due 4/26/2023	CASH	10100	**Total**	$675.00
Claim Type						
Claim# 18176	*MARIE RIDGEWAY LICSW*					
Cash Payment	E 101-42210-208 Training		TRAINING			$2,400.00
Invoice 2149						
Transaction Date	4/25/2023	Due 4/25/2023	CASH	10100	**Total**	$2,400.00
Claim Type						
Claim# 18166	*MCDONALD DIST CO.*					
Cash Payment	E 609-49751-251 Liquor		LIQUOR			$167.10
Invoice 682859						
Cash Payment	E 609-49751-252 Beer		BEER			$11,159.00
Invoice 682860						
Cash Payment	E 609-49751-252 Beer		BEER			-$369.75
Invoice 682883						
Cash Payment	E 609-49751-255 N/A Products		NON-ALCHOLIC PRODUCTS			$25.85
Invoice 682860						
Transaction Date	4/25/2023		CASH	10100	**Total**	$10,982.20
Claim Type						
Claim# 18208	*METRO SALES, INC.*					
Cash Payment	E 101-42110-311 Contract		COPIES			$425.90
Invoice INV2267388						
Transaction Date	4/27/2023	Due 4/27/2023	CASH	10100	**Total**	$425.90
Claim Type						
Claim# 18129	*METRO WEST INSPECTIONS SER*					
Cash Payment	E 101-42400-311 Contract		FINALED PERMITS - 2021			$5,158.05
Invoice 3627						
Transaction Date	4/18/2023		CASH	10100	**Total**	$5,158.05

CITY OF ST FRANCIS

*Claim Register©

AP 05-01-2023

April 2023

Claim Type

Claim# 18183 *MHSRC/RANGE*

Cash Payment	E 101-42110-208	Training	TRAINING			$980.00
Invoice 337900-9956						
Transaction Date	4/25/2023	Due 4/25/2023	CASH	10100	**Total**	$980.00

Claim Type

Claim# 18142 *MORRELL & MORRELL LP*

Cash Payment	E 405-43100-441	Miscellaneous	MATERIALS			$2,501.35
Invoice 70361						
Cash Payment	E 405-43100-441	Miscellaneous	MATERIALS			$823.78
Invoice 70358						
Cash Payment	E 405-43100-441	Miscellaneous	MATERIALS			$2,854.95
Invoice 70356						
Cash Payment	E 405-43100-441	Miscellaneous	MATERIALS			$2,460.92
Invoice 70353						
Cash Payment	E 405-43100-303	Engineering Fees	EMERGENCY ROAD REPAIRS			$3,654.94
Invoice 70359						
Cash Payment	E 405-43100-441	Miscellaneous	MATERIALS			$2,915.67
Invoice 70360						
Transaction Date	4/20/2023		CASH	10100	**Total**	$15,211.61

Claim Type

Claim# 18182 *PAUSTIS WINE COMPANY*

Cash Payment	E 609-49751-206	Freight	FREIGHT			$15.00
Invoice 198486						
Cash Payment	E 609-49751-253	Wine	WINE			$520.00
Invoice 198486						
Cash Payment	E 609-49751-254	Miscellaneous Merchandis	MISC			$96.00
Invoice 198486						
Transaction Date	4/25/2023		CASH	10100	**Total**	$631.00

Claim Type

Claim# 18181 *PEPSI COLA*

Cash Payment	E 609-49751-254	Miscellaneous Merchandis	MISC			$667.69
Invoice 51795255						
Transaction Date	4/25/2023		CASH	10100	**Total**	$667.69

Claim Type

Claim# 18178 *PHILLIPS WINE & SPIRITS CO.*

Cash Payment	E 609-49751-206	Freight	FREIGHT			$7.28
Invoice 6574976						
Cash Payment	E 609-49751-206	Freight	FREIGHT			$13.50
Invoice 6572413						
Cash Payment	E 609-49751-206	Freight	FREIGHT			$286.66
Invoice 8574975						
Cash Payment	E 609-49751-206	Freight	FREIGHT			$7.28
Invoice 6574977						
Cash Payment	E 609-49751-254	Miscellaneous Merchandis	MISC			$28.05
Invoice 6574977						
Cash Payment	E 609-49751-253	Wine	WINE			$239.80
Invoice 6574976						
Cash Payment	E 609-49751-251	Liquor	LIQUOR			$15,289.25
Invoice 8574975						

CITY OF ST FRANCIS

*Claim Register©

AP 05-01-2023

April 2023

Cash Payment	E 609-49751-251	Liquor		LIQUOR		$676.00
Invoice 6572413						
Transaction Date	4/25/2023		CASH	10100	**Total**	$16,547.82

Claim Type

Claim# 18141 *RMB ENVIRONMENTAL LAB*

Cash Payment	E 602-49490-313	Sample Testing		ALL WEEKS COOLER 2		$162.26
Invoice B008483						
Cash Payment	E 602-49490-313	Sample Testing		WEEKS 2-4 COOLER 1		$214.53
Invoice B008508						
Cash Payment	E 602-49490-313	Sample Testing		WEEKS 2-4 COOLER 1		$214.53
Invoice B008462						
Transaction Date	4/20/2023		CASH	10100	**Total**	$591.32

Claim Type

Claim# 18175 *ROYAL SUPPLY*

Cash Payment	E 101-41940-210	Operating Supplies		SUPPLIES		$64.40
Invoice 4746						
Cash Payment	E 101-42110-217	Other Operating Supplies		SUPPLIES		$32.20
Invoice 4746						
Cash Payment	E 101-43100-217	Other Operating Supplies		SUPPLIES		$16.10
Invoice 4746						
Cash Payment	E 101-45200-217	Other Operating Supplies		SUPPLIES		$16.10
Invoice 4746						
Cash Payment	E 601-49440-217	Other Operating Supplies		SUPPLIES		$16.10
Invoice 4746						
Cash Payment	E 602-49490-217	Other Operating Supplies		SUPPLIES		$16.10
Invoice 4746						
Transaction Date	4/25/2023	Due 4/25/2023	CASH	10100	**Total**	$161.00

Claim Type

Claim# 18174 *SOUTHERN GLAZERS OF MN*

Cash Payment	E 609-49751-206	Freight		FREIGHT		$28.48
Invoice 2333837						
Cash Payment	E 609-49751-251	Liquor		LIQUOR		$2,072.32
Invoice 2333837						
Transaction Date	4/25/2023		CASH	10100	**Total**	$2,100.80

Claim Type

Claim# 18140 *ST. FRANCIS TRUE VALUE HARD*

Cash Payment	E 101-45200-217	Other Operating Supplies		OPERATING SUPPLIES		$854.55
Invoice 49351						
Transaction Date	4/20/2023	Due 4/20/2023	CASH	10100	**Total**	$854.55

Claim Type

Claim# 18173 *STREICHER S*

Cash Payment	E 101-42110-437	Uniforms		UNIFORMS		$372.97
Invoice 1628323						
Transaction Date	4/25/2023	Due 4/25/2023	CASH	10100	**Total**	$372.97

Claim Type

Claim# 18130 *TJ ASSOCIATES*

Cash Payment	E 101-42110-200	Office Supplies		POLICE ID BADGES		$19.90
Invoice 240389						
Transaction Date	4/18/2023	Due 4/18/2023	CASH	10100	**Total**	$19.90

CITY OF ST FRANCIS

*Claim Register©

AP 05-01-2023

April 2023

Claim Type

Claim# 18187 *USABLUEBOOK*

Cash Payment E 601-49440-233 Water Plant Maint LAB SUPPLIES $44.10
Invoice 330189

Transaction Date 4/26/2023 Due 4/26/2023 CASH 10100 **Total** $44.10

Claim Type

Claim# 18186 *VESSCO, INC.*

Cash Payment E 601-49440-233 Water Plant Maint WATER PLANT MAINTENANCE $144.72
Invoice 090730

Transaction Date 4/26/2023 CASH 10100 **Total** $144.72

Claim Type

Claim# 18172 *VINOCOPIA, INC.*

Cash Payment E 609-49751-206 Freight FREIGHT $19.50
Invoice 0327511

Cash Payment E 609-49751-251 Liquor LIQUOR $67.50
Invoice 0327511

Cash Payment E 609-49751-253 Wine WINE $1,120.00
Invoice 0327511

Transaction Date 4/25/2023 CASH 10100 **Total** $1,207.00

Claim Type

Claim# 18185 *WWGOETSCH ASSOCIATES*

Cash Payment E 602-49490-229 Project Maintenance PROJECT MAINTENANCE $5,471.00
Invoice 110125

Transaction Date 4/26/2023 CASH 10100 **Total** $5,471.00

Pre-Written Checks	$0.00
Checks to be Generated by the Computer	$231,365.35
Total	$231,365.35

City of St. Francis

CITY COUNCIL AGENDA REPORT

TO: St. Francis City Council

FROM: Beth Richmond, Planner

SUBJECT: Comprehensive Plan Amendment, Rezoning

DATE: May 1, 2023

APPLICANT: C&E Ventures, LLC (Eric Vickaryous)

LOCATION: North of Bridgestone Rd NW and south of Seelye Brook (PINs 36-34-25-22-0006 and 36-34-25-23-0004)

COMP PLAN: Agriculture

ZONING: A-2

OVERVIEW:

Eric Vickaryous of C&E Ventures LLC has submitted an application for a Comprehensive Plan amendment and rezoning for the roughly 22.5 acres of vacant land located outside of the City's Urban Service Area between Ambassador Blvd NW and Bridgestone Rd NW. This site is made up of two parcels and abuts Seelye Brook. The applicant is requesting to change the allowable use of the property from Agriculture to Rural Residential. A rezoning from A-2 Rural Estate-Agriculture to RR Rural Residential is also requested.

PLANNING COMMISSION REVIEW

The Planning Commission reviewed the amendment and rezoning requests at their meeting on April 19, 2023. Members of the public attended the meeting and spoke at the public hearing. A majority of public comments were related to concerns with the amount of buildable land on the site relative to the existing wetlands and floodplain and the creation of multiple access points along a curved roadway. Staff noted that the applicant would be required to meet City standards for buffers and setbacks from wetlands and adequate septic site locations with any future subdivision submittal. Staff also shared that Anoka County has reviewed the requests and did not have significant concerns with the potential future development of the site.

Following the public hearing and Planning Commission discussion, the Commission recommended approval of both the Comprehensive Plan amendment and the rezoning requests.

CITY COUNCIL ACTION

Given Planning Commission and Staff recommendation for approval of the Comprehensive Plan amendment and rezoning requests, draft approval materials approving the requests have been prepared for your consideration.

Suggested Motions:

a. *Move to approve Resolution 2023-15 approving the Comprehensive Plan Amendment to reguide 22.5 acres of land between Ambassador Blvd NW and Bridgestone Rd NW from Agriculture to Rural Residential with conditions and findings of fact as recommended by Staff and to authorize submittal of this amendment to the Metropolitan Council for final review.*

b. *Move to approve the 1st Reading of Ordinance 312 approving the rezoning request to rezone 22.5 acres of land between Ambassador Blvd NW and Bridgestone Rd NW from A-2 to RR.*

ATTACHMENTS:

- Draft Resolution 2023-15
- Draft Ordinance 312 – 1st Reading
- Planning report for April 19, 2023

CITY OF ST. FRANCIS
ST. FRANCIS, MN
ANOKA COUNTY

RESOLUTION 2023-15

A RESOLUTION APPROVING A COMPREHENSIVE PLAN AMENDMENT FOR LAND LOCATED NORTH OF BRIDGESTONE ROAD NW AND SOUTH OF SEELYE BROOK AND AUTHORIZING SUBMISSION OF THE AMENDMENT TO THE METROPOLITAN COUNCIL FOR REVIEW

WHEREAS, the applicant, C&E Ventures LLC , has requested a Comprehensive Plan amendment to reguide approximately 22.5 acres of land from Agriculture to Rural Residential; and

WHEREAS, the site is intended as a future residential subdivision; and

WHEREAS, the site includes two parcels depicted in Exhibit A and known as:
PIDs: 36-34-25-22-0006
36-34-25-23-0004; and

WHEREAS, all adjacent and affected agencies including MnDNR and Anoka County were provided an opportunity to review the proposed amendment and provide comments; and

WHEREAS, on April 19, 2023, after published and mailed notice in accordance with Minnesota Statutes and the City Code, the Planning Commission held a public hearing, at which time all persons desiring to be heard concerning this application were given the opportunity to speak thereon; and

WHEREAS, on April 19, 2023, the Planning Commission recommended approval of the requested amendment; and

WHEREAS, the City Council of the City of St. Francis, on May 1, 2023, considered the requested amendment and how it might affect public health, safety, or welfare and found that the project will not negatively impact the public health, safety, or welfare.

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of St. Francis hereby approves the requested Comprehensive Plan amendment based on the following findings of fact:

1. The proposed amendment is compatible with the surrounding land uses.
2. The proposed amendment is consistent with the vision and guiding principles for the City of St. Francis established in the Comprehensive Plan and will not negatively impact the public health, safety, or welfare.

BE IT FURTHER RESOLVED that approval of the Comprehensive Plan Amendment shall be subject to the following condition:

1. The Comprehensive Plan amendment shall be submitted to the Metropolitan Council for final review and approval.

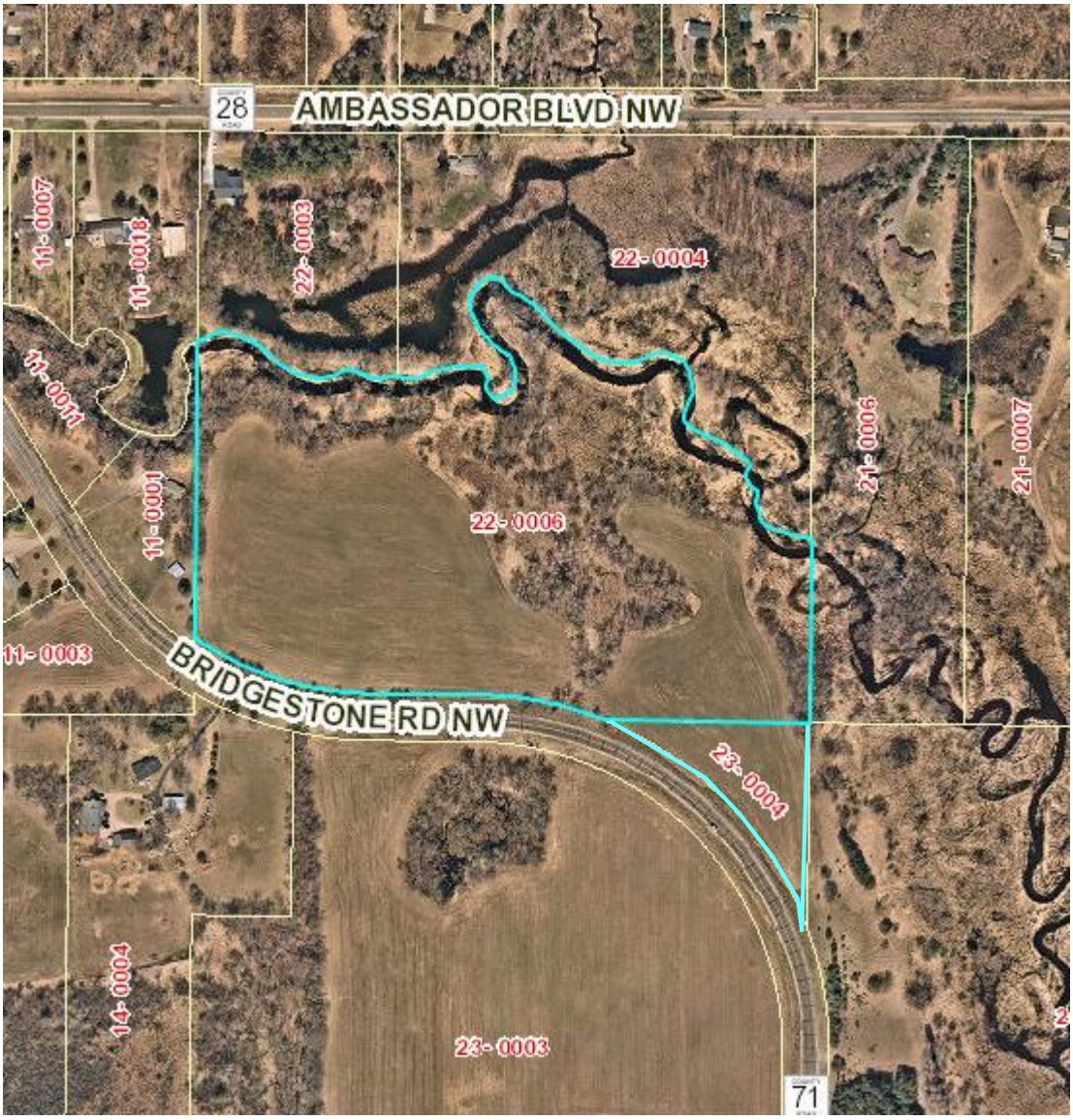
Approved and adopted by the City Council of the City of St. Francis on the 1st day of May, 2023.

_____
Steven D. Feldman, Mayor

_____ _____
Attest: Jennifer Wida, City Clerk Dated

DRAFTED BY:
Hoisington Koegler Group, Inc.
800 Washington Ave N, Suite 103
Minneapolis, MN 55401

EXHIBIT A


28
AMBASSADOR BLVD NW
11 - 0007
11 - 0018
22 - 0003
22 - 0004
11 - 0011
11 - 0001
22 - 0006
21 - 0006
21 - 0007
11 - 0003
BRIDGESTONE RD NW
23 - 0004
14 - 0004
23 - 0003
71

ORDINANCE NO. 312, SECOND SERIES

CITY OF ST. FRANCIS
ANOKA COUNTY

AN ORDINANCE APPROVING REZONING LAND LOCATED NORTH OF BRIDGESTONE ROAD NW AND SOUTH OF SEELYE BROOK FROM A-2 TO RR – 1ST READING

WHEREAS, the applicant, C&E Ventures LLC, applied for a rezoning on March 8, 2023 for the property legally described in Exhibit A; and

WHEREAS, on April 19, 2023, after published and mailed notice in accordance with Minnesota Statutes and the City Code, the Planning Commission held a public hearing, at which time all persons desiring to be heard concerning this application were given the opportunity to speak thereon; and

WHEREAS, on April 19, 2023, at an official public hearing, the Planning Commission considered the applicant's submission, the contents of the staff report, public testimony, and other evidence available to the Commission; and made recommendations for consideration by the City Council; and

WHEREAS, on May 1, 2023, the City Council has considered the proposed project and found that the project will not negatively impact the public health, safety, or welfare; and

WHEREAS, the rezoning to RR is consistent with the Comprehensive Plan designation for the site as amended.

THE CITY COUNCIL OF THE CITY OF ST. FRANCIS, ANOKA COUNTY, MINNESOTA, ORDAINS:

Section 1. The property legally described in Exhibit A is hereby rezoned from the A-2 Rural Estate-Agriculture District to the RR Rural Residential District.

Section 2. The Zoning Map of the City of St. Francis referred to and described in Section 10-14-03 of the St. Francis City Code shall not be republished to show the aforesaid rezoning, but the Zoning Administrator or designee shall appropriately mark the Zoning Map on file in the City Clerk's office for the purpose of indicating the rezoning provided for in this ordinance and all of the notations, references, and other information shown thereon are hereby incorporated by reference and made a part of this ordinance.

Section 3. This Ordinance shall take effect and be enforced from and after its passage and publication according to law.

Approved and adopted by the City Council this 1st day of May, 2023.

BY: _____
SEAL Steven D. Feldman, Mayor

_____
Attest: Jennifer Wida, City Clerk

Published in the Anoka County Union Herald _____2023.

DRAFTED BY:
Hoisington Koegler Group, Inc.
800 Washington Ave N, Suite 103
Minneapolis, MN 55401

EXHIBIT A

Legal Descriptions

All that part of the Northwest Quarter of the Northwest Quarter of Section 36, Township 34, Range 25, Anoka County, Minnesota, lying South of the center line of Seeley Brook, so-called, as the same traverses said land, save that the North boundary line for a rod or so next to the East line of said land, shall be a line running Easterly from the point of the last bend of said Cree, to a point on the East line of said 40 acres, which point is 36 1/2 rods and 3 links North from the Southeast corner thereof, and lying North of the center line of County Road No. 71, as now laid out and traveled.

AND

All that part of the Southwest Quarter of the Northwest Quarter, Section 36, Township 34, Range 25, Anoka County, Minnesota, lying North of the center line of County Road No. 71, as now laid out and traveled.

City of St. Francis

PLANNING COMMISSION AGENDA REPORT

TO: St. Francis Planning Commission

FROM: Beth Richmond, Planner

SUBJECT: Comprehensive Plan Amendment, Rezoning

DATE: 4-12-2023 for 4-19-2023 meeting

APPLICANT: C&E Ventures, LLC (Eric Vickaryous)

LOCATION: North of Bridgestone Rd NW and south of Seelye Brook (PINs 36-34-25-22-0006 and 36-34-25-23-0004)

COMP PLAN: Agriculture

ZONING: A-2

OVERVIEW:

Eric Vickaryous of C&E Ventures LLC has submitted an application for a Comprehensive Plan amendment and rezoning for the roughly 22.5 acres of vacant land located outside of the City's Urban Service Area between Ambassador Blvd NW and Bridgestone Rd NW. This site is made up of two parcels and abuts Seelye Brook. Roughly one third of the site consists of wetland.

In February 2023, several concept plans for this property were reviewed by the Planning Commission and City Council. The concepts included a variety of plans to create a residential subdivision on the site. During the concept plan review process, it was determined that, in addition to other approvals, a Comprehensive Plan amendment would be required for any residential development on the site consisting of more than two lots. The Planning Commission and City Council were most supportive of the concept plan which included the development of four residential lots on the site.

The Planning Commission is requested to hold a public hearing, review the Comprehensive Plan amendment and rezoning requests, and provide a recommendation to the City Council. If approved, the applicant intends to submit additional applications in the future including preliminary and final plats.

COMPREHENSIVE PLAN AMENDMENT REVIEW

The subject site is currently guided for Agriculture use. Land to the north, east, and west is guided for Rural Residential use. The Rural Residential land use category is not generally intended to be expanded. However, this site is not actively used for agriculture today and is surrounded by an existing rural residential neighborhood. Staff supports the amendment request in order to continue the development pattern that has already been established in the area.

Existing Future Land Use Map

If approved, the future development of the site will be required to adhere to the uses and density ranges established in the Comprehensive Plan for the Rural Residential land use category. Land guided for RR use is allowed a maximum density of 1 unit per 5 acres. If flexible development strategies such as clustering or build out plans are used, this maximum density can be increased.

REZONING REVIEW

The City is required to ensure that its zoning map is in compliance with its Comprehensive Plan land use guidance. The applicant has also applied to rezone the subject site from A-2 Rural Estate Agriculture to RR Rural Residential in conformance with the requested Comprehensive Plan amendment.

Similar to the RR designation, the RR zoning district is not intended to be expanded. However, a site's zoning is required to conform to its land use guidance. Therefore, if the Commission is supportive of the Comprehensive Plan amendment to reguide the site to Rural Residential, then the rezoning request from A-2 to RR should also be supported.

RECOMMENDATION

Staff requests that the Planning Commission hold a public hearing and review the requested Comprehensive Plan amendment and rezoning. If the City Council approves the Comprehensive Plan amendment request, the amendment will be submitted to the Metropolitan Council for final review.

Staff recommends the following:

1. Planning Commission recommendation of approval of the Comprehensive Plan Amendment to reguide 22.5 acres of land between Ambassador Blvd NW and Bridgestone Rd NW from Agriculture to Rural Residential with conditions and findings of fact.
2. Planning Commission recommendation of approval of the rezoning request to rezone 22.5 acres of land between Ambassador Blvd NW and Bridgestone Rd NW from A-2 to RR.

Proposed Conditions of Approval – Comprehensive Plan Amendment

1. The Comprehensive Plan amendment shall be submitted to the Metropolitan Council for final review and approval.

Proposed Findings of Fact – Comprehensive Plan Amendment

1. The proposed amendment is compatible with the surrounding land uses.

PLANNING COMMISSION ACTION

After the public hearing and discussion, the Planning Commission could take one of the following actions:

1. Recommend approval with the conditions and findings of fact as presented by Staff.

   Suggested Motions:

   a. *Move to recommend approval of the Comprehensive Plan Amendment to reguide 22.5 acres of land between Ambassador Blvd NW and Bridgestone Rd NW from Agriculture to Rural Residential with conditions and findings of fact as recommended by Staff.*

   b. *Move to recommend approval of the rezoning request to rezone 22.5 acres of land between Ambassador Blvd NW and Bridgestone Rd NW from A-2 to RR.*

2. Recommend denial with Planning Commissioners' findings of fact.
3. Table the request to the next Planning Commission meeting and provide direction to Staff and the applicant as to the additional information needed.

CITY COUNCIL AGENDA REPORT

TO: Kate Thunstrom, City Administrator

FROM: Craig Jochum, City Engineer

SUBJECT: Approve updated Private Development Standards

DATE: May 1, 2023

OVERVIEW:

The City's Private Development Standards includes details and product specific information for Developer's to reference when planning and constructing a new development. The standards were last updated in 2013, therefore, they were over a decade old and many of the references and material specifications were outdated.

The Private Development Standards have been updated to reference current bituminous mixtures, current manufacturer specifications, and other minor updates.

The Private Development Standards have also been updated to include Standard Details for the City Code revisions that are concurrently being considered. These City Code revisions include adding standards for rural roads in the Rural Service Area as well as standards for Private Streets.

The updated Private Development Standards have been reviewed by Public Works Staff and have been coordinated with Community Development and Planning staff such that they correlate with the proposed City Code revisions

ACTION TO BE CONSIDERED:

We recommend that the City Council approve the updated Private Development Standards.

BUDGET IMPLICATION:

None- The cost for the improvements for new developments are borne by the Developer.

Attachments:

- Private Development Standards, dated April 27, 202

City of St. Francis

PRIVATE DEVELOPMENT STANDARDS

April 27, 2023

Forward

In order to protect the public health, safety and welfare, it is necessary to establish standards for engineering in the City of St. Francis.

This manual outlines specific requirements, materials and standards that will be incorporated into the preparation of plans and specifications for sanitary sewer, storm sewer, watermain, trails, street construction and other improvements within the City of St. Francis. The following definitions shall be used for this manual:

Owner: Owner shall mean the person(s), company, corporation, etc. that enter into a "Developers Agreement" with the City of St. Francis for the purpose of construction of public improvements on lands under the ownership and control of said persons(s), company, corporation, etc.

Engineer: Engineer shall mean the Owner's Engineer.

City Engineer: City Engineer shall mean the Licensed Professional Engineer(s) under contract to the City to serve in that capacity.

Approved Plans: Shall mean all Plans and Specifications and information required to be shown thereon per the City of St. Francis Ordinances, along with these Standard Specifications.

Sanitary sewer facilities and water work shall be designed to conform to the “10 State Standards” and shall be constructed in accordance with City Engineers Association of Minnesota Standard Specifications except as modified by specific City of St. Francis requirements. Street and road surface improvements shall be designed to the standards of the Minnesota Department of Transportation design manuals and shall be constructed in accordance with the Minnesota Department of Transportation Standard Specifications except as modified by specific City of St. Francis requirements.

Development plans and public facilities construction plans shall conform to City of St. Francis Ordinances and Comprehensive Plans. Related to engineering, comprehensive plans include the sanitary sewer system with associated trunk facilities for area service, the water distribution system with watermain oversizing, the surface water runoff control plan and the city transportation plan with designated collector streets. The City of St. Francis has the authority to construct improvements as necessary conforming with City Comprehensive Planning with the costs of improvements allocated or assessed to properties for benefit.

Once the plat, plans and specifications and associated documents have been reviewed, approved and signed, the City will allow the Developers, as defined in the Development Agreement, to proceed with the construction.

These standards are established as policy and as such may be subject to change by action of the City Council. The City of St. Francis Private Development Standards manual was approved by the City Council on _____ .

TABLE OF CONTENTS

GLOSSARY OF TERMS

AASHTO	American Association of State Highway and Transportation Office
ANSI	American National Standards Institute
ASTM	American Society of Testing and Materials
AWWA	American Water Works Association
CEAM	City Engineer’s Association of Minnesota
CMP	Corrugated Metal Pipe
HDPE	High Density Polyethylene
MnDOT	Minnesota Department of Transportation
MnPCA	Minnesota Pollution Control Agency
PID	Property Identification Number
PVC	Polyvinyl chloride
RCP	Reinforced Concrete Pipe
SDR	Strength to Diameter Ratio

ENGINEERING MANUAL

I. Engineering Requirements

As set forth in various sections of the City ordinances, Developers of property within the City of St. Francis are required to submit certain plans and specifications for review and approval by the City. These include such items as grading plans, drainage plans, topographic surveys, plats, street and utility plans and specifications. These plans and specifications shall be prepared by competent professionals.

The professional services required of the Developer may include one or more of the following professionals: architect, land surveyor, planner, soils and civil engineer and testing service. The engineering services include not only preparation of plans and specifications, but field staking in order to assure the City that the completed project is in conformance with the approved plans and specifications. The City will provide construction observation of the installation of the facilities at the Developer's expense.

The following procedures shall be followed:

1. The Developer shall submit plans, specifications and copies of all design calculations to the City for review and approval. These plans are to be prepared by a licensed professional civil engineer and shall be in accordance with City standards as outlined herein. The City comprehensive sanitary sewer, water, storm drainage and thoroughfare plans shall be adhered to in design considerations. All sanitary sewer and watermain testing shall be completed and copies of service ties submitted to the City prior to issuance of any service connection permits.

2. The Developer shall submit erosion and sediment control plans to the City for review and approval. No work is to begin until all erosion and sediment control methods are in place and approved by the City.

3. The Developer shall furnish a separate Development Plan showing housepad with elevations on front & back of pad and garage floor slab, lot corners, drainage arrows, and street grade in front of driveway.

4. The Developer will be responsible for not only plans and specifications preparation, but also for providing construction staking. Resident construction observation of said improvements to assure compliance with the approved plans shall be completed by the City.

5. Copies of all bids, change orders, etc. relating to the improvements shall be forwarded to the City Engineer.

6. The Developer shall furnish to the City the list of selected contractors and subcontractors being considered for retention by the Developer for any of the public improvements work in the development. The City has the right to reject any contractor or subcontractor deemed unacceptable to the City.

7. Any changes to the approved plans and specifications shall be approved by the City Engineer in writing before work is started. If the change affects the project letter of credit by increasing the cost, the letter of credit shall be increased before the work can begin.

8. The Developer will hold a preconstruction meeting at the City Hall prior to start of any work on the development. The City staff and City Engineer along with the contractor and subcontractors, Developer's engineer, utility companies and other interested parties must be invited to the meeting. The Developer will be responsible for drafting pre-construction meeting minutes. The said minutes shall be submitted to the City Engineer for review, and then distributed by the Developer to all parties whom were in attendance at the meeting.

9. The Developer shall retain an independent testing service to perform the required tests of materials. Copies of tests will be directed to the City Engineer or his designated representative. The cost of this service will be the responsibility of the Developer.

   The City shall be notified 24 hours in advance of all scheduled tests so its representatives can be present at the time tests are made. The required tests include sanitary sewer, watermain, storm sewer, street subgrade, base course, wear course, and curb and gutter.

10. Upon completion of all the work required, the City Engineer or his/her designated representative, a representative of the contractor and a representative of the Developer will make the required final inspections of all work. This includes a final inspection of all site grading and approval by the City Engineer before any building permits will be issued. Before the improvements are considered for acceptance by the City, the City Engineer shall be satisfied that all work is satisfactorily completed in accordance with the approved plans and specifications, and the Developer's engineer shall submit a written statement attesting to same. Acceptance of the completed work shall be made by motion of the City Council upon the recommendation of the City Engineer.

11. An as-built survey signed by a Professional Land Surveyor for each individual lot will be required to verify lot corner elevations, swales, emergency overflow elevations, and house low floor and lowest opening elevations. Said survey shall be submitted to the City Building

Department for review and approved by the City Engineer prior to the Certificate of Occupancy being issued.

12. Warranty Period – If within the time prescribed by law, by the contract documents and/or the Developer's Agreement any of the work is found to be unacceptable, the Developer shall correct it promptly unless the City Council has previously accepted the work. The Developer shall give prompt notice after discovery of any unacceptable conditions to the contractor responsible for the project work.

    Unless otherwise noted in the contract documents, the following requirements shall apply:

    a. The contractor shall guarantee all work relating to street construction including concrete curb and gutter, utilities, appurtenances, material and equipment furnished by him/her for a period of two years from the date of written acceptance by the City Council of the work or project.

    b. The Developer shall provide letter of credit(s) as defined in the Developers Agreement. The amount of the letter of credit(s) will be determined by the City Engineer and the City Attorney.

13. After all public improvements have been completed, properly inspected as specified above, and after an acceptable maintenance guarantee has been provided the public improvements will be scheduled for acceptance by the City Council subject to the following:

    a. The Developer or the Developer's engineer must submit written certification to the City Engineer stating that all public improvements have been completed in accordance with the approved plans and specifications.

    b. The Developer's engineer shall provide the City with a complete set of "as-builts" for the City records as outlined in this manual. These as-builts shall be submitted prior to release of building permits.

II. Erosion Control Policy

1. Required Erosion Control Plan. Prior to commencing any earth disturbing activity in a subdivision, the Developer shall prepare and submit to the City Engineer a Stormwater Pollution Prevention Plan (SWPPP).

2. The SWPPP shall conform to the MnPCA's "Application for General Storm-water Permit for Construction Activity (MN R100001) and as specified herein:

a. The plan shall be suited to the topography and soils so as to create the least erosion potential.

b. The land shall be developed in increments of workable size on which adequate controls of erosion and siltation can be provided and maintained during the construction period. Grading operations and other land disturbing operations shall be staged so that the area being developed is not exposed for long periods of time without stabilization.

c. Temporary vegetation and/or mulching shall be used to protect the areas exposed during the development. No area shall be left denuded for a period longer than five (5) days after initial site grading and other land disturbing operations on slopes of 3:1 and greater. These areas shall be mulched and stabilized with an erosion control netting or hydraulic erosion control matrix acceptable to the City Engineer.

d. Permanent vegetation and erosion control measures shall be installed within time period as prescribed in the approved SWPPP. If grading is not completed until after the planting season has expired, temporary erosion control measures, including dormant seeding and mulching, shall be implemented.

e. Sediment basins (debris basins, desilting basins, or silt traps) shall be installed and maintained to remove sediment from runoff waters from the land undergoing development. Storm sewer inlets shall be provided with debris guards and microsilt basins to trap sediment and avoid possible damage from blockage. The silt shall be removed when necessary. If sediment/siltation measures taken are not adequate and result in downstream sediment, the Developer shall be responsible for cleaning out or dredging downstream storm sewers, ponds, and/or natural features as necessary.

f. Before grading is commenced, all control measures as shown on the approved plan shall be installed.

g. Immediately after curb and gutter has been placed, cured, and backfilled, approved erosion control measures shall be installed directly behind the curb.

h. Erosion control practices shall comply with the Minnesota Pollution Control Agency Best Management Practices.

i. The Developer shall be responsible for cleaning and maintenance of the storm sewer system (including ponds, pipes, catch basins, culverts, and swales) within the subdivision and the adjacent off-site storm sewer system that receives storm water from the subdivision. The Developer shall follow all instructions it receives from the City concerning the cleaning and maintenance of the storm sewer system. The Developer's obligations under this paragraph shall end as defined in the Developers Agreement.

j. The Developer shall be responsible for cleaning all streets in the subdivision and adjacent to the subdivision from sediment and debris from the subdivision for a period of two (2) year beginning when the streets have been completed and accepted by the City.

3. Financial Guarantee

a. A portion of the Developer's letter of credit required by the Developer's agreement shall include a guarantee of compliance with erosion control measures, and shall be furnished upon approval of the Developer's Agreement before work is commenced. The financial guarantee shall remain in place until all the Developer's obligations under the erosion control plan have been satisfied.

b. If the City draws upon the financial guarantee, the Developer shall within ten (10) days of the draw, deposit with the City additional security in the same amount that the City has drawn. No further inspections will be conducted, no new building permits will be issued, and all work must stop within the development until the cash deposit for erosion control is restored to the predraw balance.

4. Street Sweeping. The Developer shall provide street sweeping within the plat before the final acceptance is approved. If the construction operation within or out of the plat causes debris on the existing streets, the City Engineer may require street sweeping done by the Developer.

5. Enforcement.

   a. The City may issue a stop work order halting all development work and building construction for noncompliance with the erosion control plan.

   b. The City may draw down the posted financial guarantee and perform any work necessary to achieve compliance with the erosion control plan. The City will endeavor to give the Developer advance notice of such action.

III. City Standard Plans

In order for the City to have standardized construction and as-built plans, the guidelines listed below shall be followed:

General Requirements:

1. The Developers must consider the requirements for plans found in the subdivision ordinance and street construction standards attached herein.

2. Incorporated in the set of plans shall be a sheet indicating the entire project, with corresponding sheet numbers on each separate sheet and index.

3. All sheets shall be 22” x 34”, reduceable to 11” x 17” at correct scaling.

4. Scale Horizontal Scale 1” = 50’
   Vertical Scale 1” = 5’
   (unless otherwise approved by the City engineer)

5. General Details

   a. North arrow
   b. Scale with bargraph
   c. Date of preparation
   d. Proposed name of the subdivision in which the roadway and utilities are to be constructed.
   e. Proposed name of all streets
   f. Name of the plan preparer, Engineer, Surveyor and Owner
   g. Seal or signature of the preparer and Licensed Engineer
   h. Street, sanitary sewer, watermain and storm sewer plan and profile shall be drawn at a scale of 1” = 50’ horizontal and 1” = 5’ vertical.
   i. Street cross-sections shall be drawn at a scale of 1” = 10’ horizontal and 1” = 5’ vertical.

j. Location map which shows all existing streets within 2500 feet of the proposed plat.

6. All utilities shall be shown in the following approximate locations:

a.	Sanitary Sewer	-	on centerline of street right-of-way
b.	Watermain	-	ten feet north and east of centerline
c.	Storm Sewer	-	ten feet south and west of centerline

7. All detail drawings shall be on a separate sheet and referenced to the proper sheet.

8. The profile shall be directly below the plan with the stationing aligned as closely as practical. Stationing shall be shown on the plan view as well as the profile.

9. All parcels shall be properly labeled with lot and block numbers and plat name, or P.I.D. in unplatted areas. Developed parcels shall have their address shown on the plan. Bearings and distances for all existing roadway centerlines and right-of-ways described above shall be shown.

10. All match line breaks shall be clean with reference points clearly marked. All plans which are broken by a matchline shall be on the same or consecutive sheets.

11. Existing utilities shall be shown in both plan and profile, stationed and labeled as existing.

12. Approximate locations of gas, electric, telephone and cable lines shall be shown.

13. Right of way and pavement or curb and gutter alignment data shall be shown. Right of way shall be rounded at intersections to allow for utility installation.

14. Bench marks shall be placed on all sheets.

Specific Requirements:

1. Stationing of sanitary sewer wyes shall be indicated “S” in front of the stationing.

2. All sanitary sewer services shall be drawn on the plan to the constructed length. If other than open cut trench methods are employed, the method needs to be indicated on the plans.

3. If the sanitary sewer wye only is constructed, it shall be noted as “Wye Only” after stationing.

4. The invert elevation of all sanitary sewer services shall be shown on the plans. If risers are installed, the height of each shall be indicated on the plans and also drawn on the profile, along with the height of each riser.

5. All manholes shall be numbered on both plan and profile.

6. All hydrants, gate valves and tees shall be stationed on the bottom of the profile.

7. All water corporation stops shall be indicated by a “W” in front of its stationing.

8. All water services shall be drawn to constructed length. If other than open cut service installation methods are employed, the method needs to be indicated on the plans.

9. The size and type of materials of all sanitary sewer and water services shall be noted on the plans.

10. On combination sewer and water projects, services may be placed in the same trench with sanitary sewer services three feet downstream from water services. Locations will be noted on the plans with an “S & W” in front of the stationing.

11. All sewer and watermain shall be shown in the profile with the appropriate information such as size, material, grades, invert elevations, etc.

As-Built Requirements:

1. All as-built plans shall be submitted electronically in .pdf and .dwg format.

2. As-built plans on all ponding areas are required. Plans shall indicate as-built spot elevations overlaid on the proposed contours, normal water elevation, high water elevation, and the acre feet of storage for each ponding area along with the final storm sewer plans.

3. All “as-built” plans shall be certified by the design engineer and land surveyor responsible for the field work.

4. All water valves shall be located with at least two permanent field ties, using the following priority:

    a. Fire hydrants

b. Manholes
c. Catch basins, if curb and gutter is in
d. Buildings or other permanent structures
e. Power poles, trees, other semipermanent items
f. Stationing from hydrants, manholes, catch basins, if over 100'
g. Back of curb only when used with station in (f.) above

5. All services shall be tied with at least two ties, using the following priority:

   a. The served structure with address noted
   b. Neighboring structures with address noted
   c. Fire hydrants
   d. Manholes, catch basins, if curb and gutter is in
   e. Other permanent structures (bridges, telephone boxes, electrical boxes, etc.)
   f. Power poles, trees, and other semipermanent items
   g. Stationing from hydrant, manhole, catch basins – these may be used with back of curb distance only as last possible means.

6. Show contractor's name on the as-builts.

7. Show where fabric has been placed or correction to pavement section has been made in the streets on the plan portion of the as-builts.

8. Benchmarks shall be referenced on each sheet.

9. All hydrants are to be at required height after lawns, boulevards, etc. are finished (sod, seed, etc.) <u>This will be the Developer's responsibility.</u>

10. The Developer shall provide the City with linework and feature locations as necessary for updating the City's G.I.S. mapping. The Developer shall pay the costs for updating the G.I.S. mapping to include the new infrastructure.

IV. <u>City Standard Materials</u>

In order to standardize certain construction materials and assure quality construction, we have adopted the following:

1. Sanitary Sewer pipe and service line materials:

   a. Plastic pipe shall be smooth wall polyvinyl chloride (PVC) and shall conform with ASTM D 3034 for the size and strength requirements shown on the plans. Minimum pipe strength shall be SDR 35 for depths 20 feet and less. For sewer depths greater than 20 feet, the pipe shall be SDR 26. In general, sanitary sewer shall not exceed

26 feet in depth unless approved by the City. All joints shall be elastomeric gasketed.

b. Ductile iron sewer pipe shall be Class 50 and shall meet ANSI specifications A-21.51.

c. All connections between existing and new sanitary sewer or service pipe shall be made with factory manufactured flexible couplings, Fernco or equivalent, specially designed and sized for sanitary sewer connections.

d. All PVC sanitary sewer service pipe and fittings shall be SDR 26 minimum pipe strength. All service pipe connections shall be solvent welded. Gasketed connections will not be allowed.

e. Maximum distance between sanitary sewer manholes shall be 400 feet. All sanitary sewer manholes shall be located on the street centerline unless otherwise approved by the City.

f. Green tracer wire is required along all sanitary sewer main and service pipe in accordance with the specification as contained herein.

2. Storm Sewer and Drainage Pipe

a. All storm sewer pipe within any street right-of-way shall be reinforced concrete pipe of the class as shown on the plans. Pipe shall meet Mn/DOT 3236 Specification. Pipe joint sealer materials shall be preformed rubber, Type A, in accordance with Mn/DOT Specification Section, 3726.

b. High density polyethylene (HDPE) is not allowed.

c. Riprap shall be required for all sizes to prevent erosion. Fabric blanket conforming with MnDOT 3733 Type IV shall be required under the rip-rap. Erosion control blanket is required at all inlets per Mn/DOT Standard Plat No. 9102D.

d. All flared end sections for pipe culverts 18” and larger shall be fitted with trash guards and all flared end sections on pipe storm sewer systems shall be fitted with trash guards.

3. Metal Sewer Castings

a. Castings for sanitary sewer manhole shall be Neenah R1733 or approved equal with a concealed pickhole and a neoprene gasket

and groove for watertight application. The words “Sanitary Sewer” shall be imprinted on the cover. Waterproof castings where required shall be Neenah R 1755 or approved equal.

b. Castings for storm manholes and catchbasin shall be in accordance with the standard plates and schedule of structures. Unless otherwise specified, castings shall be equivalent to Neenah R-1733 for manholes and R-3067 with V or VB grates for catch basins.

c. Off-street catchbasin manhole and catchbasin inlets shall be constructed per MnDOT Standard Plate 4143E – Stool Grate & Concrete Frame and shall utilize a R-4342 or equivalent grate.

4. Manhole and Catchbasin Structure

a. Manhole and catchbasin structure shall be in accordance with applicable MnDOT standard plates or City standard plates and Mn/DOT Standard Specification Section 2506. All manholes and covers shall be reinforced for traffic loadings.

b. Manholes identified on the plans as box structures shall be constructed from precast reinforced concrete box sections conforming to ASTM C-789 placed on end. Wall thickness and reinforcement shall be in accordance with ASTM C-789 Table 1 for box section under earth dead load and HS-20 live load conditions. Base and cover slabs shall have thickness and reinforcement to meet MnDOT HS-20 traffic loadings.

c. All manhole and catchbasin structures with builds greater than 5.0 feet from casting to invert shall have steps. Maximum distance from top of casting to first step is 2 feet.

d. Sanitary sewer adjusting rings shall be Ladtech HDPE or approved equal. Storm sewer adjusting rings shall be concrete with approved Chimney Seal or Infi-Shield External Seal or Flex-Seal Utility Seal.

5. Chimney Seal or Infi- Shield External Seal or Flex-Seal Utility Seal

Any one of the three following ring seals is allowed. (Contractor choice)

a. CHIMNEY SEAL

1. Chimney seals shall consist of a flexible internal rubber sleeve, interlocking extensions and stainless steel expansion bands. (See standard plate No. 308)

2. The seal shall remain flexible throughout a 25 year design life, allowing repeated vertical movement of the frame of not less than 2 inches and/or repeated horizontal movement of not less than ½ inch. The sleeve portion of the seal shall be either double or triple pleated with a minimum unexpanded vertical height of either 8 inches or 10 inches respectively. The sleeve and extension shall have a minimum thickness of 3/16 inches and shall be made from a high quality rubber compound conforming to the applicable requirements of ASTM C-923, with a minimum 1500 psi tensile strength, a maximum 18% compression set and a hardness (durometer) of 48±5. The bands shall be integrally formed from 16 gauge stainless steel conforming to ASTM A-240, Type 304, with no welded attachments, shall have a minimum adjustment range of 2 diameter inches and a positive locking mechanism. Any screws, bolts or nuts used for this mechanism shall be stainless steel conforming to ASTM F-593 and 594, Type 304.

b. FLEX-SEAL UTILITY SEALANT

1. Manhole seal shall be designed to prevent leakage of water into the manhole through the frame joint area and the area above the manhole cone including all extensions to the chimney area. Extensions shall include but is not limited to lifting rings, brick and/or block material that may have been used to achieve grade. The seal shall remain flexible allowing for the repeated vertical or horizontal movements of the frame due to frost lift, ground movement or the thermal movement of pavements. The final liner material shall be made no less than 200 mils. of corrosion resistant aromatic flexible urethane resin coating to be applied to the inside wall of the entire chimney area as described above. The product shall have a minimum elongation of 800% and a hardness (Durometer) of 75. Final liner shall have a minimum tensile and adhesion strengths of 1150 psi and 175 lb. l/in. respectively. The manhole sealing system shall conform to the physical requirements of ASTM D-412, with a minimum of 200 mils. thickness for durability and resistance elongation and tearing. The lining product shall have an aromatic urethane primer resin on the complete surface. The sealing system shall line the interior of the adjustment area from the cone/top of the manhole and onto the inside of the casting. (See standard plate No. 309)

2. All lose and protruding mortar and brick that would interfere with the seal's performance shall be removed. Any lips for gravel pan supports shall be cut off flush with casting. All excessive voids shall be sealed. Patching cement, shall conform to the manufactures requirements. Any patching cement work will require the contractor to contact the sealant manufacture to determine in writing the proper time required for the cement to completely cure prior to installing this item. Preparation of surface shall include water blasting machine that delivers the water with a sandblaster attachment in a steady stream at a minimum of 3500 psi. Surface preparation shall also include wire brushing of surface to ensure a clean surface as required by manufacture. Active leaks (infiltration) should be corrected by a method approved by the City Engineer prior to installing an Internal Manhole Seal. After water sandblasting, pressure wash the entire area to remove any loose sand that may have been deposited. The substrate surface must be free of sand, loose debris, latencies, dust, oil, grease or chemical contamination. A blower may be required to completely dry the substrate surface or as recommended by manufacture. Ensure casting and structure surfaces are clean and dry where the primer is intended to adhere. Flex-Seal Utility Sealant or approved equal may require the proper mixing of agents, as recommended by the manufacture's instructions. After allowing for proper drying of primer to occur, sealant may be applied by brush as evenly as possible over the entire chimney area, that includes the frame joint area and the area above the manhole cone including all extensions to the chimney area. The contractor is to furnish the City Engineer two (2) mirrors with extension handles that can be used to inspect sealant application to areas underneath frame without entry of manhole. These items will become the property of the owner upon completion and at no additional cost of this item. Cost for these items shall be included in the bid items for internal manhole sealing work.

3. The manufacture must in writing certify that each of the contractor's representatives are approved to install item. The proof or certification of training shall be included in the bid items for internal manhole seals.

c. INFI-SHIELD

1. The casting shall be sealed to the structure with an external sealing system. The seal shall be continuous bands, made

of high quality EPDM (Ethylene Propylene Diene Monomer) rubber with a minimum thickness of 60 mils. Each unit shall have a 2" wide mastic strip on the top and bottom of the band. The mastic shall be non-hardening butyl rubber sealant, with a minimum thickness of 3/16", and shall seal to the cone/top of the manhole section and over the flange of the casting. (See standard plate No. 310)

2. The external sealing system shall be installed according to the manufacturers recommendations. The external seal shall extend onto the casting and the cone section a minimum of 2".

6. Watermain and Appurtenances

Materials shall conform to the Standard Specifications and to the following:

a. Watermain shall be polyvinyl chloride (PVC) pressure pipe. PVC watermain shall conform to AWWA C 900 for pipe sizes 4" to 12" and AWWA C 905 for pipe sizes 14" to 24". All pipe shall have a minimum dimension ratio (DR) of 18 corresponding to a working pressure of 150 psi for PVC type 1120 pipe.

The bell of the joint shall consist of an integral wall section with a factory installed, solid cross section elastometric ring, which meets the requirements of ASTM F 477. The bell section shall be designed to be at least as hydrostatically strong as the pipe wall and meet the requirements of AWWA C 900 for sizes 4" to 12" and AWWA C 905 for sizes 14" to 24". The pipe shall be manufactured to ductile iron outside dimensions in accordance with AWWA C 900.

Restraints for C 900 and C 905 PVC pipe shall be Ebba Iron Series 2001PV, Uniflange Series 1300C, and 1390C or approved equal. Fittings for the PVC watermain shall be ductile iron.

Blue tracer wire shall be laid with all PVC watermain in accordance with the specifications included herein.

Granular bedding material shall be furnished and installed with the PVC watermain and associated services, as necessary.

b. Bends shall be 45 degrees or less. Any deflection greater than 45 degrees shall be made with multiple bend sections.

c. Valves 12” and larger shall be butterfly valves, AWWA C504, Mueller Line Seal or approved equal. Valves smaller than 12” in size shall be resilient wedge valves, Mueller A 2360 Series, American-Darling Series 2500 or approved equal conforming to AWWA C509 standards. All valves shall be installed on-line with accompanying valve boxes. All valves shall close in a clockwise direction. All valves shall be epoxy coated as per AWWA C550.

Valve boxes shall be three piece adjustable screw type boxes, nominal 60” to 90” extension, with a 5 ¼” shaft diameter. Valve boxes shall be provided with extension suitable for the design location and a minimum 6-inch available adjustment after final setting. The word “Water” shall be imprinted on each lid.

All valves shall be fitted with extension rods to within one foot of the finished ground surface.

d. All fire hydrants shall be Clow Medalliaon ® F2545 with 16” break off section. The hydrant lead shall contain a 6” gate valve. Color and threads shall match City of St. Francis Standards. A Hydrafinder® red and white stripe shall be included. 8’6” bury depth typical. All hydrants shall be purchased from licensed distributors of Clow hydrants. All hydrant bolts shall be stainless steel.

e. All water service will be minimum 1-inch. All copper service pipe shall be Type K or Polyethylene Grade PE-3408 or PE-4710, or High Density Polyethylene SDR 11 and shall be rated for 200 PSI working pressure.

f. The component parts of a tap service installation shall include a corporation stop coupling complete with watermain tap and saddle; a curb stop coupling complete with curb box; and copper service piping extending from the corporation stop to the curb stop coupling. Corporation stops for 1” through 2” services shall be Mueller 300 Ball Type or Ford FB-600-4-NL Series Ballcorp. All services shall be wet tapped**.** Service saddles shall be all Type 304 stainless steel Smith-Blair 372 TaperSeal service saddles, or approved equal. Curb stops for 1” through 2” service shall be Ford Ball Valve B22-444M-NL Series or Mueller Oriseal and shall be a Minneapolis pattern valve with thread top. Curb box shall be Minneapolis base, sized to fit the curb stop. Boxes shall have a one and one-quarter (1 ¼) inch upper section and shall be furnished with a stationary rod 66” in length. All curb boxes shall utilize a BoaBox with tracer wire and ground wire securely connected to the BoaBox terminals. All curb boxes located beneath

driveways, shall have Ford Series A lid covers placed over the riser. (See Standard Plate 207)

g. Water services 2-inches and larger shall be constructed with pipe, fittings, valves and boxes as specified for PVC pipe installation.

h. Water meter shall be obtained from the City with payment of established fee, and installed in accordance with directions.

7. Street Material

All materials shall be in conformance with Minnesota Department of Transportation Standard Specifications for Construction, latest edition and all subsequent revisions (MnDOT) or as modified herein in Appendix C.

V. Testing Requirements

Materials shall be sampled and tested in accordance to the MnDOT schedule of material control, except for as modified below. Utility systems shall be tested in accordance with the standard specifications for watermain, service lines, sanitary sewer and storm sewer as published by the City Engineer Association of Minnesota. The City Engineer shall be notified 24 hours in advance of the specific test.

1. Pipe Trench Compaction:

a. Standard Proctor Density (ASTM D-698-78): Proctor samples will be obtained within the utility trenches for each type of soil encountered in construction.

b. Density Test Nuclear (ASTM D-2922): 1 test per lift of backfill, 1 test every 500 feet of pipe installed, minimum 1 test daily when backfilling.

c. Sand-Cone Method (ASTM D-1556): The City Engineer may at his or her discretion, order density tests by the sand cone method.

2. Embankment Compaction:

   a. Standard Proctor Density (ASTM D-698-78): 1 test per source of material.

   b. Density Test Nuclear (ASTM D-2922): 1 test per lift of embankment, 1 test every 500 feet of roadway fill, 1 test daily when constructing embankment.

   c. Density Test Sand-Cone Method (ASTM D-1556): The City Engineer may, at his or her discretion, order density tests by the sand cone method.

3. Select Granular Borrow

   a. Standard Proctor Density (ASTM D-698-78): 1 test per source of material.

   b. Gradation Test: 1 test per source of material.

   c. Density Test Nuclear (ASTM D-2922): 1 test per lift of embankment, 1 test every 500 feet of roadway fill, 1 test daily when constructing embankment.

   d. Density Test Sand-Cone method (ASTM D-1556): The City Engineer may, at his or her discretion, order density tests by the sand cone method.

4. Concrete Tests

   a. General: When molding cylinders for strength tests, three cylinders are to be made according to ASTM C-31.

   b. Compressive Strength (ASTM C-39): 1 set of 3 for every 1000 l.f. of curb and gutter constructed or 1 set of 3 for every 100 cubic yards of concrete placed or a minimum 1 set of 3 daily when pouring concrete.

   c. Percent Air Test (ASTM C-231): 1 test for every 1000 l.f. of curb and gutter constructed or 1 test for every 100 cubic yards of concrete placed or a minimum 1 test daily when pouring concrete.

   d. Slump Test (ASTM C-143): 1 test for every 1000 l.f. of curb and gutter constructed or 1 test for every 100 cubic yards of concrete placed or a minimum 1 test daily when pouring concrete.

5. Televising

The Developer shall televise all sewer pipe, pipe joints, and service connections. One copy of the televising report and tape shall be submitted to the City for review.

VI. Construction Requirements

1. Sanitary Sewer, Watermain, and Storm Sewer

a. Applicable Specifications

Work shall conform to the Standard Utility Specifications as published by the City Engineers Association of Minnesota, latest edition.

2. Storm Sewer

Pipe sewers shall be installed in accordance with CEAM 2621 and MnDOT 2501 and 2503, except as modified by these specifications.

3. Casting Adjustments

All utility castings shall be adjusted as follows:

a. Sewer Manhole:

All sanitary and storm sewer manhole castings shall be in place during the laying of the wear course. The castings shall be adjusted before the mat is laid and shall be not less than one-eight inch (1/8”) nor more than three-eighths inch (3/8”) below finished grade.

b. Storm Sewer:

Storm sewer inlet castings shall be adjusted to be 0.1 feet below finished gutter line.

c. Water Valve Boxes:

All water valve boxes shall be adjusted prior to wear course paving and shall be not less than one-eight (1/8”) nor more than three-eights inch (3/8”) below finished grade. Only screw-type adjustments are allowed.

d. Grouting Adjusting Rings:

Whenever adjustment rings are provided, the contractor shall grout rings, place the castings and remove all excess grout on the inside and outside of the manhole by wiping smooth with a gloved hand or similar instrument.

4. Streets

The street shall be constructed in accordance with typical sections shown on City Standard Plates and specifications as approved by the City Engineer. The final wear course shall not be constructed until at least one construction season after the base construction is completed.

VII. Storm Water Treatment Basins

1. Storm water conveyance, storage and treatment basins shall be designed in accordance with the City of St. Francis's policy on stormwater drainage in Appendix B. Typical basin construction and outlet structures are shown on the City Standard Plates in Appendix A.

VIII. Miscellaneous

1. Proper notification of improvements shall be given by the Developer or his/her engineer to the responsible governmental agencies, watershed districts, etc. affected by said construction. All necessary permits shall be obtained prior to commencing any work. All special requirements of the responsible agencies shall be complied with.

2. The Developer's contractor shall furnish, erect and maintain signs and barricades as provided in MnDOT 1710 "Barricades and Signs" under the General Conditions to protect the public. The City Engineer shall be notified 48 hours prior to the proposed partial blockage or closure of any street or public right-of-way. No street or public right-of-way shall be closed without the proper approval of the City Engineer.

3. It is the responsibility of the Developer's contractor to protect and leave undisturbed those markers or monuments set for the subdivision of land.

4. The Developer and/or his/her contractor shall immediately repair or replace at his/her own expense any defective workmanship or material of which he/she is notified during the construction period, or within the warranty period, regardless of the approval and acceptance of the work.

5. A plan for the routing of construction traffic shall be submitted to the City Engineer for his/her approval. City streets that are utilized for access or egress to the construction site shall be kept free of dirt and other debris resulting from said construction. Adequate control of dust shall be maintained by the Developer or contractor.

6. The City will require the contractor or Developer to submit a list of materials and respective suppliers as well as all tests of materials.

7. If any material or labor supplied by the contractor or Developer is rejected by the City Engineer or his/her designated representative as defective or unsuitable, then such rejected material shall be promptly removed, disposed of off the job site, and replaced with approved material.

8. All street right-of-ways shall be cleared and grubbed to full width except as specifically directed.

9. The standard ten (10) foot utility and drainage easement adjacent to the street right-of-way shall be cleared and grubbed for the placement of utilities except as specifically directed.

10. Work shall not commence before 7:00 a.m. nor extend beyond 7:00 p.m. Monday through Friday. On Saturdays, the hours will be from 8:00 a.m. to 6:00 p.m. No work is to be done on Sundays. Hours and days of work may be modified based on need.

APPENDIX A

APPENDIX A

SERIES 1 PAVEMENT

100 Local Residential Urban Street Section – 9 Ton
101 Through Local Residential Urban Street Section – 9 Ton
102 MSA Collector Urban Street Section – 10 Ton
103 Rural Residential Street – 9 Ton
104 Residential Cul-De-Sac Urban Section
105 Residential Cul-De-Sac Rural Section
106 Temporary Cul-De-Sac Urban Section
107 Bituminous Patch Section
108 Minimum Public Street Standards (Table)
109 Rural Driveway Standards
110 Local Residential Private Street Section - Ending in Cul-De-Sac
111 Local Residential Private Street Section - Thru

SERIES 2 WATER SYSTEM AND APPURTENANCES

200 Water Service Detail (2” and Less)
201 Water Service Detail (Greater than 2”)
202 Water Service Detail Boulevard
203 Thrust Block Detail
204 Watermain Concrete Blocking Quantities
205 Clow Medallion Hydrant
206 Hydrant & Valve Installation
207 Typical Resilient Wedge Valve & Box Installation – 10” & under Watermain
208 Typical Butterfly Valve & Box Installation – 12” & Over Watermain
209 Curb Stop Cover for Driveway Installation
210 Hydrant Tracer Wire Detail
213 PVC C900 Watermain Trench
214 Watermain Offset
215 Gate Valve Alignment Device
216 Gate Valve Extension Stem
217 Tracer Wire Sample Water Plan

SERIES 3 SANITARY SEWER AND APPURTENANCES

300 Sanitary Sewer Standard Manhole
301 Water Tight Seals
302 Shallow Sanitary Main Service Connection
303 Deep Sanitary Main Service Connection
304 Insulation for Water & Sanitary Sewer Pipe & Services
305 Standard Drop Manhole
306 Pipe Jacking Detail
307 Sanitary Sewer Manhole Frame and Casting
308 Internal Chimney Seal
309 Manhole Adjusting Rings
310 External Chimney Seal
312 Forcemain Air/Vacuum Valve

313 Forcemain Cleanout
314 Manhole Joint Seal
315 Tracer Wire Plan (Sewer)
316 Tracer Wire Service Detail
317 Tracer Wire Sewer Manhole Detail

SERIES 4 STORM SEWER APPURTENANCES

400 Slab-Top Manhole – Storm Sewer
401 Storm Sewer Manhole Deeper than 15’
402 Skimmer Structure
403 Skimmer Structures with Weir
404 Typical Treatment Basin
405 48 Inch Diameter Shallow Catch Basin
406 Standard Storm Manhole Catch Basin
407 Plate Style Grate for 48” Dia Outlet Structure
408 Standard Storm Manhole – Yard Inlet
409 27” Precast Catch Basin Yard Inlet
410 2’ x 3’ Catch Basin
411 Transverse Permeable Aggregate Base (PAB) Drain
412 Longitudinal Permeable Aggregate Base (PAB) Drain
414 Storm Manhole Adjustment Rings
MnDOT4143E Stool Grate & Concrete Frame
MnDOT 4180J Manhole or Catch Basin Step

SERIES 5 EROSION CONTROL AND LAND APPURTENANCES

500 Articulated Concrete Block at RCP Outlets
501 Articulated Concrete Block Mat Layout
502 Rip Rap at RCP Outlet
503 Silt Fence Installation
504 Erosion Control Blanket Installation on Cut Slope
505 Rock Construction Entrance
506 Drop Inlet Protection
507 Culvert Control End
508 Silt Sock
509 Silt Sock

SERIES 6 WALLS OR MISCELLANEOUS STRUCTURES

SERIES 7 CURB AND GUTTER AND SIDEWALK

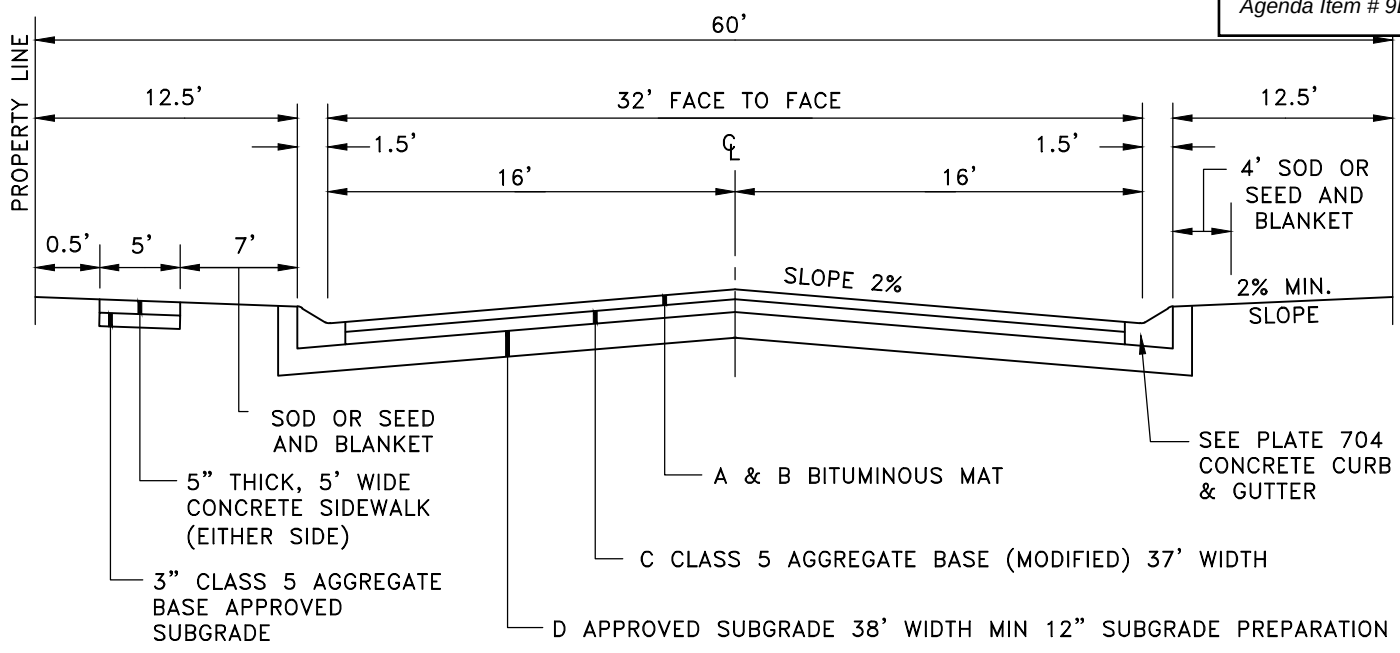
702 Concrete Cross Gutter
703 Curb and Gutter Construction at Catch Basins (B624)
704 Surmountable Concrete Curb & Gutter
705 Curb and Gutter Construction at Catch Basins (B618)
706 Typical Drop Curb – Bike Trail
707 Typical Section – Bike Trail
708 Concrete Approach Nose Detail
MnDOT 7035L Concrete Walk & Curb Returns at Entrances
MnDOT 7100 Concrete Curb & Gutter Design B & V

SERIES 8 BARRICADES, SIGNALS, MARKERS, ETC.

800 Lateral Offset and Vertical Clearance Type C & D Signs
801 Type C and D Sign Post
802A A-Frame and Stringer Bracing
802B A-Frame and Stringer Bracing
803 Marker Post Detail
805 Stop Sign and Street Name Sign Detail
806 Sign Post Detail
807 Temporary Cul-De-Sac Sign
808 Wetland Buffer Sign Installation
MnDOT 8002 Permanent Barricade

SERIES 9 MISCELLANEOUS

900 Location of Public Utilities
901 Mail Box Support



LEGEND					
AASHTO	R VALUE SIGMA N18	BITUMINOUS SURFACE		AGGREGATE BASE	
SUBGRADE SOIL CLASS		WEAR 2360***	NON-WEAR 2360***	CLASS 5 OR 6 3138 C*	CLASS 3 OR 4 3138 D*
A-3	(R-70 ≤ 90,000)	** 1 1/2"	** 2"	** 8"	–
A-4	(R-20 ≤ 90,000)	1 1/2"	2"	8"	–
A-6	(R-15 ≤ 90,000)	1 1/2"	2"	8"	12"
A-7	(R-10 ≤ 90,000)	1 1/2"	2"	8"	18"
	(R-5 ≤ 90,000)	1 1/2"	2"	8"	24"

* SUBJECT TO REVIEW BY QUALIFIED SOILS ENGINEER

** MINIMUM ALLOWABLE DESIGN THICKNESS

*** NEW CONSTRUCTION ASPHALT BINDER GRADE = B

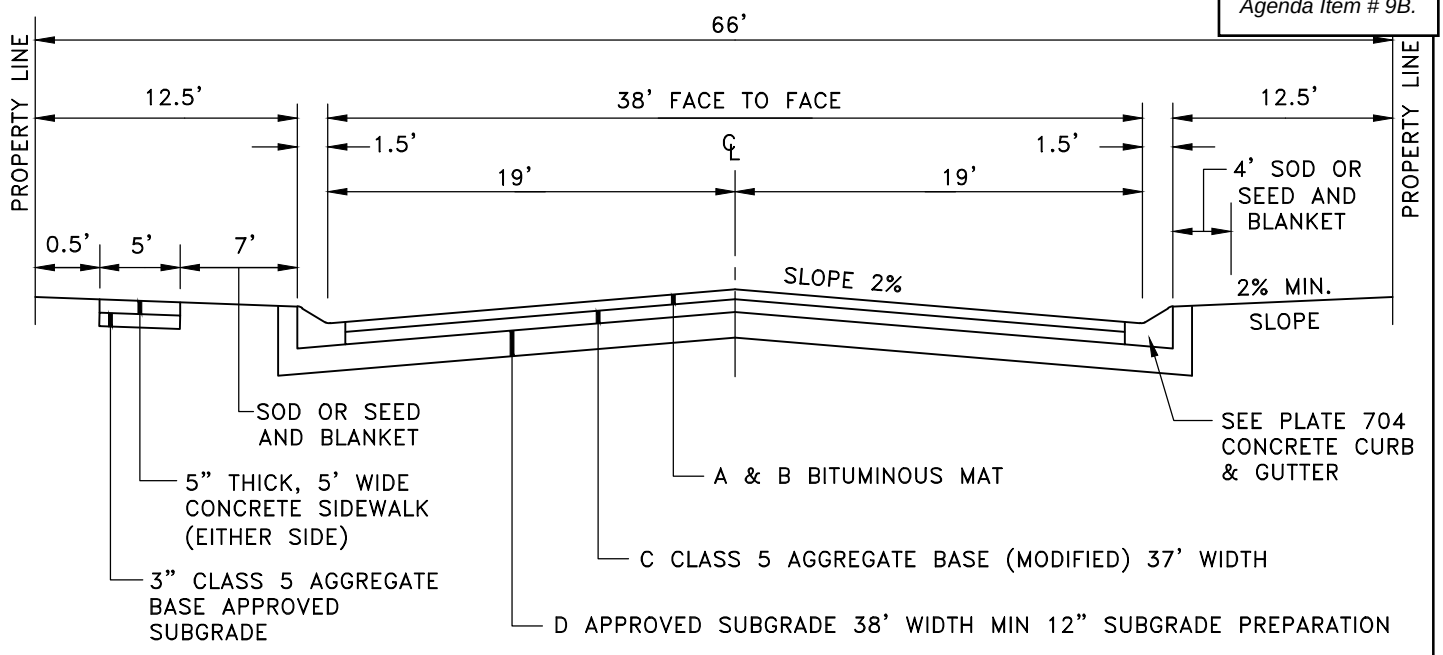
NOTES:
R VALUE IS A MEASURE OF EMBANKMENT SOIL RESISTANCE STRENGTH AS DETERMINED BY THE HVEEM STABILOMETER METHOD.

SIGMA N18 VALUE IS THE CUMULATIVE DAMAGE EFFECT OF VEHICLES DURING THE DESIGN LIFE OF A FLEXIBLE PAVEMENT.

LOCAL RESIDENTIAL
URBAN STREET SECTION – 9 TON

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 100
REVISED		



LEGEND					
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A-3	(R-70 ≤ 90,000)	** 1 1/2"	** 2"	** 8"	–
A-4	(R-20 ≤ 90,000)	1 1/2"	2"	8"	–
A-6	(R-15 ≤ 90,000)	1 1/2"	2"	8"	12"
A-7	(R-10 ≤ 90,000)	1 1/2"	2"	8"	18"
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* SUBJECT TO REVIEW BY QUALIFIED SOILS ENGINEER

** MINIMUM ALLOWABLE DESIGN THICKNESS

*** NEW CONSTRUCTION ASPHALT BINDER GRADE = B

NOTES:
R VALUE IS A MEASURE OF EMBANKMENT SOIL RESISTANCE STRENGTH AS DETERMINED BY THE HVEEM STABILOMETER METHOD

SIGMA N18 VALUE IS THE CUMULATIVE DAMAGE EFFECT OF VEHICLES DURING THE DESIGN LIFE OF A FLEXIBLE PAVEMENT.

THROUGH LOCAL RESIDENTIAL URBAN STREET SECTION – 9 TON

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 101
REVISED		

Dec 19, 2022 - 3:03pm
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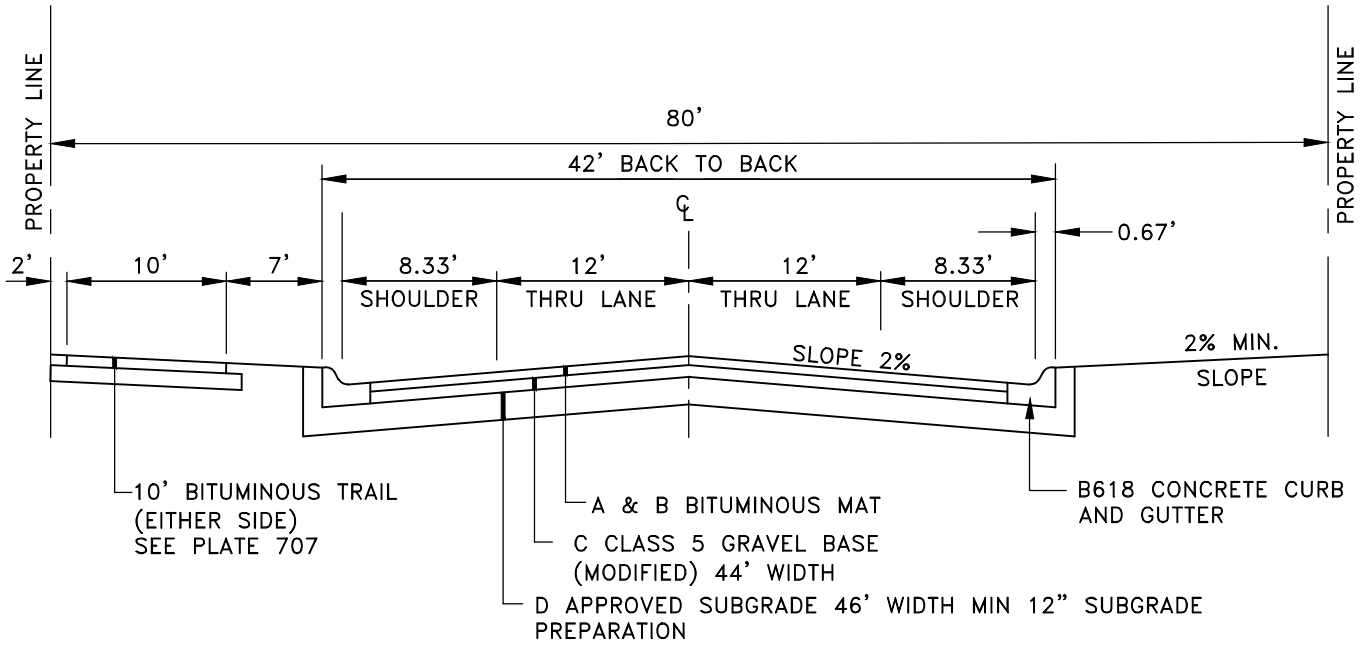

LEGEND					
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A-3	(R-70 ≤ 90,000)	** 2"	** 2 1/2"	** 8"	–
A-4	(R-20 ≤ 90,000)	2"	2 1/2"	8"	–
A-6	(R-15 ≤ 90,000)	2"	2 1/2"	8"	12"
A-7	(R-10 ≤ 90,000)	2"	2 1/2"	8"	18"
	(R-5 ≤ 90,000)	2"	2 1/2"	8"	24"

* SUBJECT TO REVIEW BY QUALIFIED SOILS ENGINEER

** MINIMUM ALLOWABLE DESIGN THICKNESS

*** BASE COURSE ASPHALT BINDER GRADE = B
WEAR COURSE ASPHALT BINDER GRADE = C

NOTES:
R VALUE IS A MEASURE OF EMBANKMENT SOIL RESISTANCE STRENGTH AS DETERMINED BY THE HVEEM STABILOMETER METHOD

SIGMA N18 VALUE IS THE CUMULATIVE DAMAGE EFFECT OF VEHICLES DURING THE DESIGN LIFE OF A FLEXIBLE PAVEMENT.

MSA COLLECTOR
URBAN STREET SECTION – 10 TON

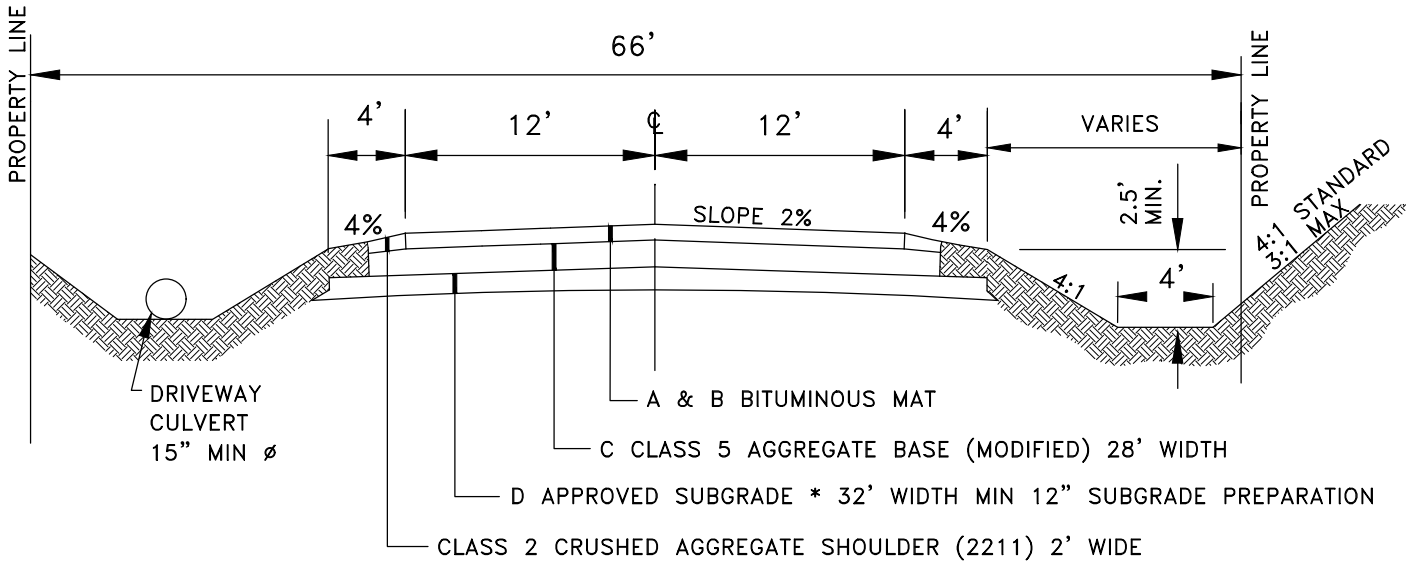
NO SCALE

APPROVED

REVISED

City of St. Francis

STANDARD PLATE NO. 102



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A-3	(R-70 ≤ 90,000)	** 1 1/2"	** 2"	** 8"	–
A-4	(R-20 ≤ 90,000)	1 1/2"	2"	8"	–
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A-7	(R-10 ≤ 90,000)	1 1/2"	2"	8"	18"
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* SUBJECT TO REVIEW BY QUALIFIED SOILS ENGINEER

** MINIMUM ALLOWABLE DESIGN THICKNESS

*** NEW CONSTRUCTION ASPHALT BINDER GRADE = B

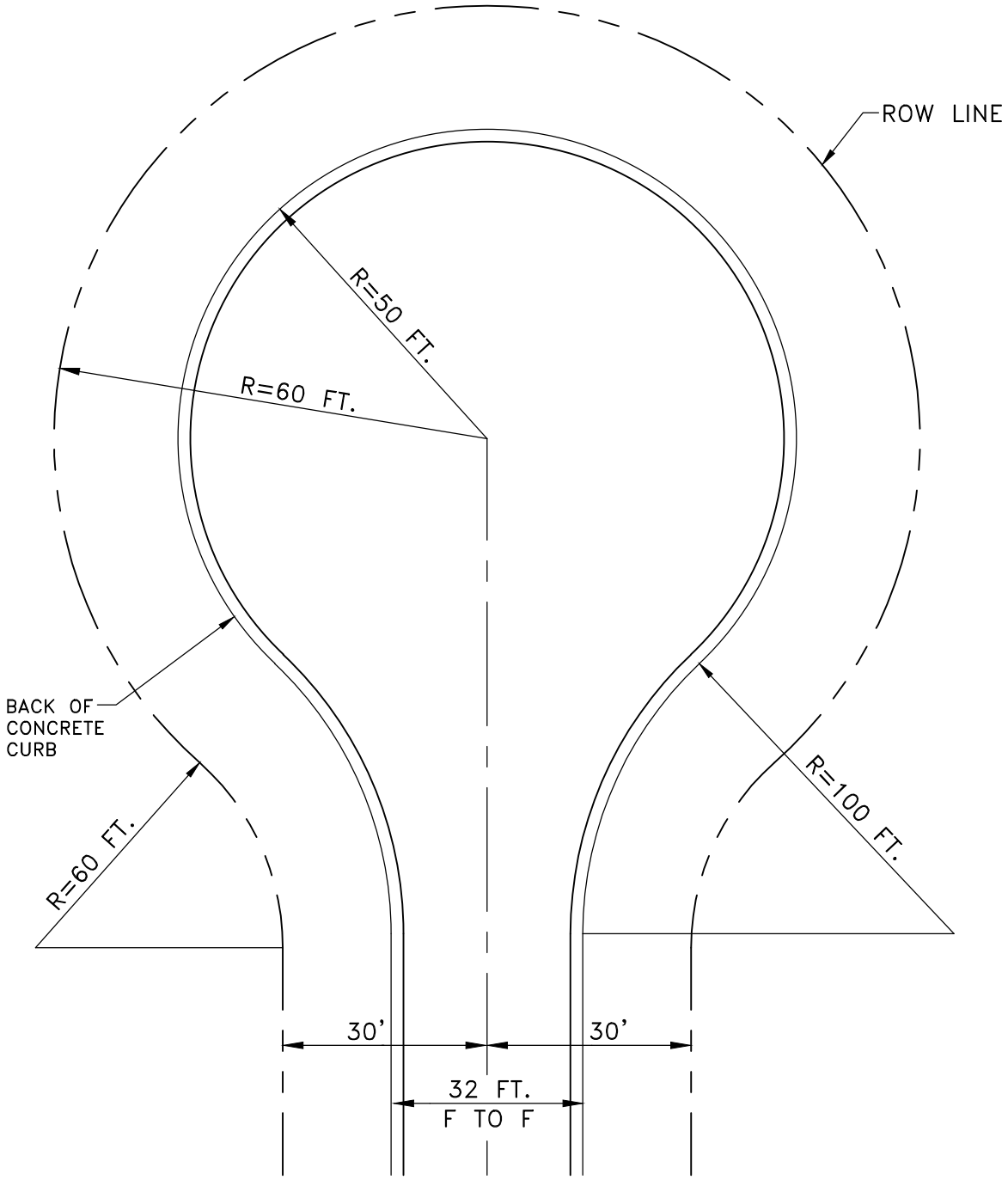
NOTES:
R VALUE IS A MEASURE OF EMBANKMENT SOIL RESISTANCE STRENGTH AS DETERMINED BY THE HVEEM STABILOMETER METHOD.

SIGMA N18 VALUE IS THE CUMULATIVE DAMAGE EFFECT OF VEHICLES DURING THE DESIGN LIFE OF A FLEXIBLE PAVEMENT.

RURAL RESIDENTIAL STREET

NO SCALE

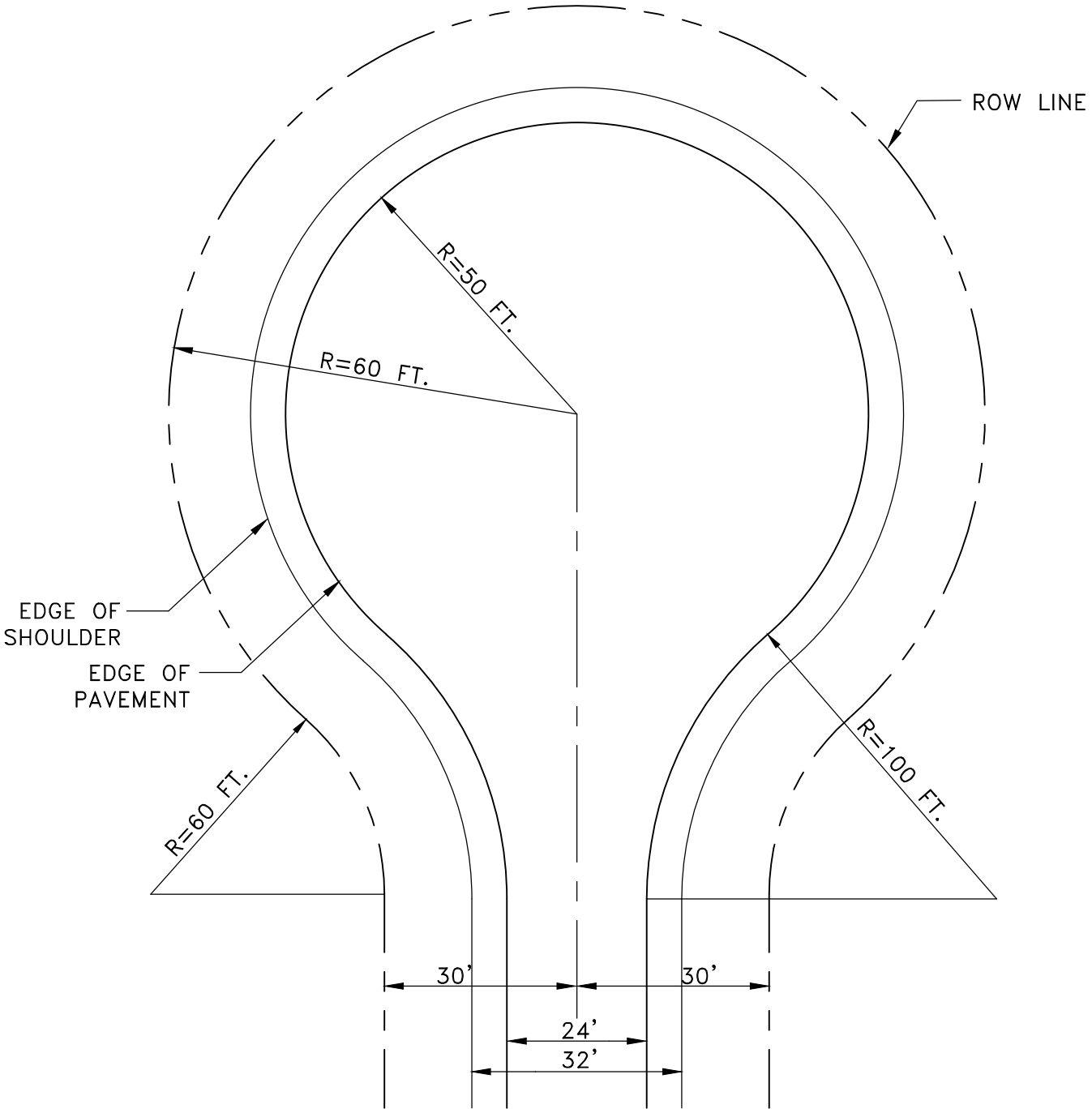
APPROVED	City of St. Francis	STANDARD PLATE NO. 103
REVISED		



RESIDENTIAL CUL DE SAC
URBAN SECTION

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 104
REVISED		



RESIDENTIAL CUL DE SAC
RURAL SECTION

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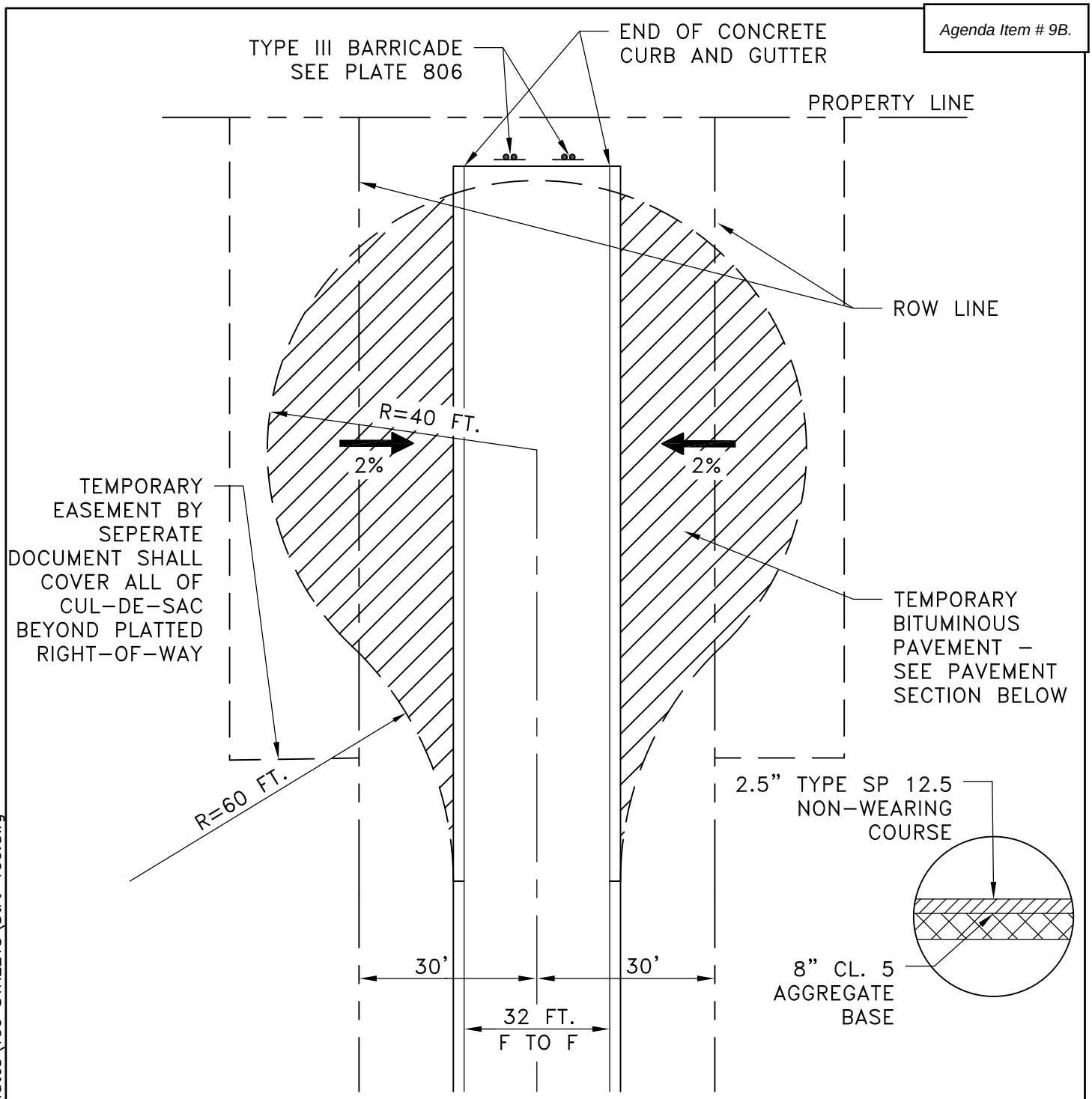
APPROVED	City of St. Francis	STANDARD PLATE NO. 105
REVISED		



TEMPORARY CUL DE SAC
URBAN SECTION

NO SCALE

Dec 19, 2022 - 3:05pm
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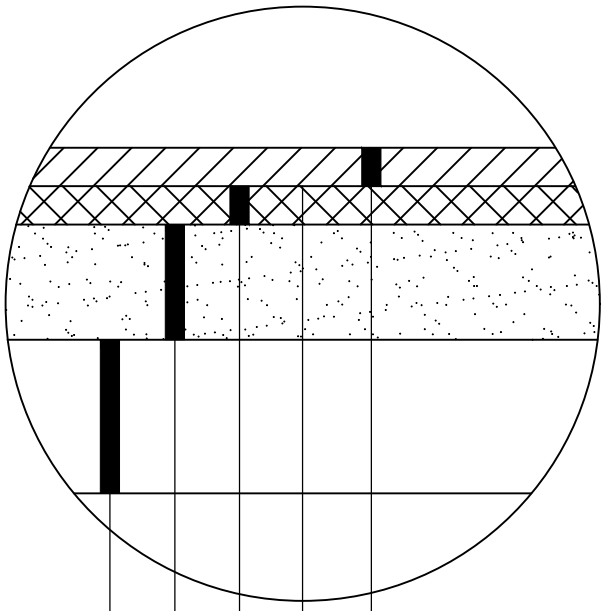
APPROVED	City of St. Francis	STANDARD PLATE NO. 106
REVISED		



2" TYPE SP 12.5 WEARING COURSE (SPWEB240B) (2360)
BITUMINOUS TACK COAT (2357)
2" TYPE SP 12.5 NON-WEARING COURSE (SPNWB230B) (2360)
8" AGGREGATE BASE CLASS 5 (2211)
12" SUBGRADE PREPARATION (2112) (INCIDENTAL)

BITUMINOUS PATCH SECTION

NO SCALE

APPROVED

REVISED

City of St. Francis

STANDARD PLATE NO. 107

APPROVED

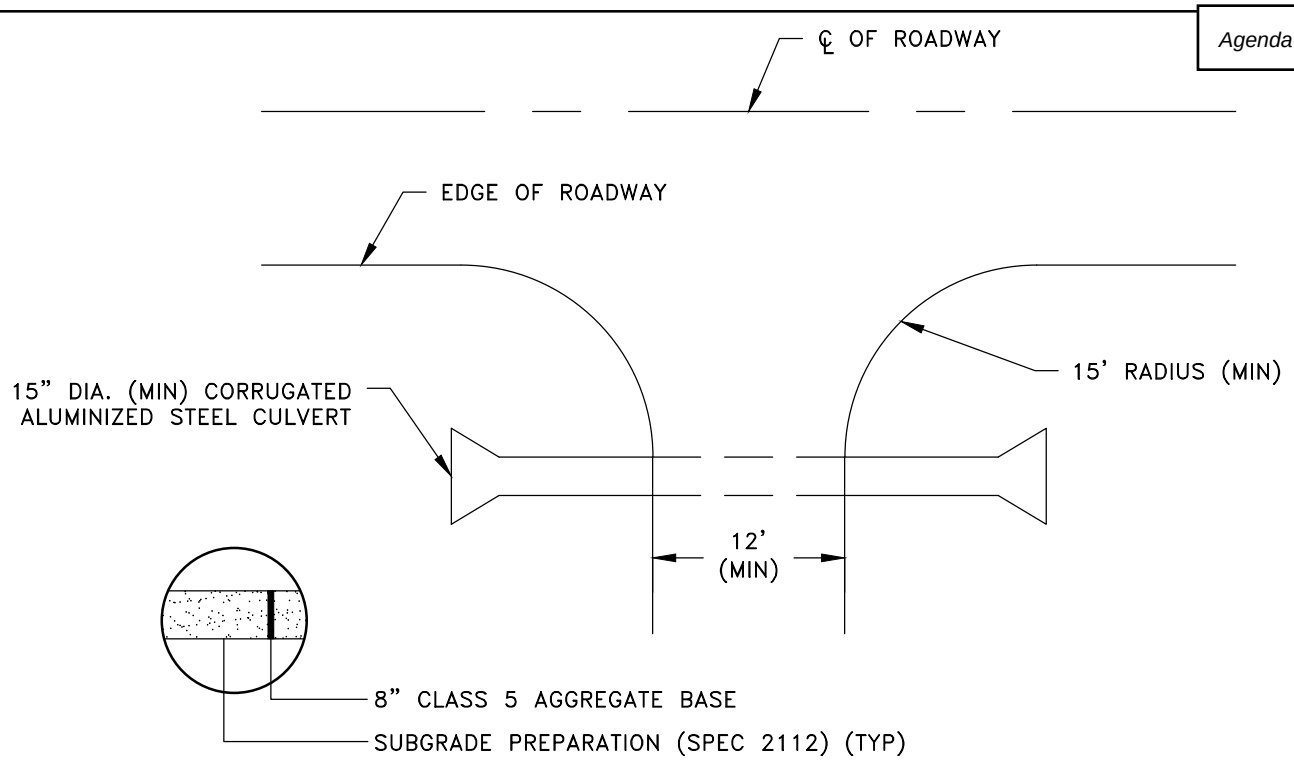
REVISED

City of St. Francis

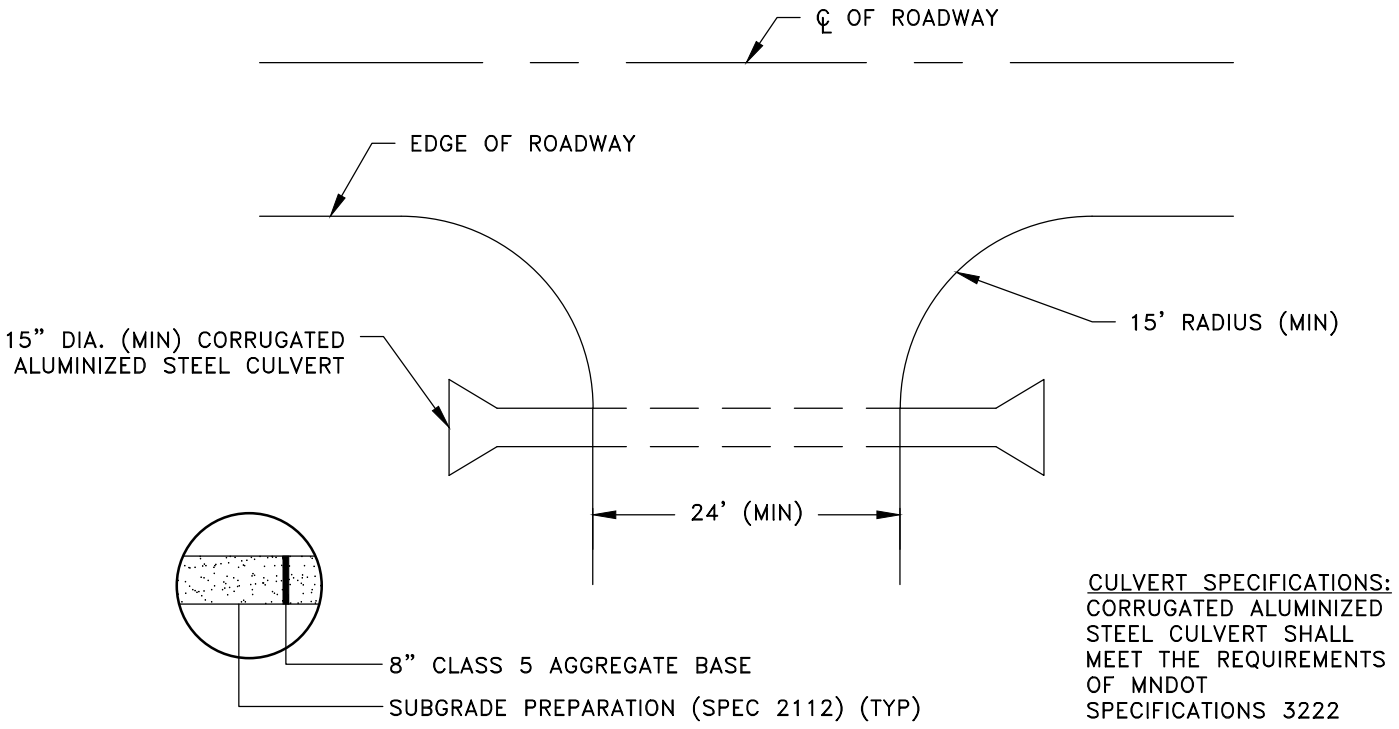
FUNCTIONAL CLASSIFICATION	F–F WIDTH (FT)	ROW WIDTH	PARKING LANES	MINIMUM ROADWAY SECTION
MINIMUM RESIDENTIAL	28’	50’	0	1.5” SPWEB240B 2.0” SPNWB230B 8.0” CLASS 5 AGGREGATE BASE 12.0” SUBGRADE PREPARATION
RESIDENTIAL STREET	32’	60’	1	1.5” SPWEB240B 2.0” SPNWB230B 8.0” CLASS 5 AGGREGATE BASE 12.0” SUBGRADE PREPARATION
THROUGH RESIDENTIAL STREET	38’	66’	2	1.5” SPWEB240B 2.0” SPNWB230B 8.0”/10.0” CLASS 5 AGGREGATE BASE 12.0” SUBGRADE PREPARATION
MINOR COLLECTOR	40’–44’ +	80’ +	2	1.5” SPWEB240C 3.5” SPNWB230B 8.0”/10.0” CLASS 5 AGGREGATE BASE 12.0” SUBGRADE PREPARATION
MAJOR COLLECTOR	VARIES	100’ +	2	4.0” SPWEB240C / SPWEB340C 2.0” SPNWB230F / SPNWB330B 10.0” CLASS 5 AGGREGATE BASE 12.0” SUBGRADE PREPARATION
HIGH DENSITY ARTERIAL	VARIES	100’ +	–	4.0” SPWEB340F 2.0” SPNWB330B 12.0” CLASS 5 AGGREGATE BASE 12.0” SUBGRADE PREPARATION

MINIMUM PUBLIC STREET STANDARDS

STANDARD PLATE NO. 108



RURAL DRIVEWAY UNDER 600' IN LENGTH



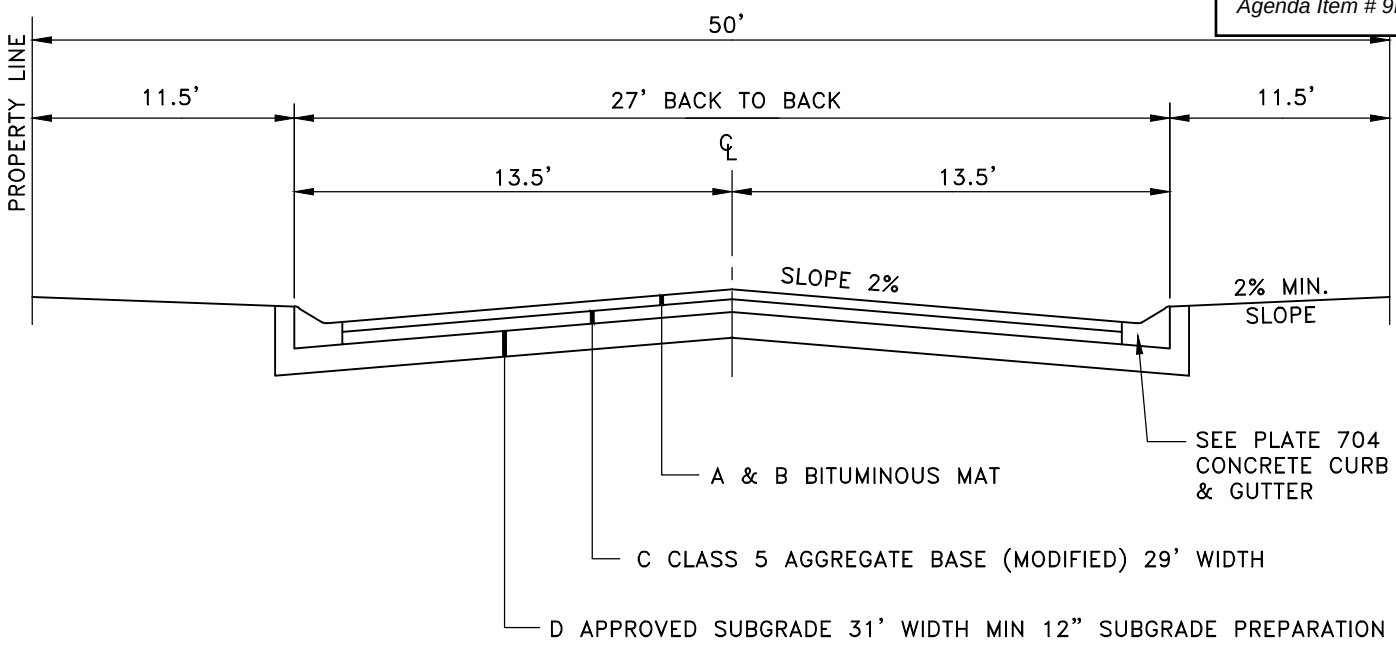
CULVERT SPECIFICATIONS:
CORRUGATED ALUMINIZED STEEL CULVERT SHALL MEET THE REQUIREMENTS OF MNDOT SPECIFICATIONS 3222

RURAL DRIVEWAY OVER 600' IN LENGTH

RURAL DRIVEWAY STANDARDS

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 109
REVISED		



LEGEND					
AASHTO	R VALUE SIGMA N18	BITUMINOUS SURFACE		AGGREGATE BASE	
SUBGRADE SOIL CLASS		WEAR 2360***	NON-WEAR 2360***	CLASS 5 OR 6 3138 C*	CLASS 3 OR 4 3138 D*
A-3	(R-70 ≤ 90,000)	** 1 1/2"	** 2"	** 8"	–
A-4	(R-20 ≤ 90,000)	1 1/2"	2"	8"	–
A-6	(R-15 ≤ 90,000)	1 1/2"	2"	8"	12"
A-7	(R-10 ≤ 90,000)	1 1/2"	2"	8"	18"
	(R-5 ≤ 90,000)	1 1/2"	2"	8"	24"

* SUBJECT TO REVIEW BY QUALIFIED SOILS ENGINEER

** MINIMUM ALLOWABLE DESIGN THICKNESS

*** NEW CONSTRUCTION ASPHALT BINDER GRADE = B

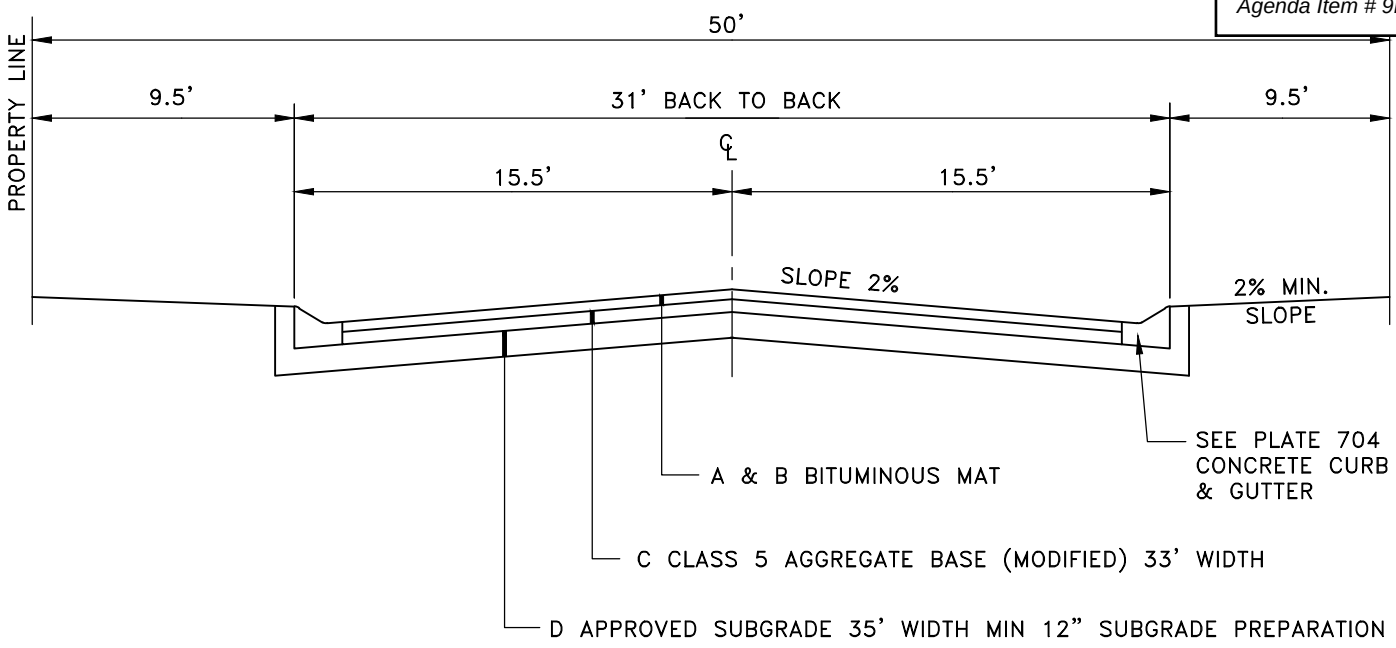
NOTES:
R VALUE IS A MEASURE OF EMBANKMENT SOIL RESISTANCE STRENGTH AS DETERMINED BY THE HVEEM STABILOMETER METHOD.

SIGMA N18 VALUE IS THE CUMULATIVE DAMAGE EFFECT OF VEHICLES DURING THE DESIGN LIFE OF A FLEXIBLE PAVEMENT.

LOCAL RESIDENTIAL
PRIVATE STREET SECTION – ENDING IN CUL-DE-SAC

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 110
REVISED		



LEGEND					
AASHTO	R VALUE SIGMA N18	BITUMINOUS SURFACE		AGGREGATE BASE	
SUBGRADE SOIL CLASS		WEAR 2360***	NON-WEAR 2360***	CLASS 5 OR 6 3138 C*	CLASS 3 OR 4 3138 D*
A-3	(R-70 ≤ 90,000)	** 1 1/2"	** 2"	** 8"	–
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A-6	(R-15 ≤ 90,000)	1 1/2"	2"	8"	12"
A-7	(R-10 ≤ 90,000)	1 1/2"	2"	8"	18"
	(R-5 ≤ 90,000)	1 1/2"	2"	8"	24"

* SUBJECT TO REVIEW BY QUALIFIED SOILS ENGINEER

** MINIMUM ALLOWABLE DESIGN THICKNESS

*** NEW CONSTRUCTION ASPHALT BINDER GRADE = B

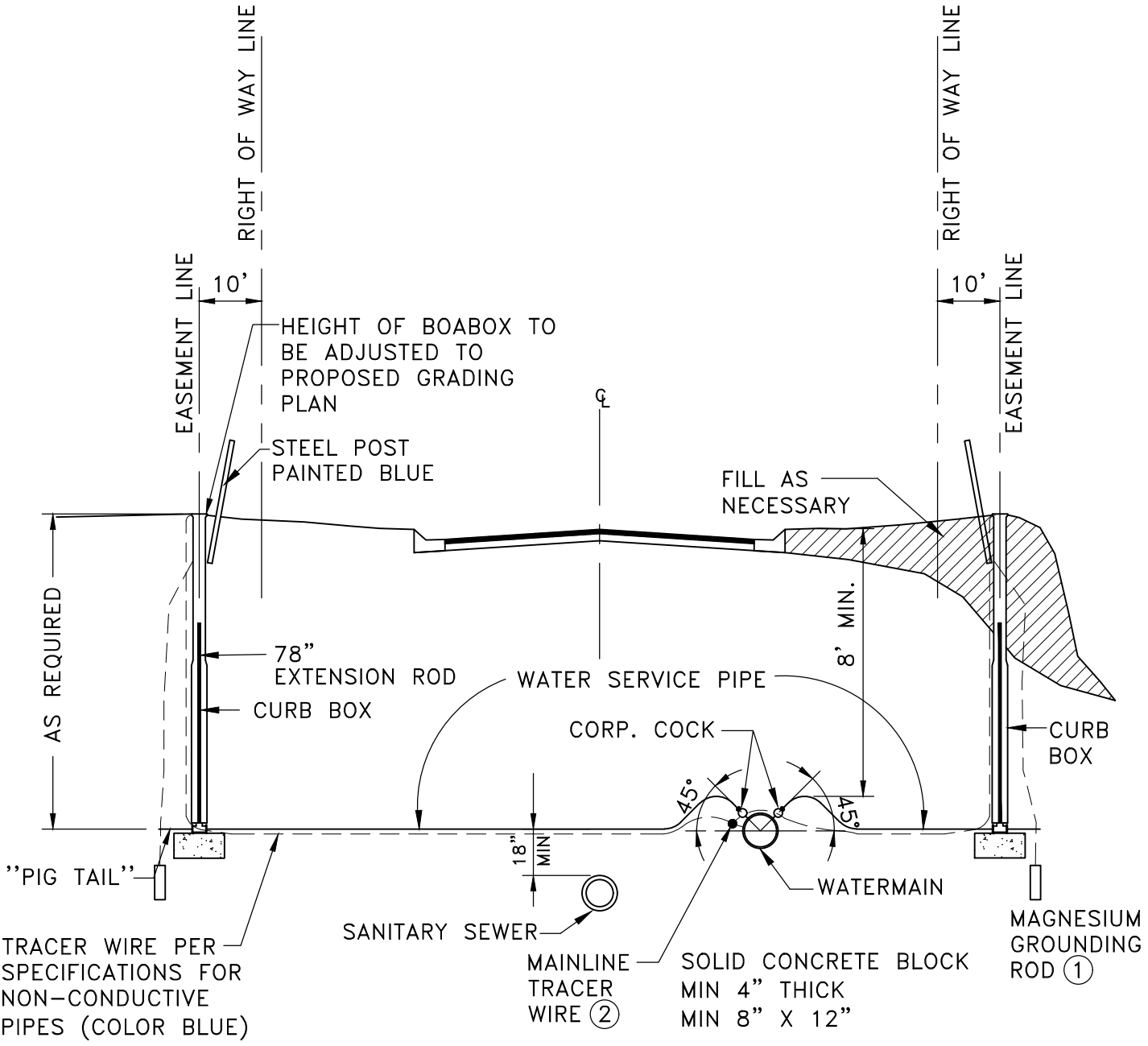
NOTES:
R VALUE IS A MEASURE OF EMBANKMENT SOIL RESISTANCE STRENGTH AS DETERMINED BY THE HVEEM STABILOMETER METHOD.

SIGMA N18 VALUE IS THE CUMULATIVE DAMAGE EFFECT OF VEHICLES DURING THE DESIGN LIFE OF A FLEXIBLE PAVEMENT.

LOCAL RESIDENTIAL
PRIVATE STREET SECTION – THRU

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 111
REVISED		



REFERENCE NOTES:

(1) GROUNDING ROD SHALL HAVE RED WIRE CONNECTED THAT TERMINATES IN BOABOX.

(2) CONNECT TO MAIN LONE TRACER WIRE WITH A THREE-WAY LUG CONNECTIONS.

WATER SERVICE DETAIL

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 200
REVISED		

Dec 19, 2022 - 3:07pm
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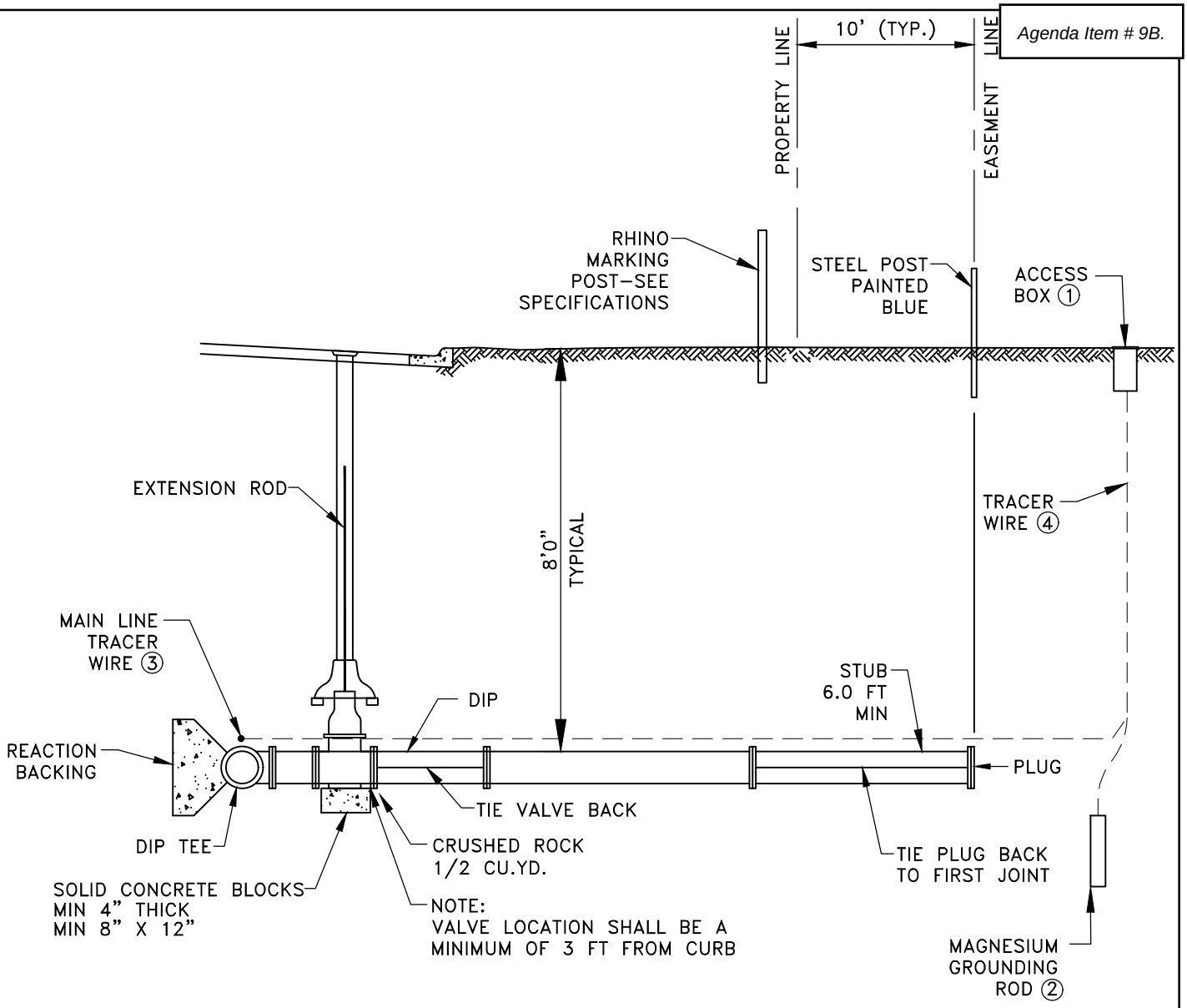


REFERENCE NOTES:

① ACCESS BOX SHALL BE A COPPERHEAD INDUSTRIES 36 INCHES LONG WITH 2–3/4 INCHES ID ABS SHAFT, CAST IRON PENTAGONAL LOCKING LID, ENCAPSULATED MAGNETIC BEACON, INTERNAL SWIVEL TRACER WIRE CONNECTION LUG, AND ARCHED BASE TO RESIST PULL–OUT OR OTHER WHICH MEETS THE REQUIREMENTS OF THIS SPECIFICATION. ACCESS BOX LIDS SHALL BE COLOR CODED BLUE FOR WATERMAIN AND LOCATION SHALL BE DEPICTED ON THE UTILITY PLAN

② GROUNDING ROD SHALL HAVE RED WIRE THAT TERMINATES IN ACCESS BOX. PROVIDE 18" OF SLACK IN ACCESS BOX.

③ CONNECT TO THE MAIN LINE TRACER WIRE WITH A THREE–WAY LUG CONNECTOR.

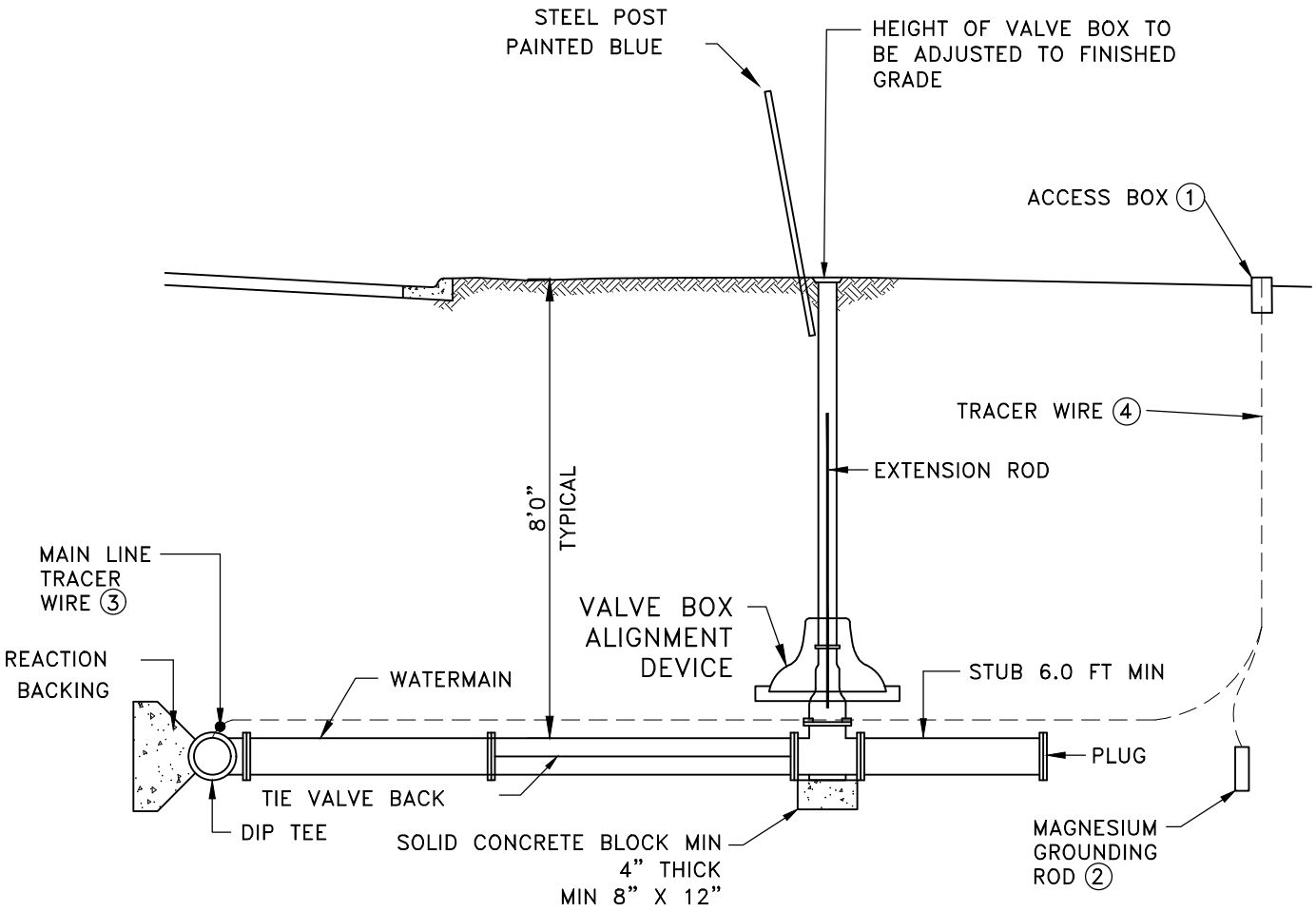
④ PROVIDE 12 INCHES OF SLACK IN ACCESS BOX. STRIP 1 INCH OF WIRE AND ATTACH TO TERMINAL CONNECTORS.

GREATER THAN 2" SERVICES

WATER SERVICE DETAIL STREET

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 201
REVISED		



REFERENCE NOTES:

① ACCESS BOX SHALL BE A COPPERHEAD INDUSTRIES 36 INCHES LONG WITH 2-3/4 INCHES ID ABS SHAFT, CAST IRON PENTAGONAL LOCKING LID, ENCAPSULATED MAGNETIC BEACON, INTERNAL SWIVEL TRACER WIRE CONNECTION LUG, AND ARCHED BASE TO RESIST PULL-OUT OR OTHER WHICH MEETS THE REQUIREMENTS OF THIS SPECIFICATION. ACCESS BOX LIDS SHALL BE COLOR CODED BLUE FOR WATERMAIN AND LOCATION SHALL BE DEPICTED ON THE UTILITY PLAN.

② GROUNDING ROD SHALL HAVE RED WIRE THAT TERMINATES IN ACCESS BOX. PROVIDE 18" OF SLACK IN ACCESS BOX.

③ CONNECT TO THE MAIN LINE TRACER WIRE WITH A THREE-WAY LUG CONNECTOR.

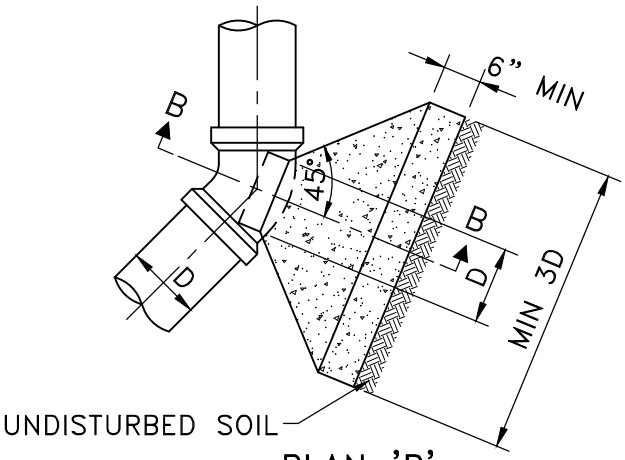
④ PROVIDE 12 INCHES OF SLACK IN ACCESS BOX. STRIP 1 INCH OF WIRE AND ATTACH TO TERMINAL CONNECTORS.

GREATER THAN 2" SERVICES

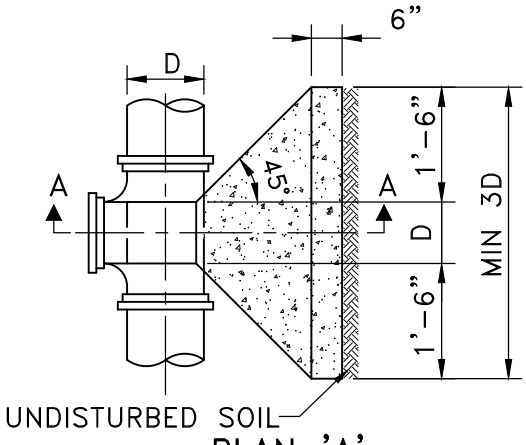
WATER SERVICE DETAIL BOULEVARD

NO SCALE

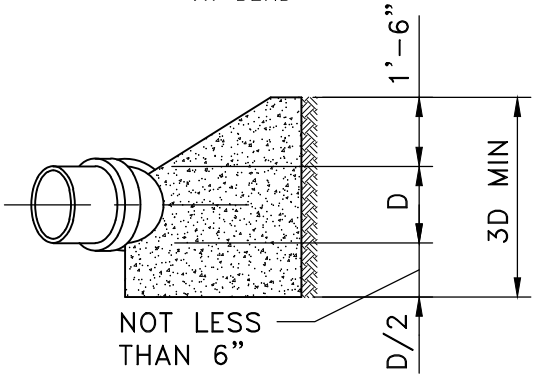
APPROVED	City of St. Francis	STANDARD PLATE NO. 202
REVISED		



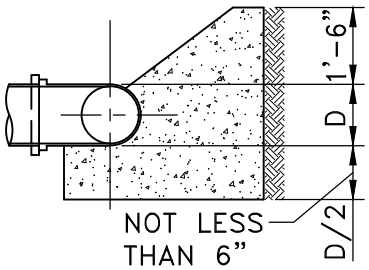
PLAN 'B'
AT BEND



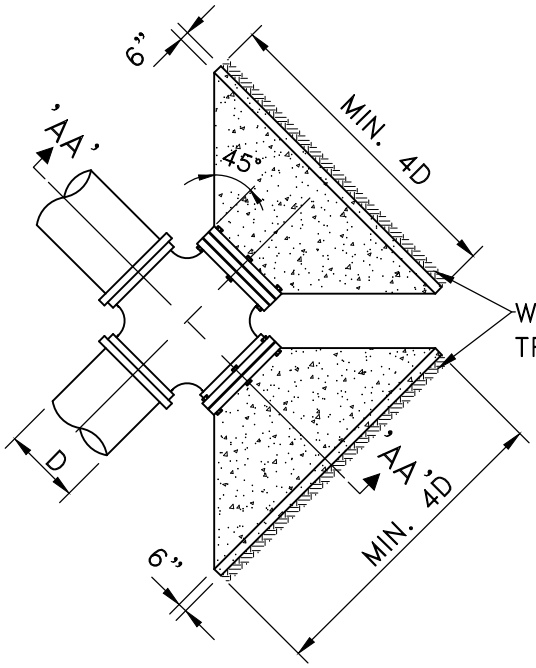
PLAN 'A'



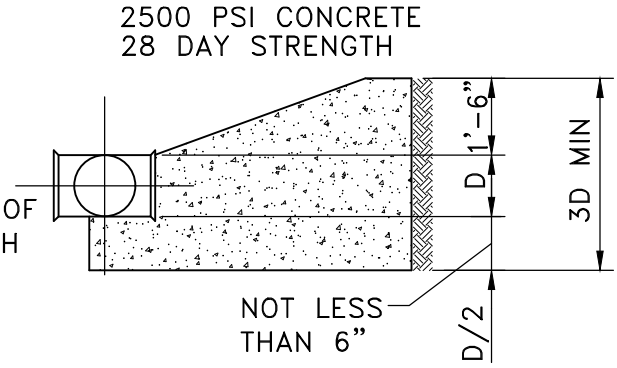
SECTION 'B'
AT BEND



SECTION 'A'



PLAN 'AA'



SECTION 'AA'

COVER FITTING ENCASED IN CONCRETE WITH POLYETHYLENE OR BUILDING PAPER PRIOR TO POURING

APPROVED	City of St. Francis	STANDARD PLATE NO. 203
REVISED		

PIPE SIZE	TEE or PLUG	CROSS W/ 2 PLUGS (i.e. 90° BEND)	1/8 BEND (45° BEND) AND 1/16 BEND (22.5°)
6”	0.22 CuYds	0.15 CuYds	0.05 CuYds
8”	0.27 CuYds	0.29 CuYds	0.08 CuYds
10”	0.32 CuYds	0.48 CuYds	0.14 CuYds
12”	0.37 CuYds	0.73 CuYds	0.21 CuYds
16”	0.53 CuYds	1.73 CuYds	0.49 CuYds
20”	0.82 CuYds	3.36 CuYds	0.95 CuYds
24”	1.34 CuYds	5.77 CuYds	1.63 CuYds

NOTE:
1. COVER FITTINGS ENCASED IN CONCRETE WITH POLYETHYLENE OR BUILDING PAPER PRIOR TO POURING.
2. CONCRETE BLOCKING SHALL BE POURED AGAINST FIRM, UNDISTURBED GROUND.
3. CONCRETE SHALL MEET THE REQUIREMENTS FOR GRADE B CONCRETE IN CONFORMANCE WITH Mn/DOT 2461.
4. ALL METAL PARTS OF TIE ROD OR STRAP TYPE RESTRAINTS SHALL BE GALVANIZED OR COATED WITH ASPHALTIC TYPE RUSTPROOFING.

WATERMAIN CONCRETE BLOCKING QUANITIES

Nov 11, 2022 - 10:17am
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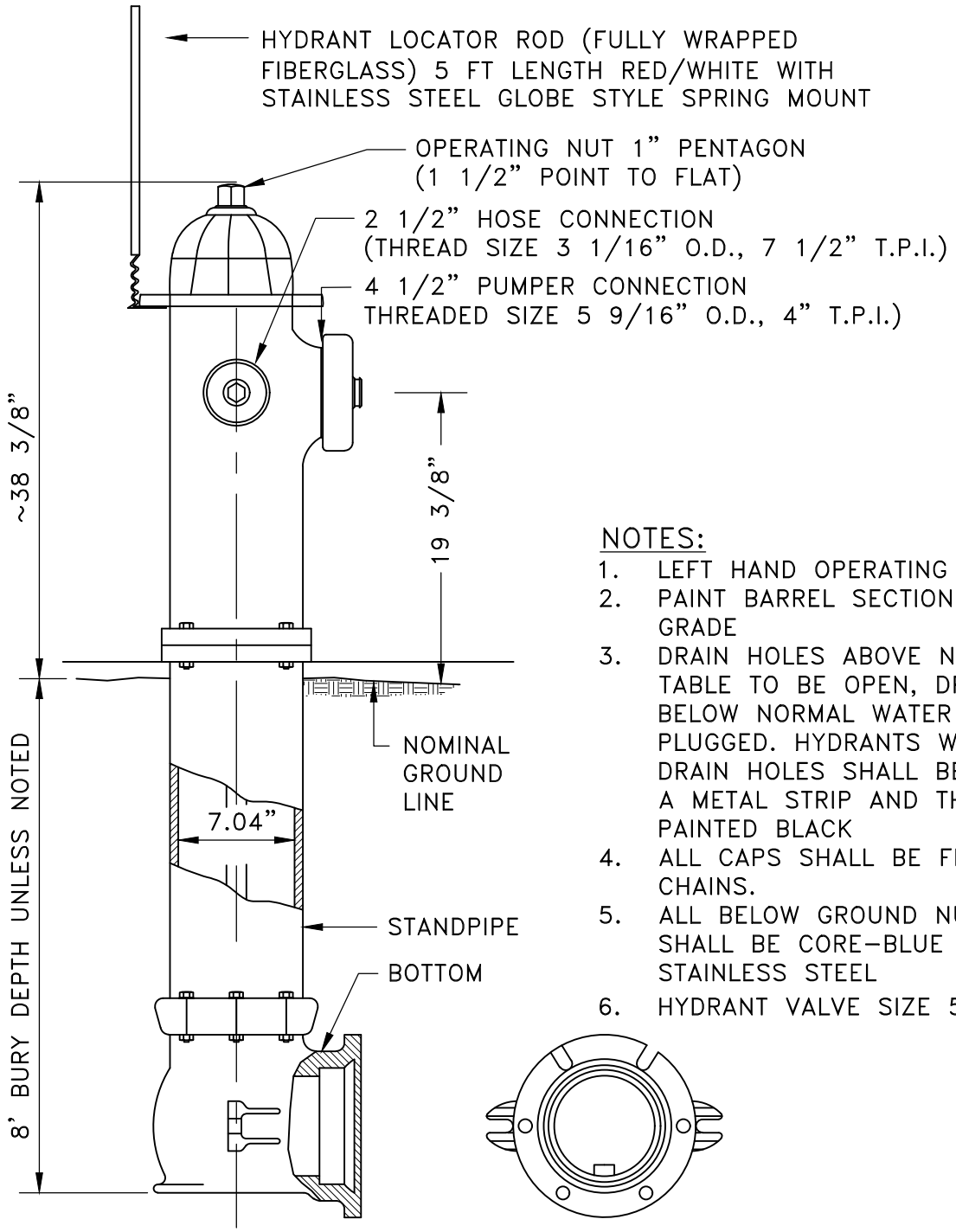
APPROVED

REVISED

City of St. Francis

STANDARD PLATE NO. 204



NOTES:

1. LEFT HAND OPERATING NUT
2. PAINT BARREL SECTION RED TO GRADE
3. DRAIN HOLES ABOVE NORMAL WATER TABLE TO BE OPEN, DRAIN HOLES BELOW NORMAL WATER TABLE TO BE PLUGGED. HYDRANTS WITH PLUGGED DRAIN HOLES SHALL BE TAGGED WITH A METAL STRIP AND THE NOZZLE PAINTED BLACK
4. ALL CAPS SHALL BE FITTED WITH CHAINS.
5. ALL BELOW GROUND NUTS AND BOLTS SHALL BE CORE-BLUE OR 316 STAINLESS STEEL
6. HYDRANT VALVE SIZE $5\frac{1}{4}$"

CLOW MEDALLION HYDRANT

(OR APPROVED EQUAL)
NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 205
REVISED		

Dec 19, 2022 - 3:08pm
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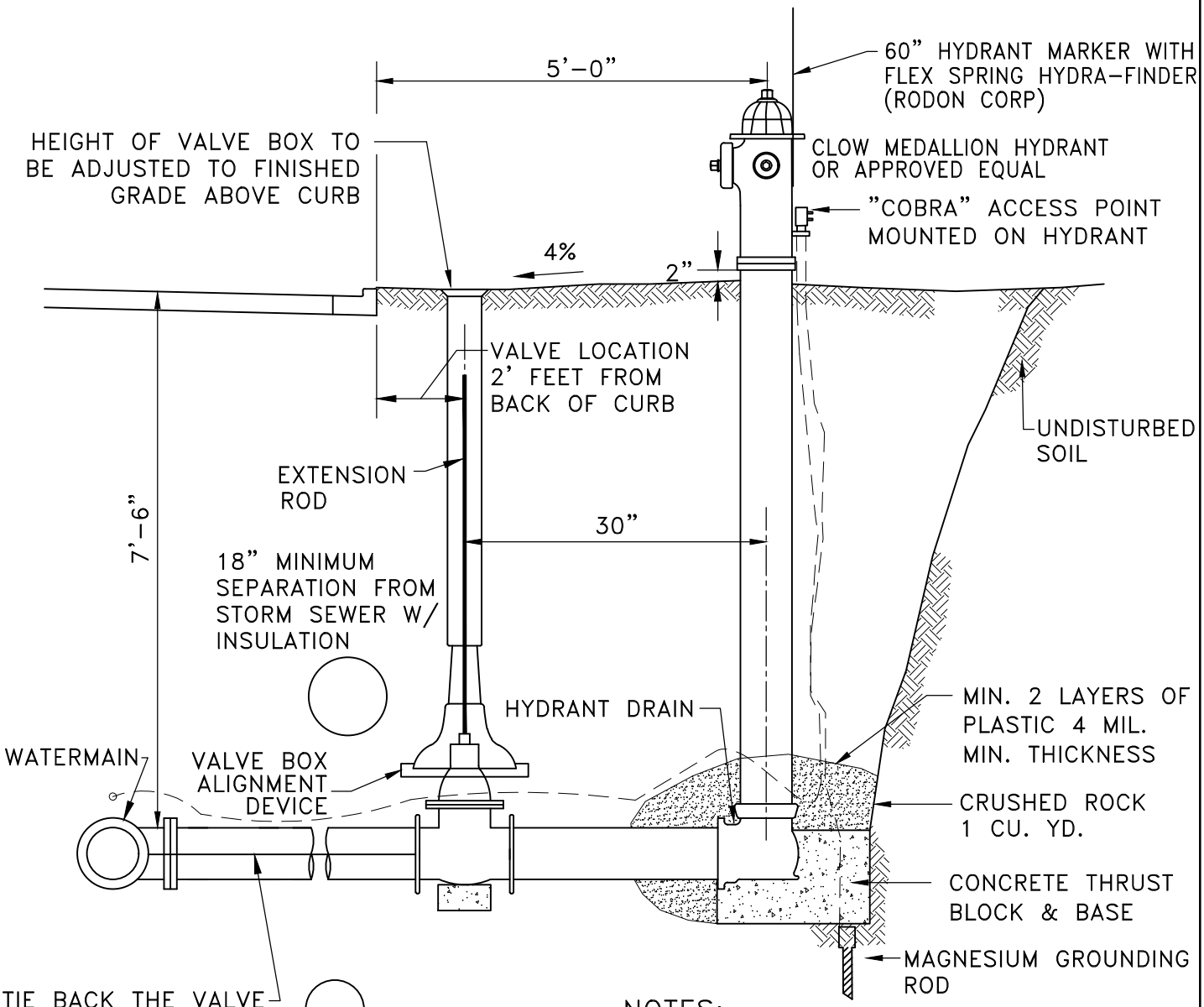


NOTES:

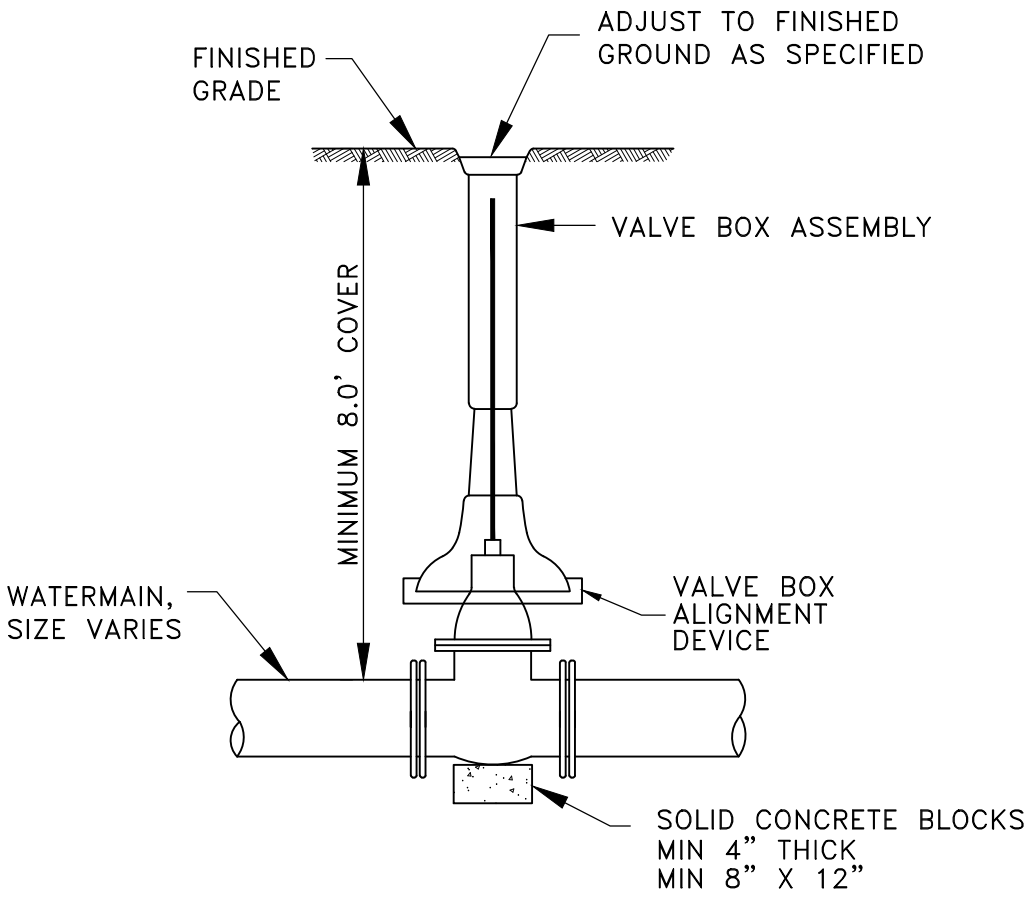
1. HYDRANT DRAINS BELOW WATER TABLE TO BE PLUGGED AND THE HYDRANT TAGGED WITH METAL STRIP AND THE NOZZLE PAINTED BLACK.
2. ALL BELOW GROUND NUTS, BOLTS, AND RODDING SHALL BE CORE-BLUE OR 316 STAINLESS STEEL.

HYDRANT AND VALVE INSTALLATION

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE No. 206
REVISED		

Dec 19, 2022 - 3:08pm K:\cad_eng\Details\ST FRANCIS\Standard plates\200 WATER\W-206.dwg



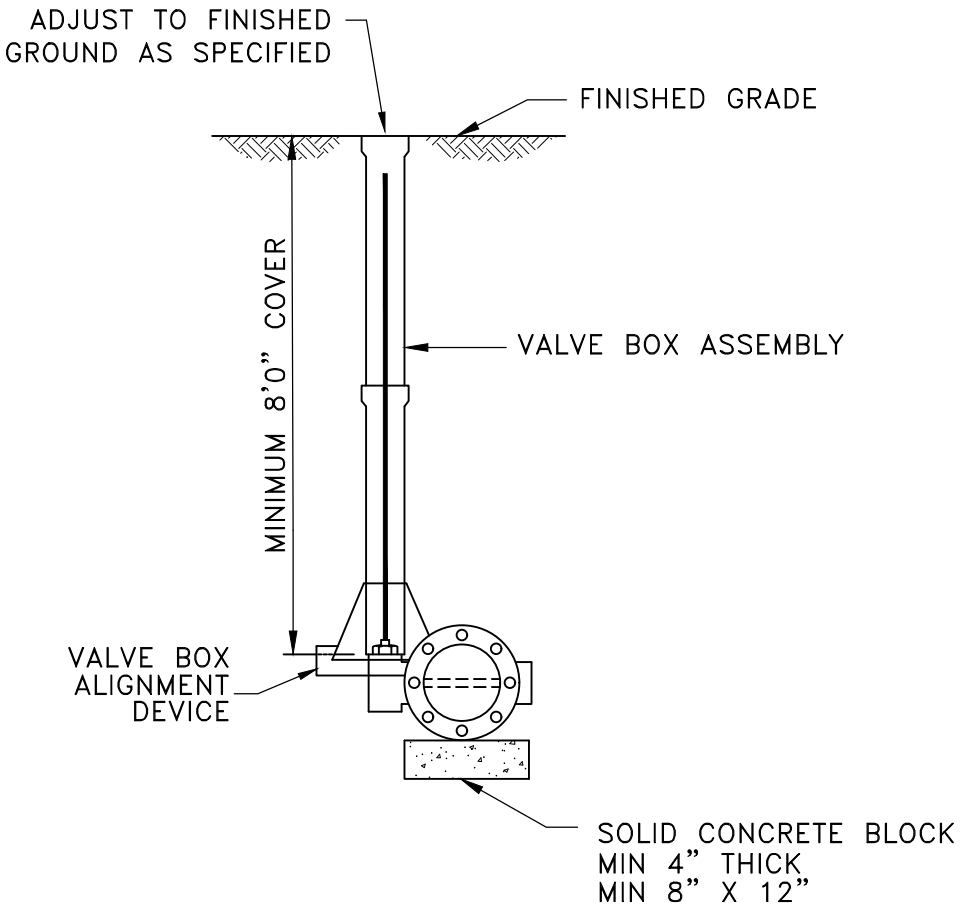
NOTES:

1. ALL VALVES SHALL BE FITTED WITH EXTENSION STEMS. TO BRING THE OPERATING NUT TO BE 12" FROM THE SURFACE.
2. ALL BELOW GROUND NUTS, BOLTS, AND RODDING SHALL BE CORE-BLUE OR 316 STAINLESS STEEL.

TYPICAL RESILIENT WEDGE VALVE & BOX INSTALLATION 10" & UNDER WATERMAIN

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 207
REVISED		



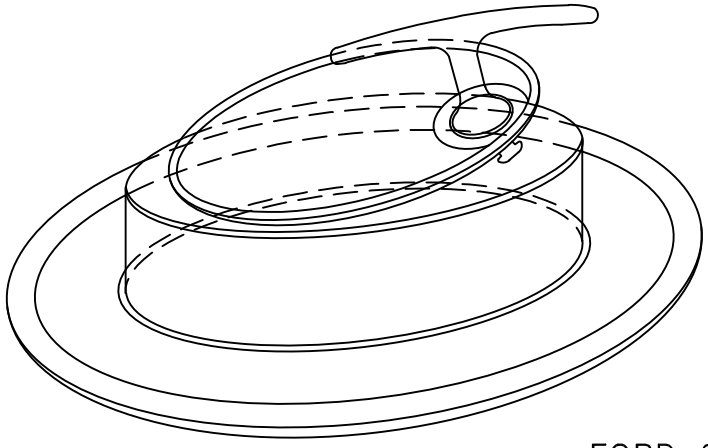
NOTES:

1. ALL VALVES SHALL BE FITTED WITH EXTENSION STEMS TO BRING THE OPERATING NUT TO BE 12" FROM THE SURFACE.
2. ALL BELOW GROUND NUTS, BOLTS, AND RODDING SHALL BE CORE-BLUE OR 316 STAINLESS STEEL

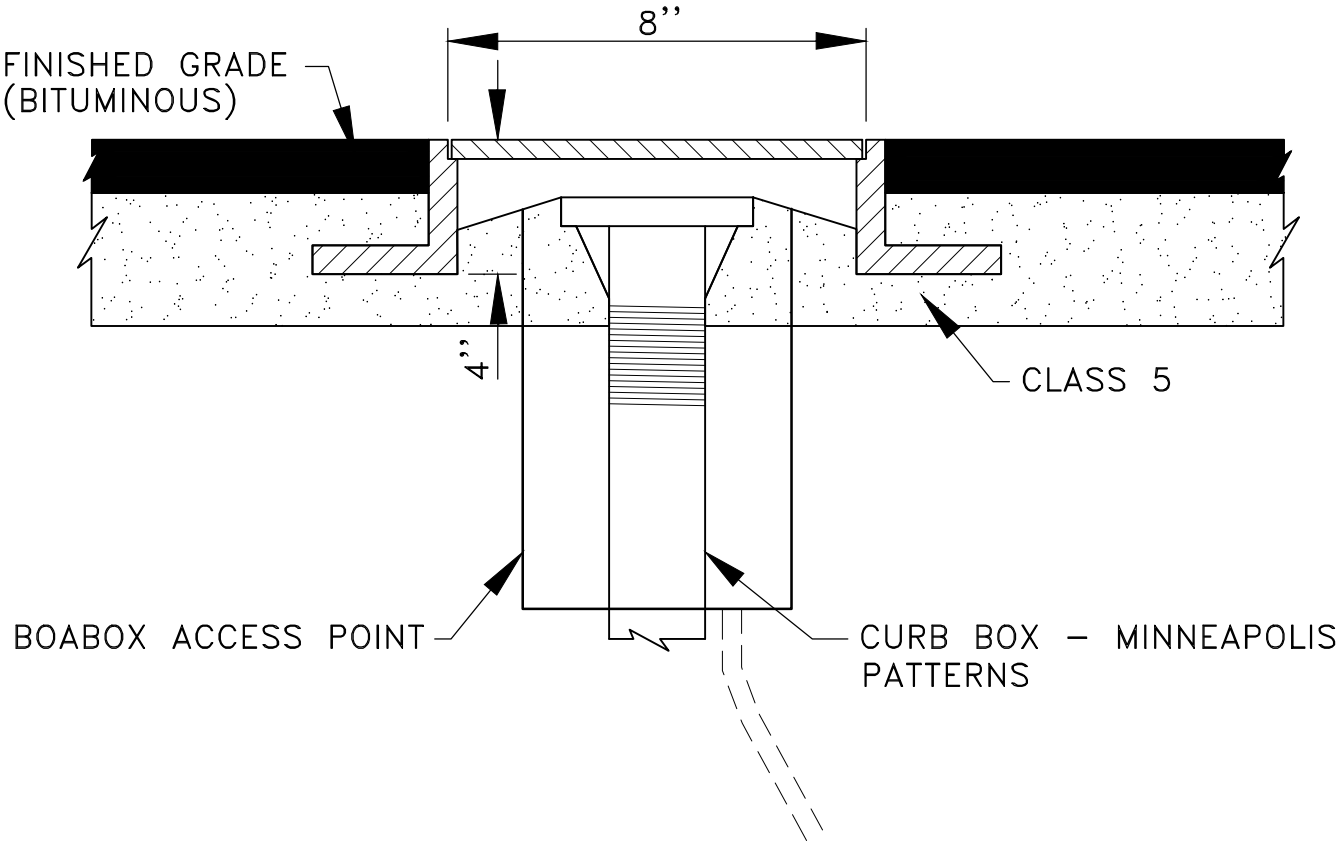
TYPICAL BUTTERFLY VALVE & BOX INSTALLATION 12" & OVER WATERMAIN

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 208
REVISED		



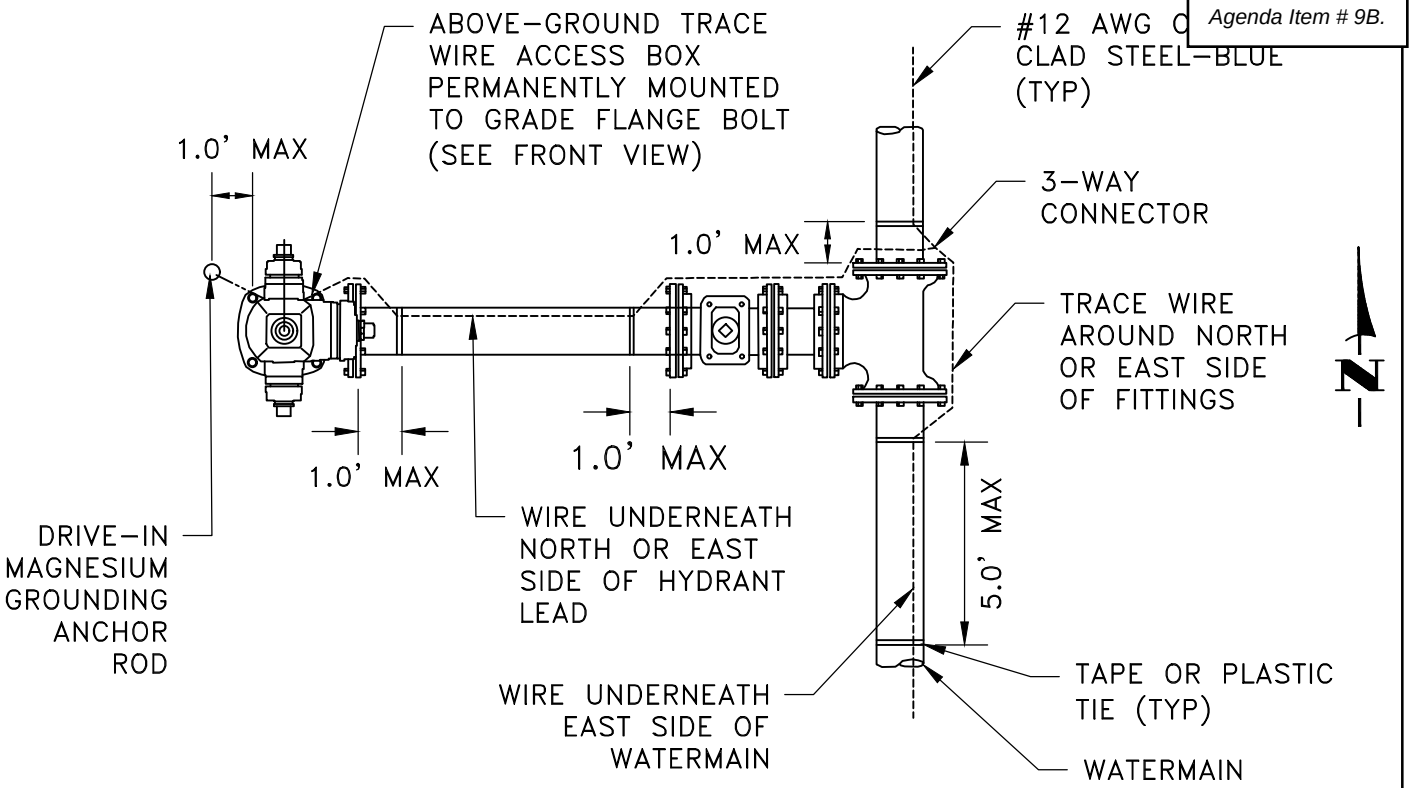
FORD SERIES A LID COVER



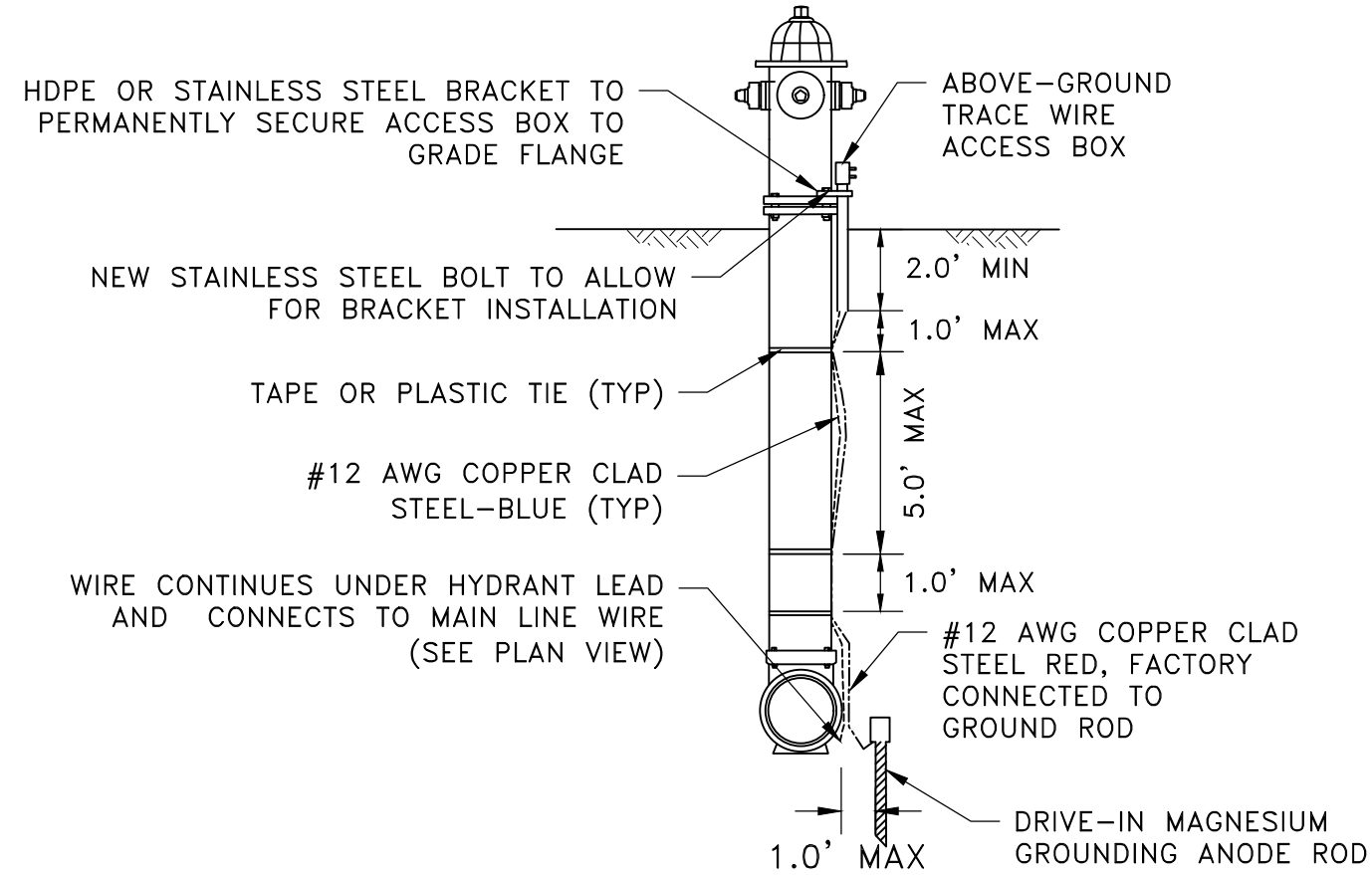
CURB STOP COVER FOR DRIVEWAY INSTALLATION

NO SCALE

APPROVED		STANDARD PLATE NO. 209
REVISED	City of St. Francis	



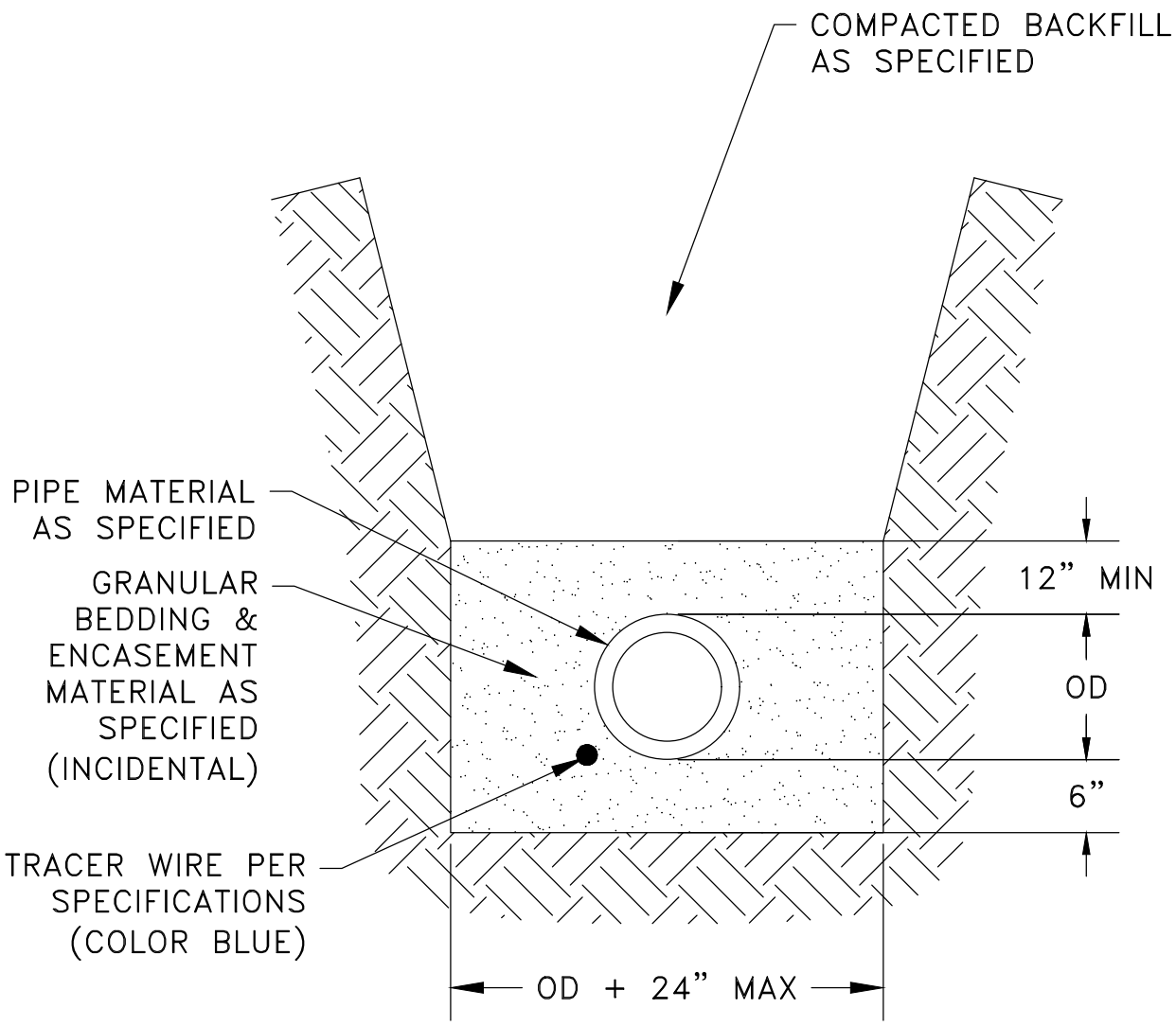
HYDRANT – PLAN VIEW



TRACER WIRE DETAIL
NO SCALE

HYDRANT – SECTION VIEW

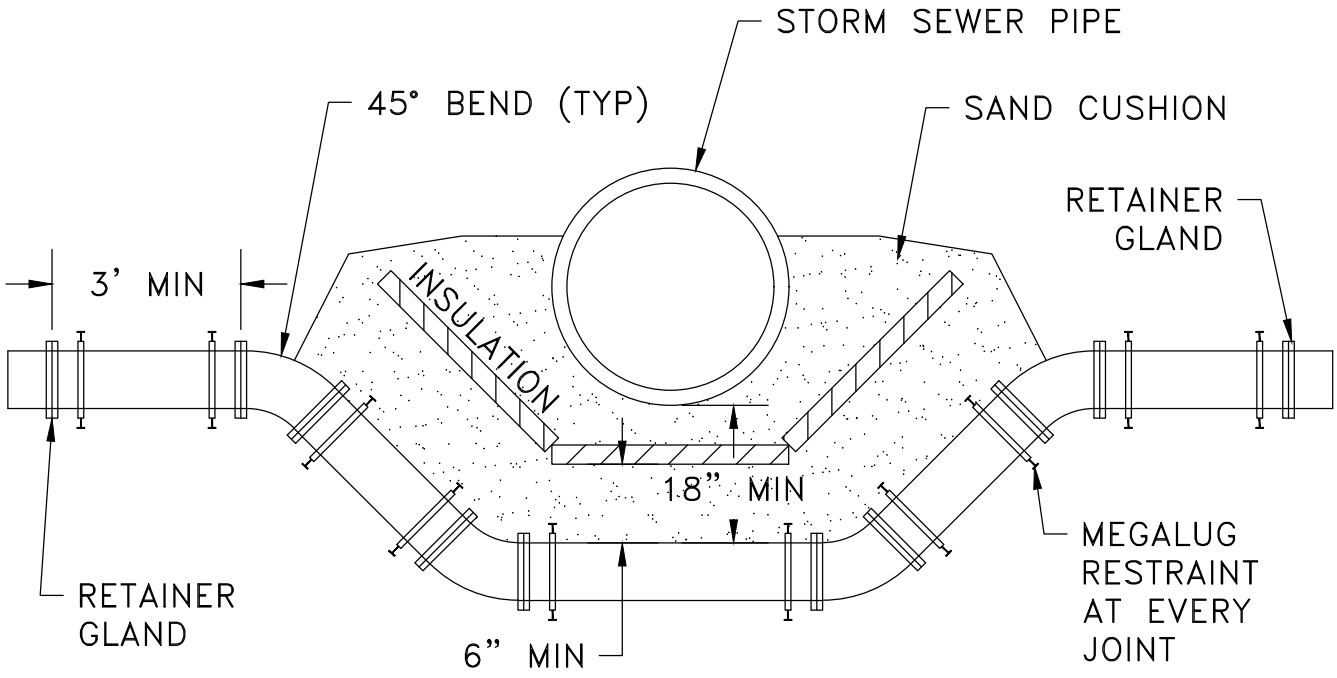
APPROVED	City of St. Francis	STANDARD PLATE NO. 210
REVISED		



PVC C-900 WATERMAIN TRENCH

NO SCALE

APPROVED REVISED	City of St. Francis	STANDARD PLATE NO. 213



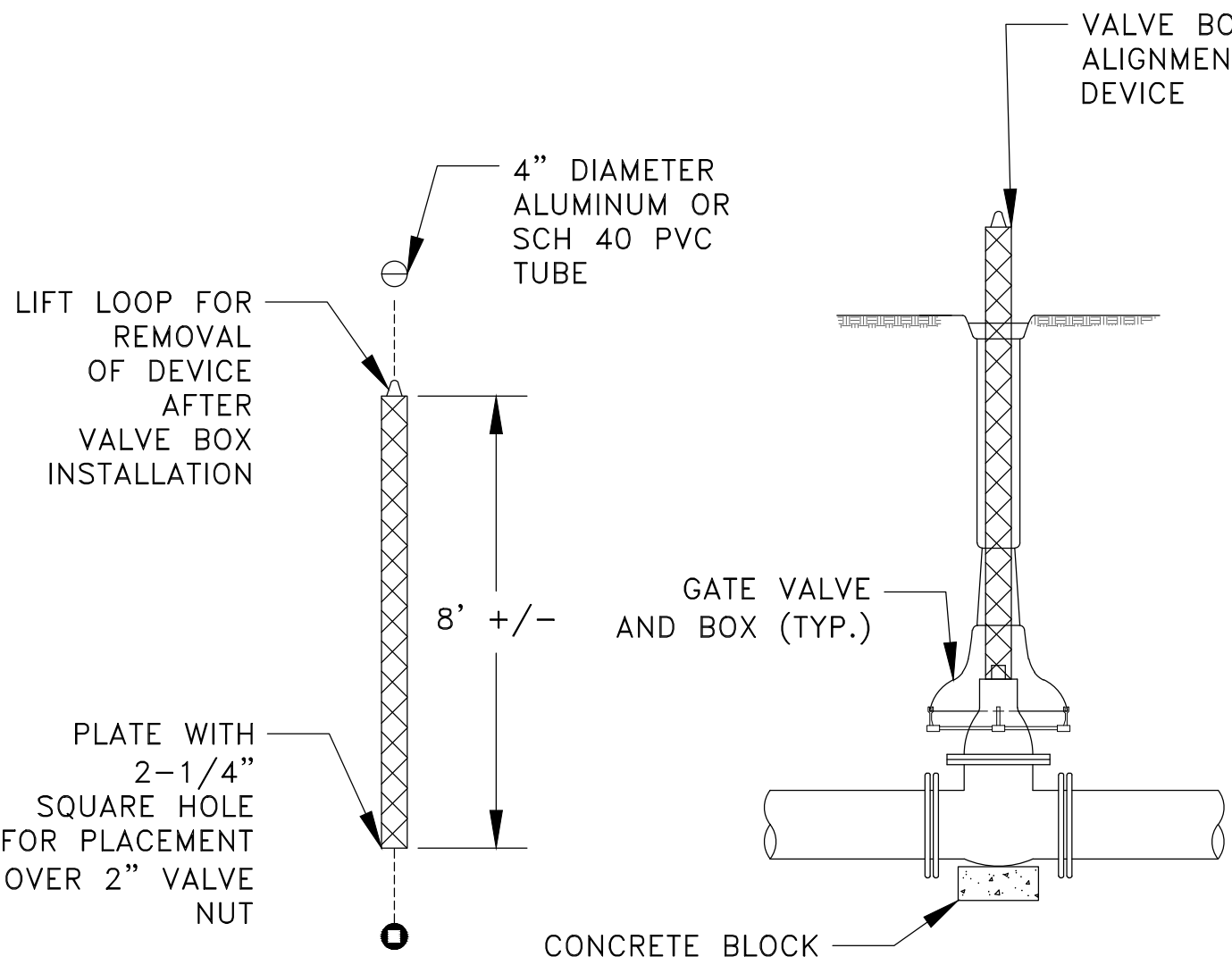
NOTES:

1. PROVIDE MEGALUG RESTRAINT AT JOINTS ON BENDS AND AS SHOWN ON DETAIL.
2. COAT ALL ANCHORAGE AS PER SPECIFICATIONS.
3. PROVIDE SAND CUSHION BETWEEN TOP OF WATERMAIN AND BOTTOM OF SEWER PIPE, MINIMUM DIMENSIONS AS SHOWN ON DETAIL (INCIDENTAL).
4. INSULATION TO BE 4" THICK POLYSTYRENE.
5. IN AREAS OF GREATER LONGITUDINAL SPACE, THE WATERMAIN SHALL BE GRADUALLY LOWERED AND RAISED, USING NO BENDS, OVER A DISTANCE OF 200 FEET.

WATERMAIN OFFSET

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 214
REVISED		

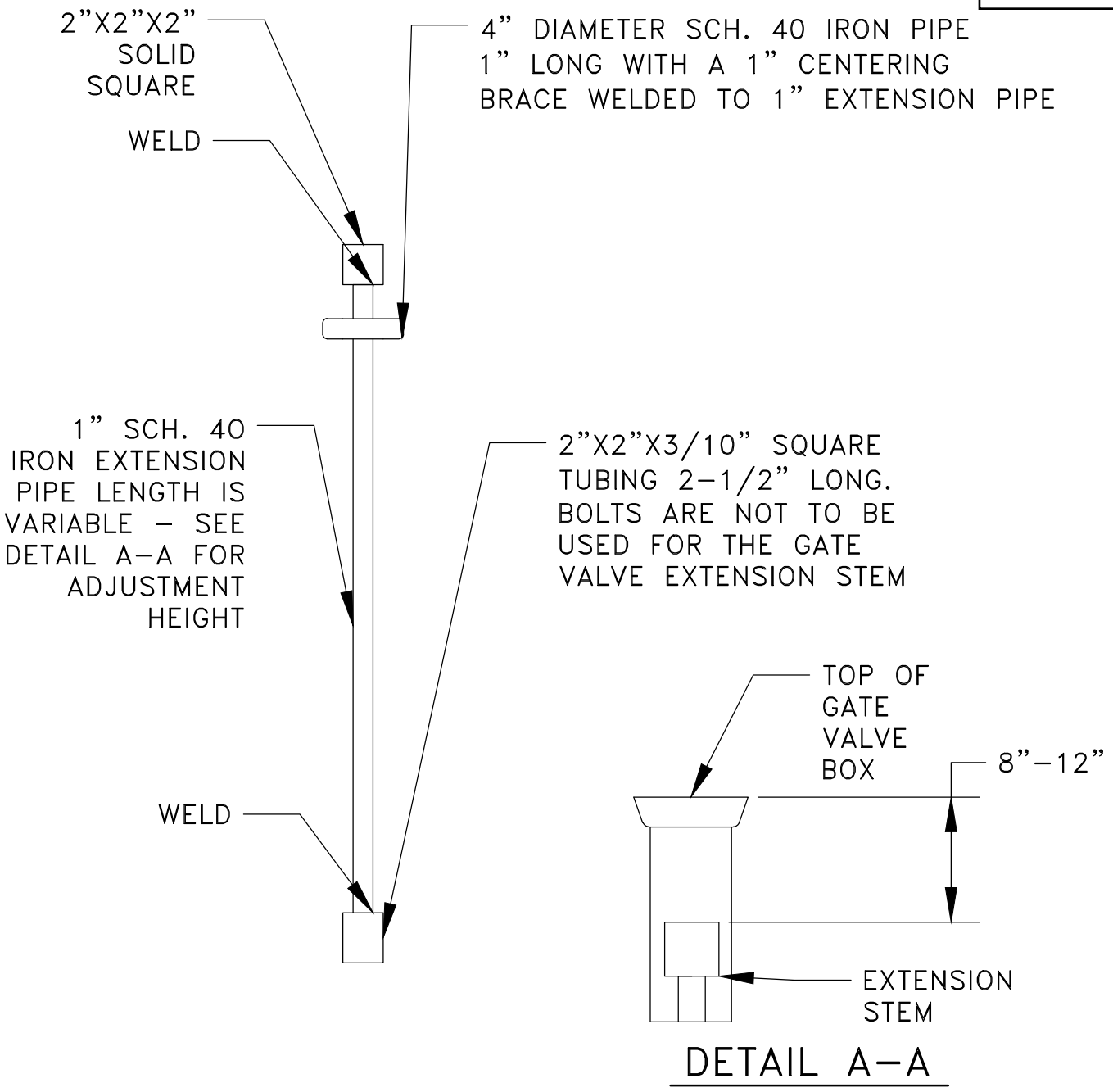


NOTE:
1. ALIGNMENT DEVICE TO BE LEFT IN PLACE UNTIL BACKFILL OPERATIONS ARE COMPLETE.

GATE VALVE ALIGNMENT DEVICE

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 215
REVISED		



DETAIL A–A

NOTE:

1. AFTER FABRICATION, THE ENTIRE GATE VALVE EXTENSION STEM SHALL BE PAINTED WITH A SHOP APPLIED PRIMER AND EXTERIOR EPOXY PAINT.

GATE VALVE EXTENSION STEM

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 216
REVISED		

Dec 27, 2022 – 8:00pm
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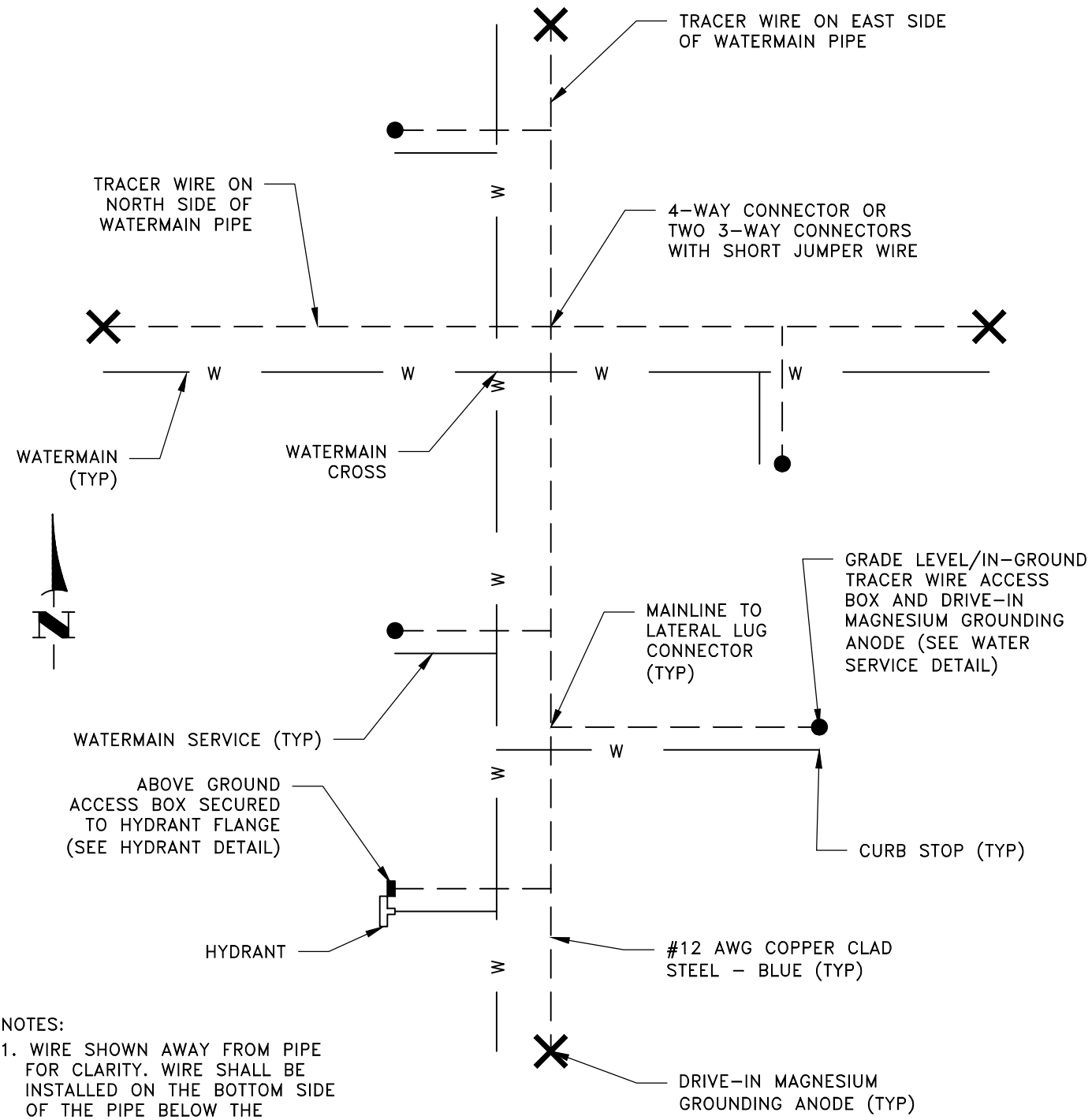


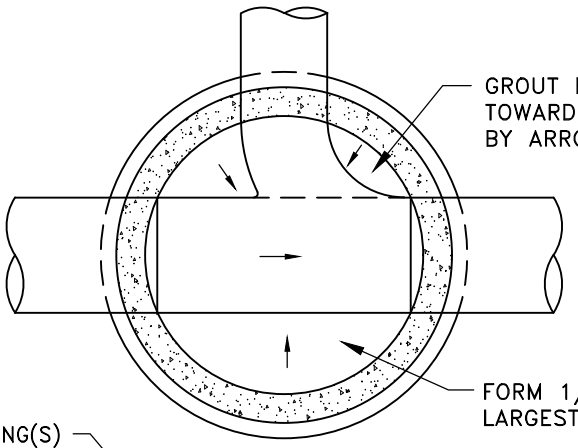
NOTES:

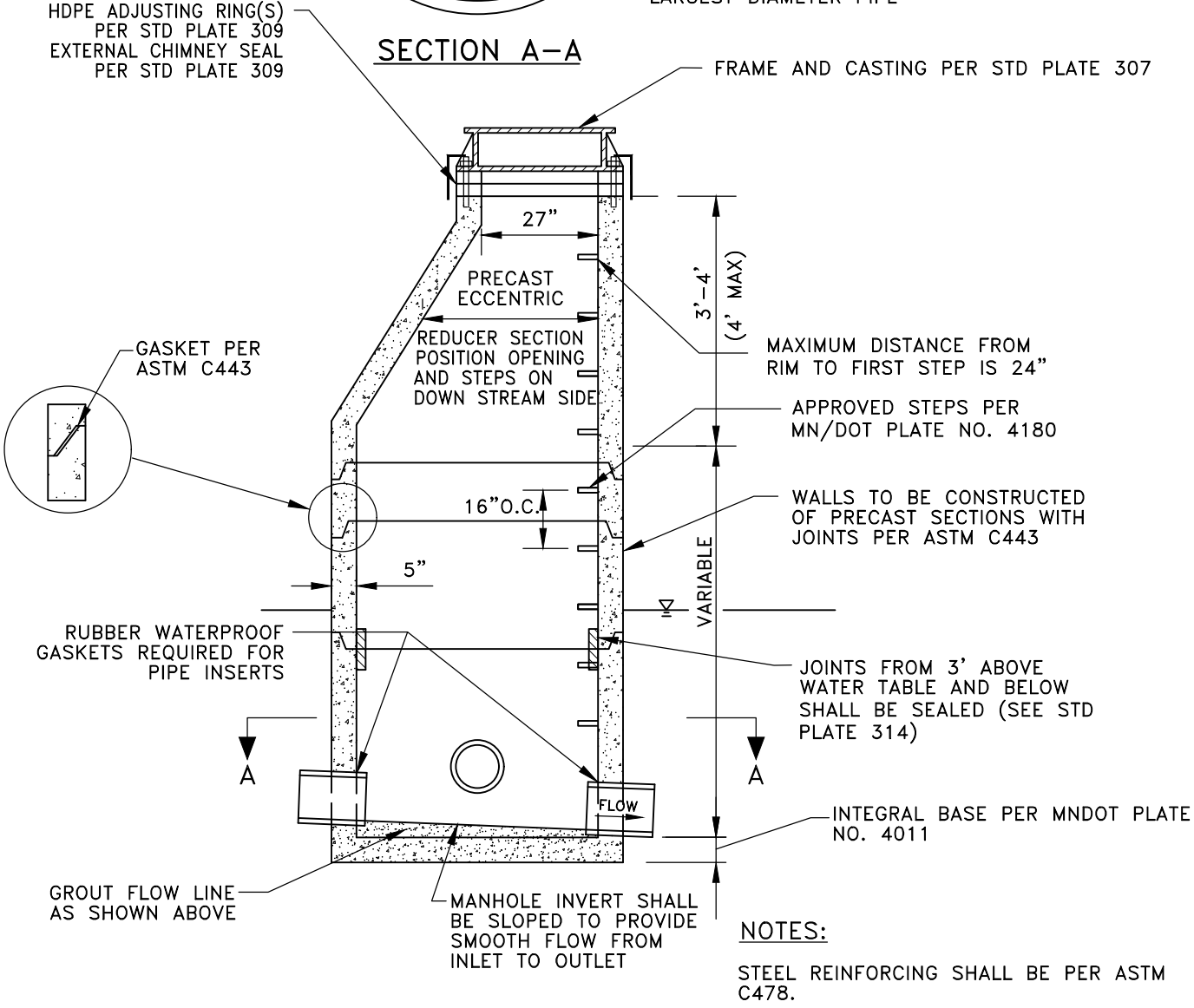
1. WIRE SHOWN AWAY FROM PIPE FOR CLARITY. WIRE SHALL BE INSTALLED ON THE BOTTOM SIDE OF THE PIPE BELOW THE SPRING LINE. THE WIRE SHALL BE FASTENED TO THE PIPE WITH TAPE OR PLASTIC TIES AT 5' INTERVALS

TRACER WIRE SAMPLE WATER PLAN

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 217
REVISED		





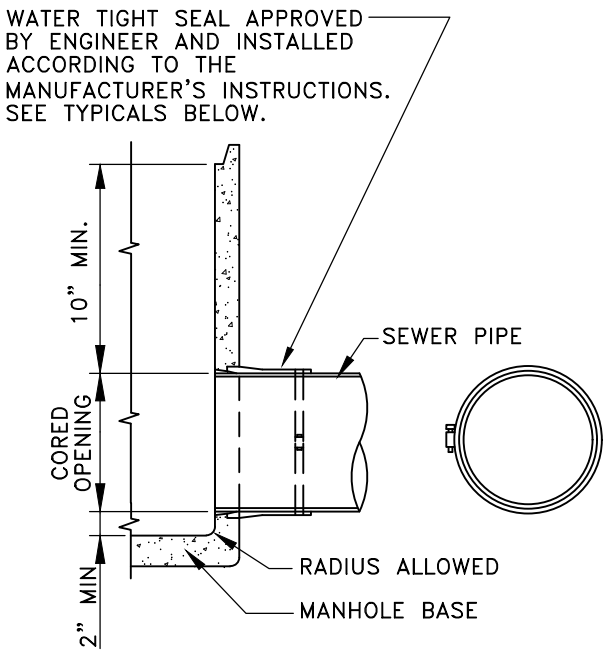
NOTES:

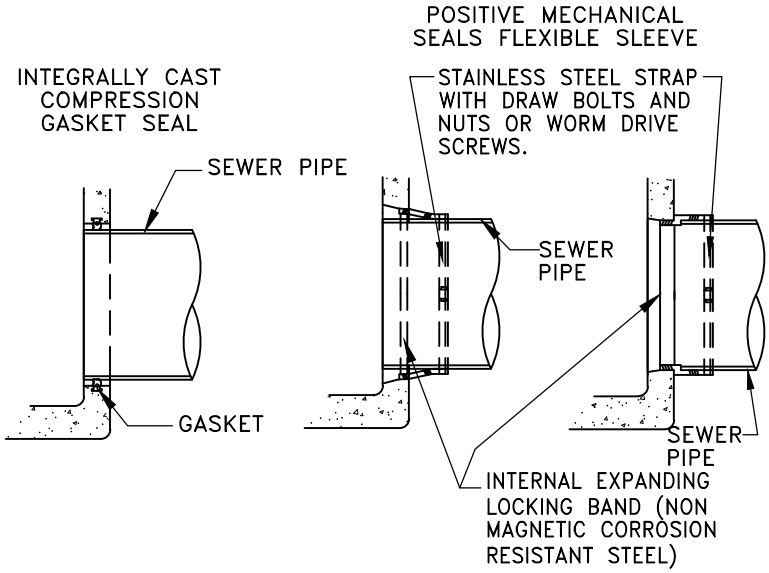
STEEL REINFORCING SHALL BE PER ASTM C478.

SANITARY SEWER STANDARD MANHOLE

NO SCALE

APPROVED REVISED	City of St. Francis	STANDARD PLATE NO. 300





SLEEVE NOTES:

FLEXIBLE SLEEVE SHALL BE NEOPRENE MATERIAL MEETING THE REQUIREMENTS OF ASTM C-443 OR AS APPROVED

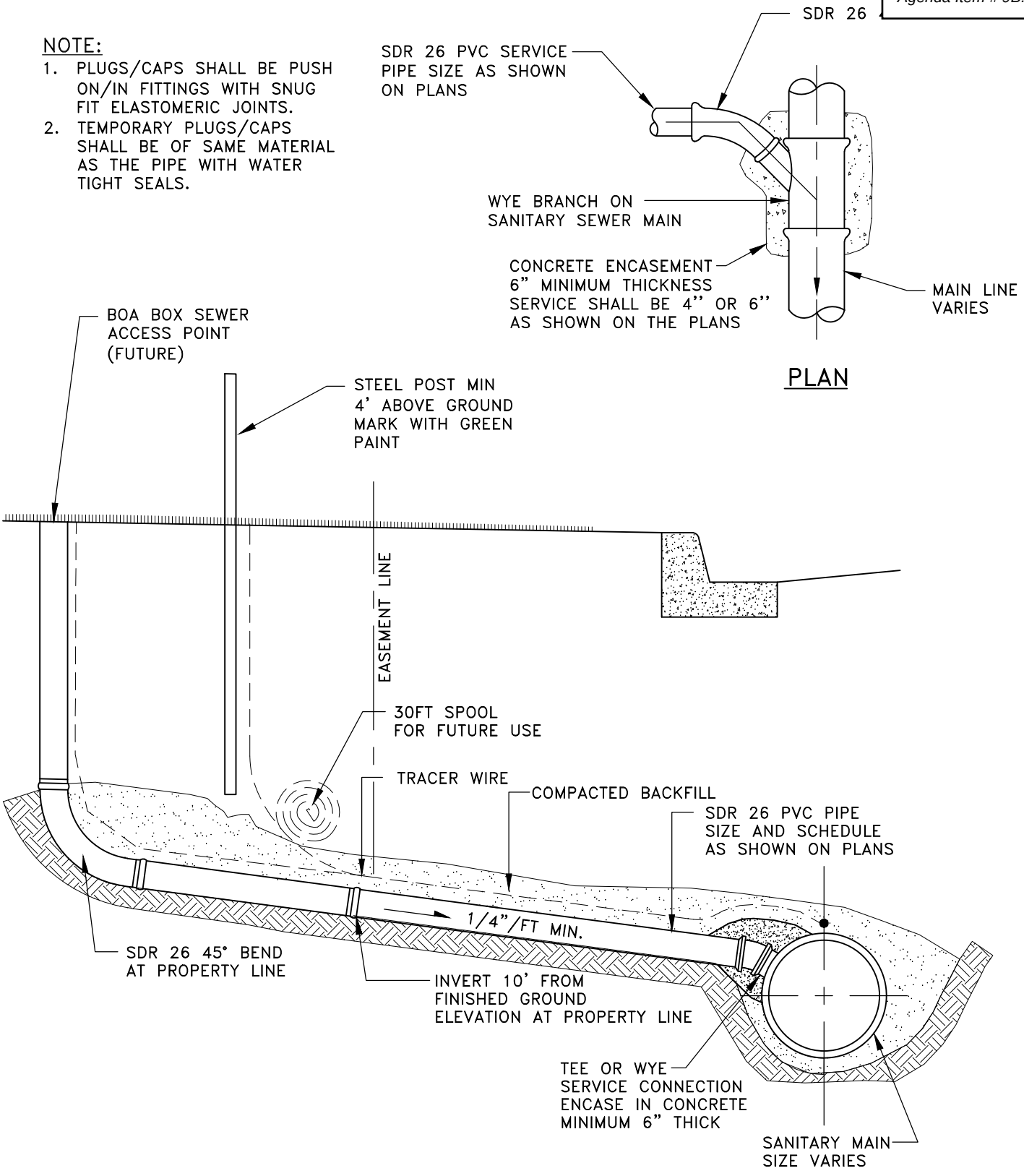
FLEXIBLE SLEEVE DIMENSIONS SHALL CONFORM TO PRODUCERS STANDARDS.

TYPICAL WATER TIGHT SEALS

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 301
REVISED		

NOTE:
1. PLUGS/CAPS SHALL BE PUSH ON/IN FITTINGS WITH SNUG FIT ELASTOMERIC JOINTS.
2. TEMPORARY PLUGS/CAPS SHALL BE OF SAME MATERIAL AS THE PIPE WITH WATER TIGHT SEALS.



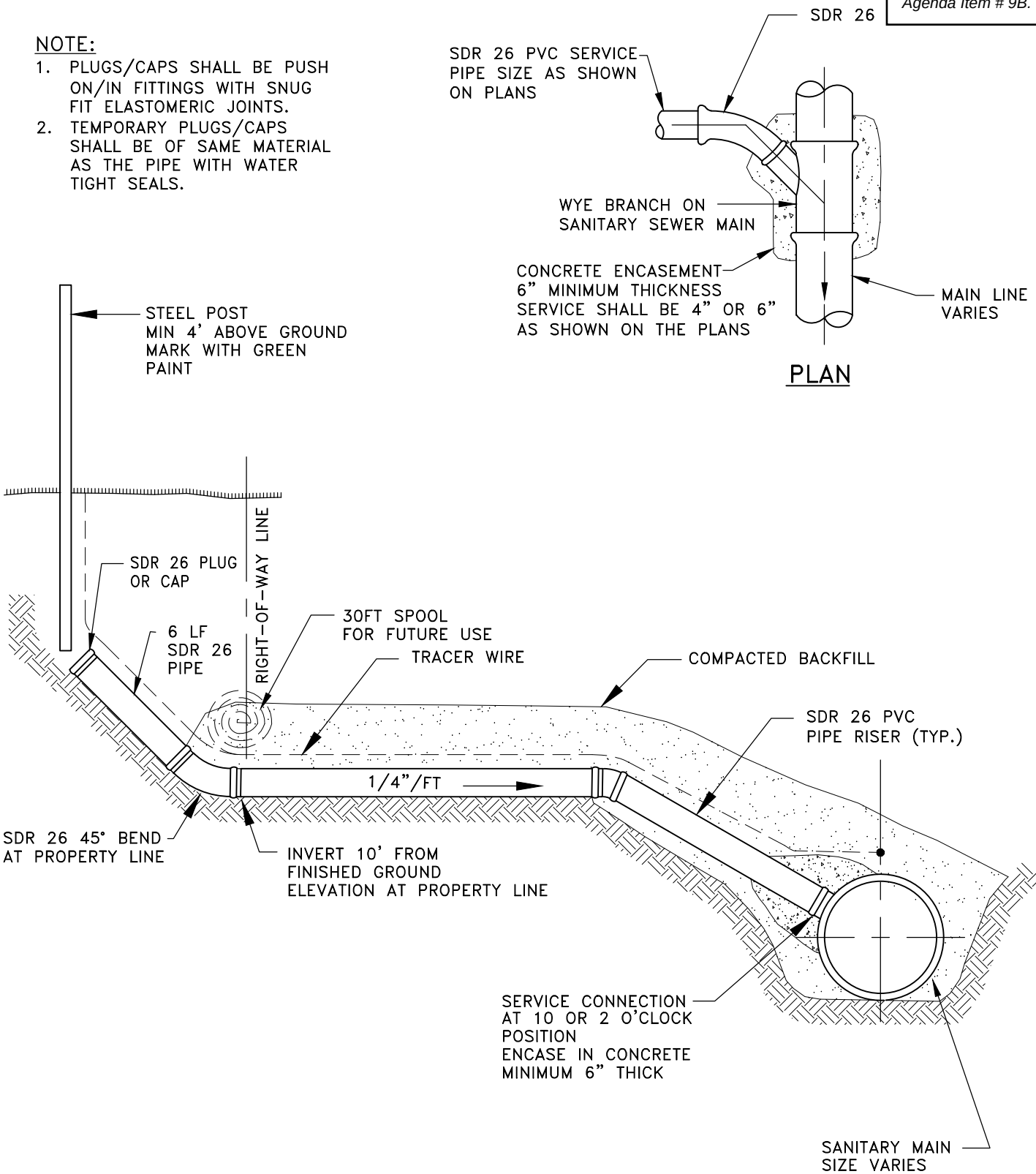
SHALLOW SANITARY MAIN SERVICE CONNECTION

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 302
REVISED		

Dec 27, 2022 - 8:06pm
K:\cad_eng\Details\ST FRANCIS\Standard plates\300 SANITARY\Sat-302.dwg

NOTE:
1. PLUGS/CAPS SHALL BE PUSH ON/IN FITTINGS WITH SNUG FIT ELASTOMERIC JOINTS.
2. TEMPORARY PLUGS/CAPS SHALL BE OF SAME MATERIAL AS THE PIPE WITH WATER TIGHT SEALS.

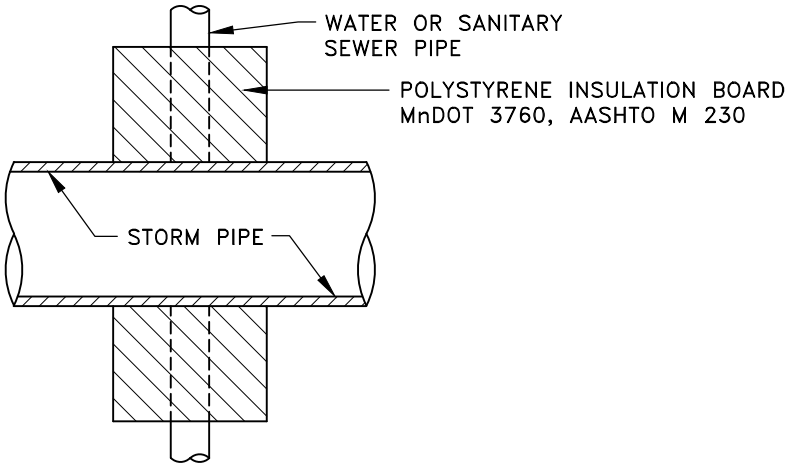


DEEP SANITARY MAIN SERVICE CONNECTION

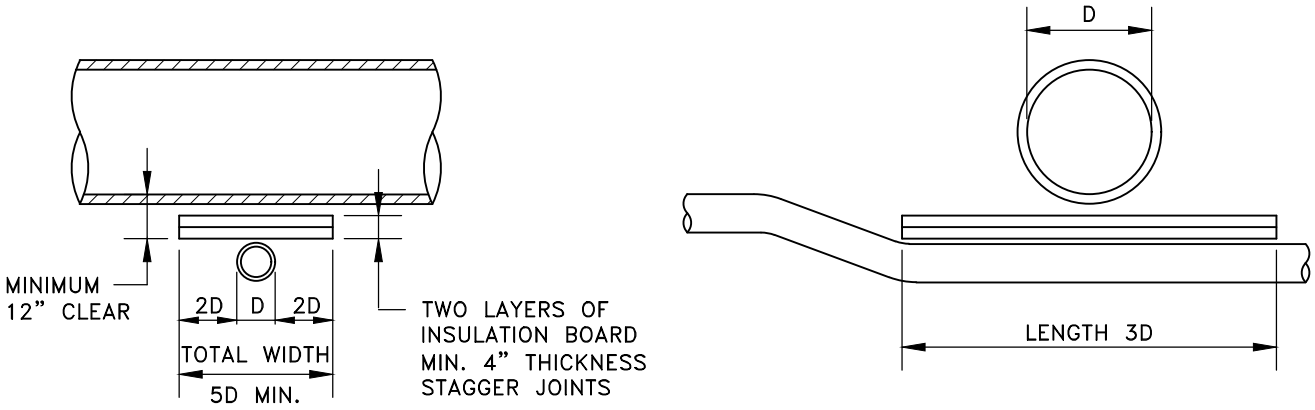
NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 303
REVISED		

NOTE:
INSULATE ALL WATER OR SANITARY SEWER PIPE CROSSINGS WITHIN 2' OF STORM SEWER PIPE



PLAN

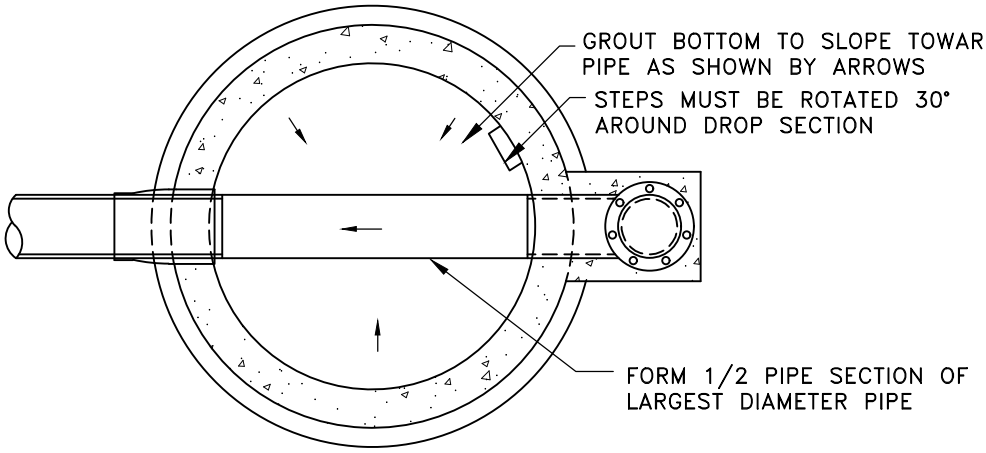


PROFILE

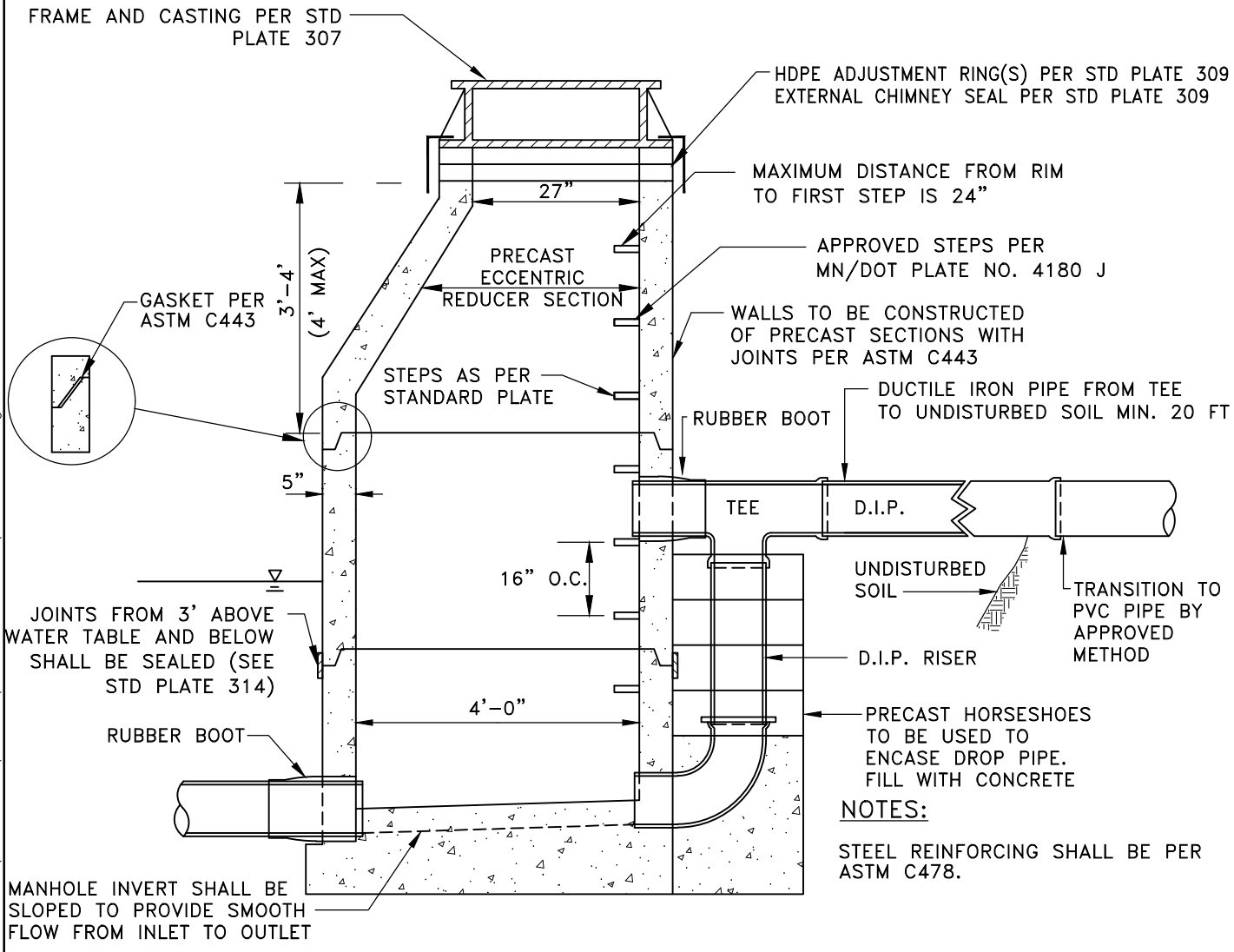
INSULATION FOR WATER & SANITARY SEWER PIPE & SERVICES

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 304
REVISED		



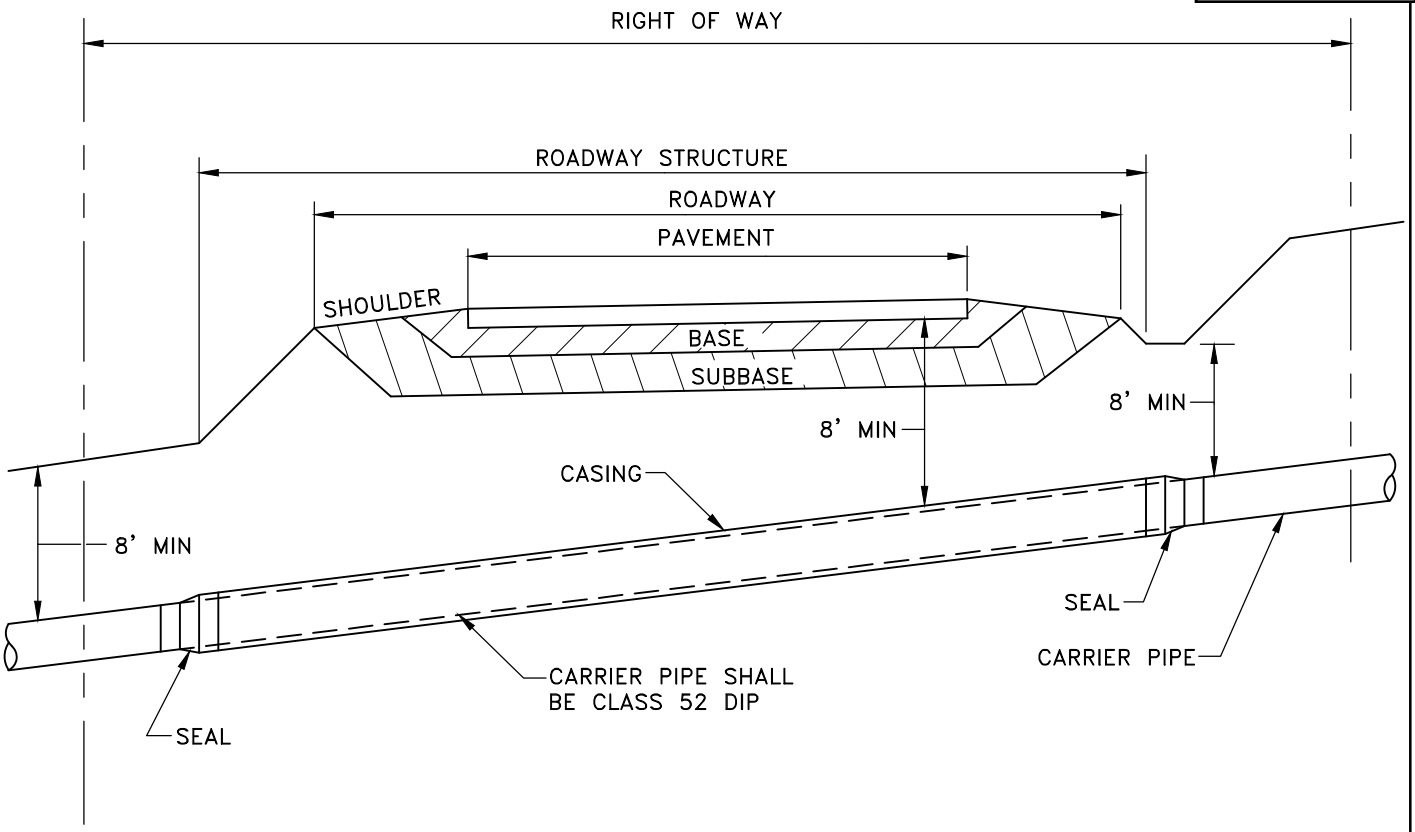
PLAN VIEW



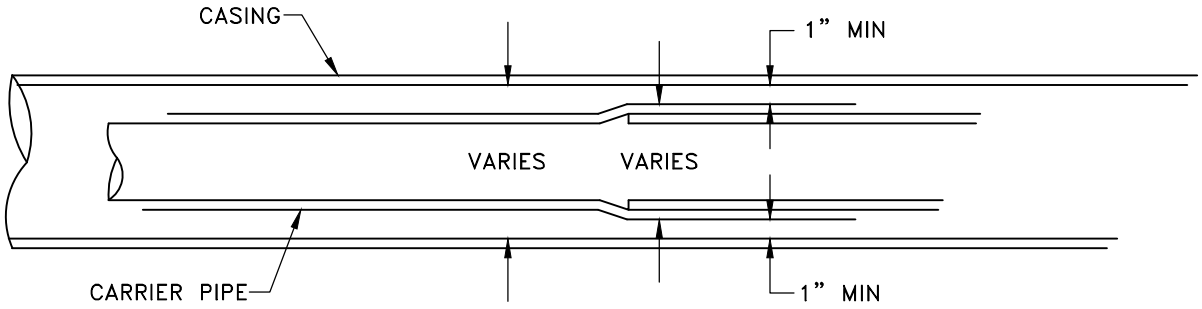
STANDARD MONOLITHIC DROP MANHOLE

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 305
REVISED		



CASING PIPE SHALL BE WELDED STEEL PIPE, NEW MATERIAL, WITH A MINIMUM YIELD STRENGTH OF 35,000 PSIG (POUNDS PER SQUARE INCH GAUGE). THE FOLLOWING MINIMUM WALL THICKNESS SHALL BE USED:

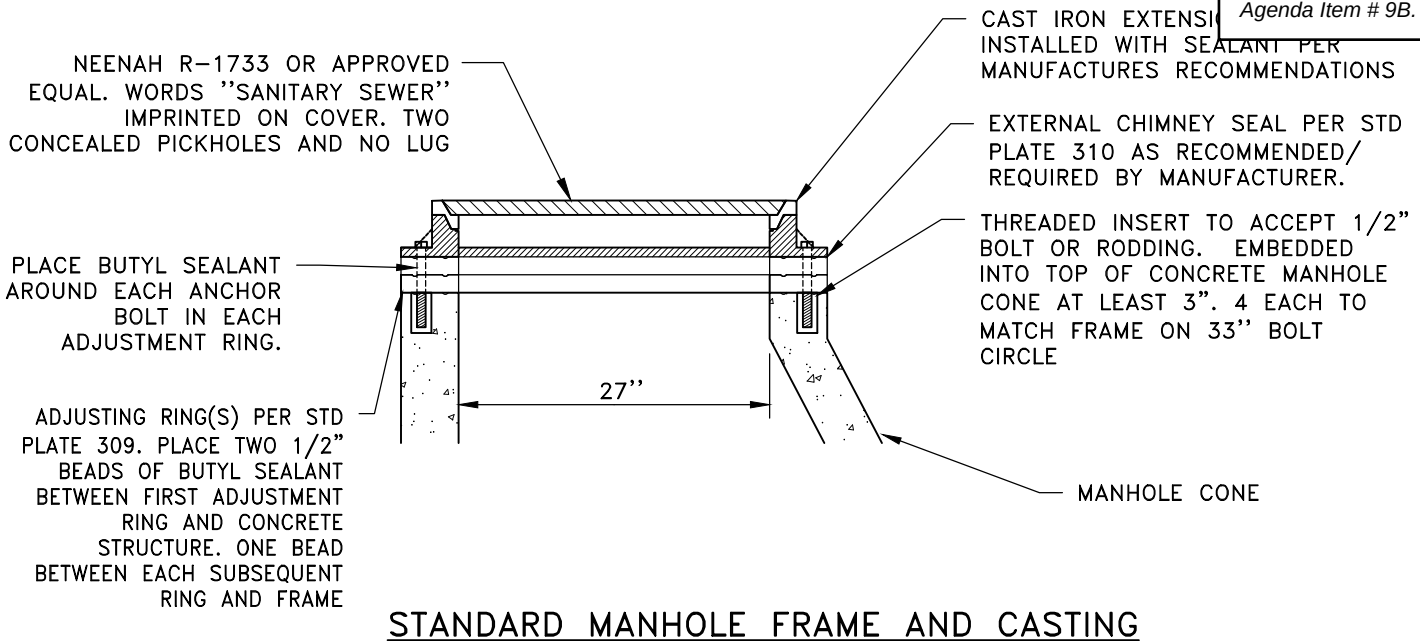


INSIDE DIAMETER OF CASING MIN 2" GREATER THEN OUTSIDE DIAMETER OF CARRIER.

PIPE JACKING DETAIL

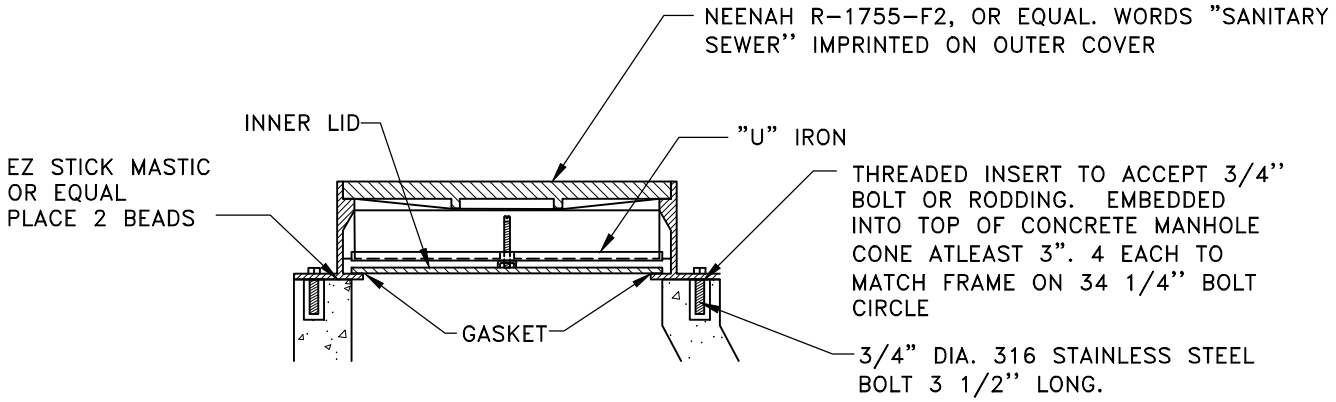
NO SCALE

APPROVED REVISED	City of St. Francis	STANDARD PLATE NO. 306



STANDARD MANHOLE FRAME AND CASTING

(ALL MANHOLES EXCEPT WHERE WATERPROOF FRAMES AND CASTINGS ARE REQUIRED)



WATERPROOF FRAME AND CASTING

(ALL FORCEMAIN MANHOLES, OR ANY MANHOLE WITHIN GREEN SPACES OR WITHIN THE 100 YR HWL AREA)

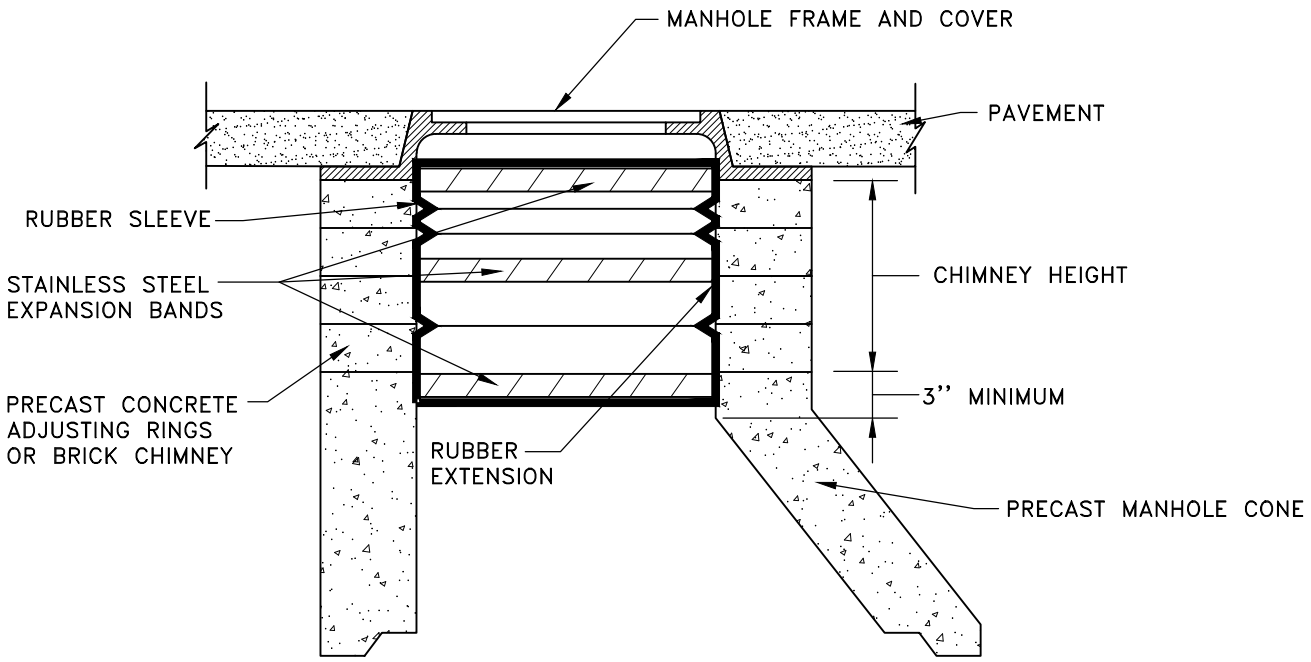
NOTE:

1. ALL NUTS, BOLTS, THREADED INSERTS, AND RODDING SHALL BE 316 STAINLESS STEEL.
2. CLEAN ALL SURFACES TO REMOVE SCALE OR LOOSE IMPEDIMENTS BEFORE PLACING ANY MASTIC, SEALANT, OR INSTALLATION OF FRAME AND CASTING SYSTEM.
3. NEENAH R-1642 SYSTEM SHALL CONSIST OF CAST IRON FRAME, SOLID CAST IRON LID, CAST IRON EXTENSION RING AND HDPE "PLASTIC" ADJUSTMENT RINGS.
4. NEENAH R-1755-F2 SYSTEM SHALL CONSIST OF CAST IRON FRAME, SOLID CAST IRON LID, & INNER LID. THOUGH NOT TYPICAL IF NECESSARY HDPE "PLASTIC" ADJUSTMENT RINGS SHALL BE USED. THE INSERT EXTENSION RINGS ARE NOT ALLOWED FOR FINAL CASTING ADJUSTMENTS WITH THESE FRAMES AND CASTINGS.

SANITARY MANHOLE FRAME AND CASTING

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 307
REVISED		



NOTES:

1. THE ADJUSTMENT RINGS AND FRAME SHALL BE SEALED WITH AN 8.5'' WIDE DOUBLE PLEATED, OR WIDE, A 10'' WIDE TRIPLE PLEATED, INTERNAL CHIMNEY SEAL AS MANUFACTURED BY CRETEX SPECIALTY PRODUCTS. THE SAME EXPANSION BANDS AND EXTENTIONS ARE USED ON BOTH.

2. SEE CHIMNEY HEIGHT TABLE FOR SEAL AND EXTENSION COMBINATIONS NEEDED TO SPAN FROM THE FRAME TO THE TOP OF THE CONE ON MANHOLES WITH VARIOUS CHIMNEY HEIGHTS. FRAME OFFSETS OR DIAMETER DIFFERENTIALS WILL REDUCE THESE SPAN HEIGHTS.

3. THE TOP OF THE CONE MUST HAVE A MINIMUM 3'' HIGH VERTICAL SURFACE THAT IS SMOOTH AND FREE OF ANY FORM OFFSETS OR EXCESSIVE HONEYCOMB. IF A 3'' HIGH VERTICAL SURFACE IS NOT AVAILABLE DUE TO THE EXISTING CONFIGURATION OF THE EXISTING MANHOLE CONE, ONE MAY BE CREATED USING A CONE DISK FORM AND A NON SHRINK PATCHING MORTAR. PLANS FOR A FORM DISK CONE ARE AVAILABLE FROM CRETEX SPECIALTY PRODUCTS.

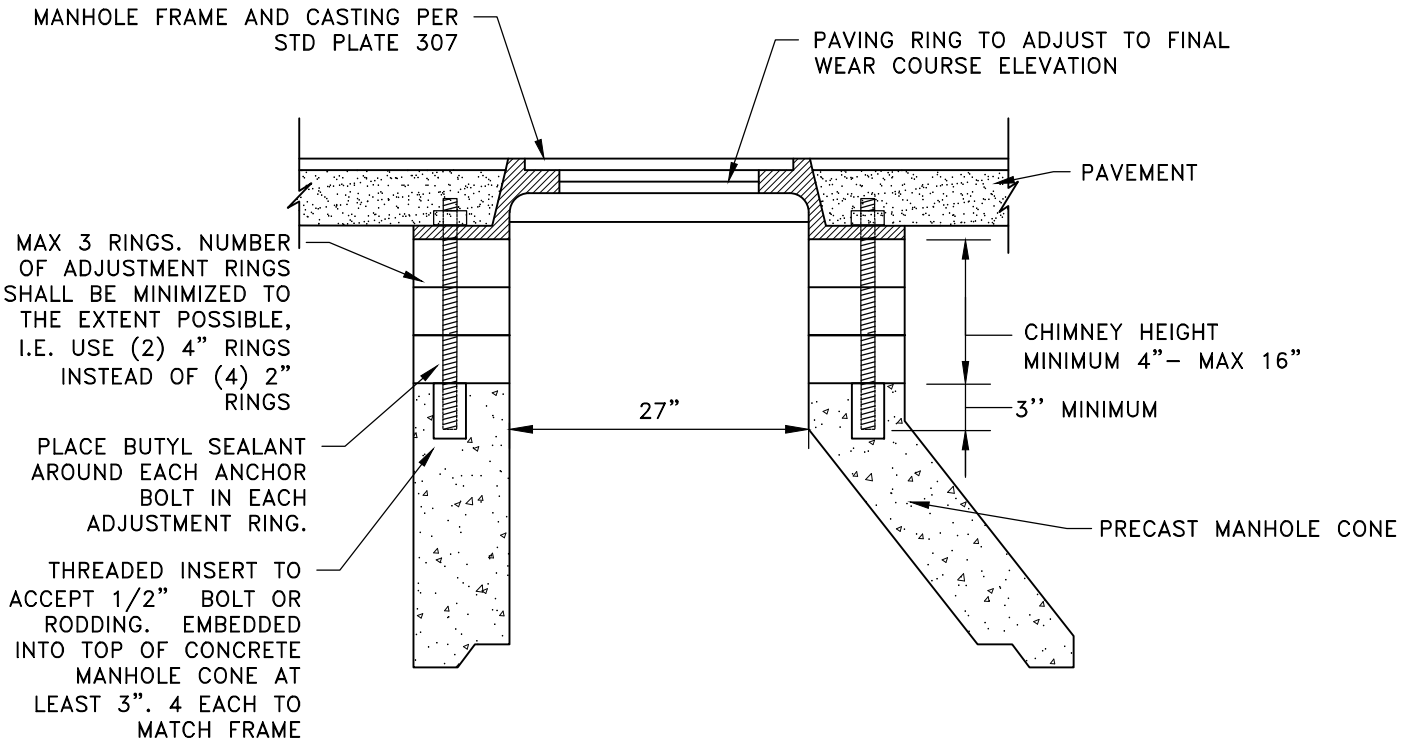
SEAL SELECTION TABLE

COMBINATIONS OF SEALS AND EXTENSIONS	TO SPAN CHIMNEY HEIGHT OF		
	W / STANDARD SEAL	W / WIDE SEAL	W /EXTRA WIDE SEAL
SEAL ONLY	0''–4.5''	2''–7.5''	OVER 6"–12"
SEAL + 7'' EXTENSION	OVER 4.5''–10.5''	OVER 7.5''–13.5''	OVER 12"–18''
SEAL + 10'' EXTENSION	OVER 10.5''–13''	OVER 13.5''–16''	OVER 18''–20.5'
SEAL + MULT. EXTENSION	OVER 13''	OVER 16''	OVER 20.5''
ADD 6'' OF COVERAGE FOR EACH ADDITIONAL 7'' EXTENSION ADD 8.5'' OF COVERAGE FOR EACH ADDITIONAL 10'' EXTENSION DIAMETER DIFFERENTIALS AND OFFSETS WILL REDUCE THESE COVERAGES			

INTERNAL CHIMNEY SEAL

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 308
REVISED		



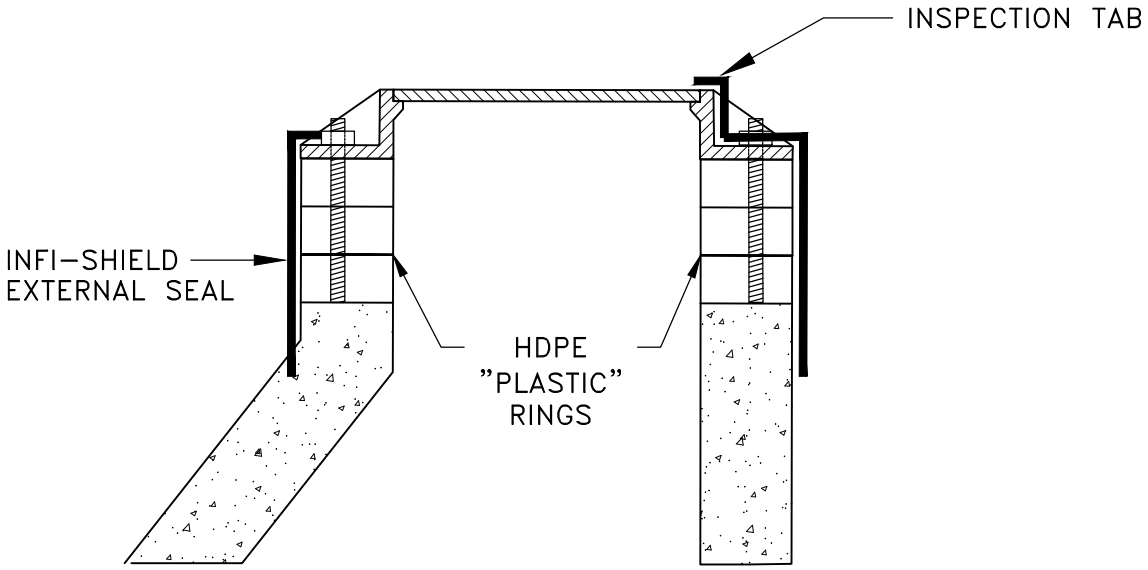
NOTES:

1. ALL NUTS, BOLTS, THREADED INSERTS, AND RODDING SHALL BE 316 STAINLESS STEEL.
2. ADJUSTMENT RINGS SHALL BE HIGH DENSITY POLYETHYLENE RINGS AS MANUFACTURED BY LADTECH, INC OR APPROVED EQUAL.
3. ALL RINGS SHALL MEET OR EXCEED MnDOT HS–20 TRAFFIC LOADING.
4. AS DETERMINED BY THE CITY ENGINEER, PRECAST CONCRETE ADJUSTING RINGS OR BRICK CHIMNEY WILL BE ALLOWED FOR ADJUSTING EXISTING MANHOLES.
5. CLEAN ALL SURFACES TO REMOVE SCALE OR LOOSE IMPEDIMENTS BEFORE PLACING ANY MASTIC, SEALANT, OR INSTALLATION OF FRAME AND CASTING SYSTEM.
6. PLACE TWO 1/2" BEADS OF BUTYL SEALANT BETWEEN FIRST ADJUSTMENT RING AND CONCRETE STRUCTURE. ONE BEAD BETWEEN EACH SUBSEQUENT RING AND FRAME.

MANHOLE ADJUSTMENT RINGS

NO SCALE

APPROVED REVISED	City of St. Francis	STANDARD PLATE NO. 309



NOTES:

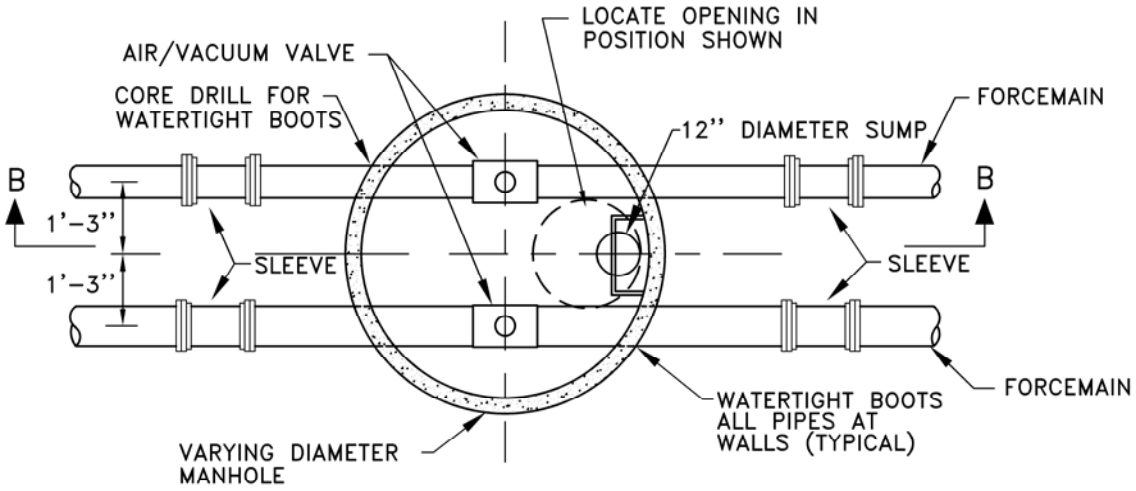
1. THE ADJUSTMENT RINGS AND FRAME SHALL BE SEALED WITH AN EXTERNAL RUBBER SEALING SLEEVE, "INFI-SHIELD" AS MANUFACTURED BY SEALING SYSTEM, INC. OR APPROVED EQUAL.

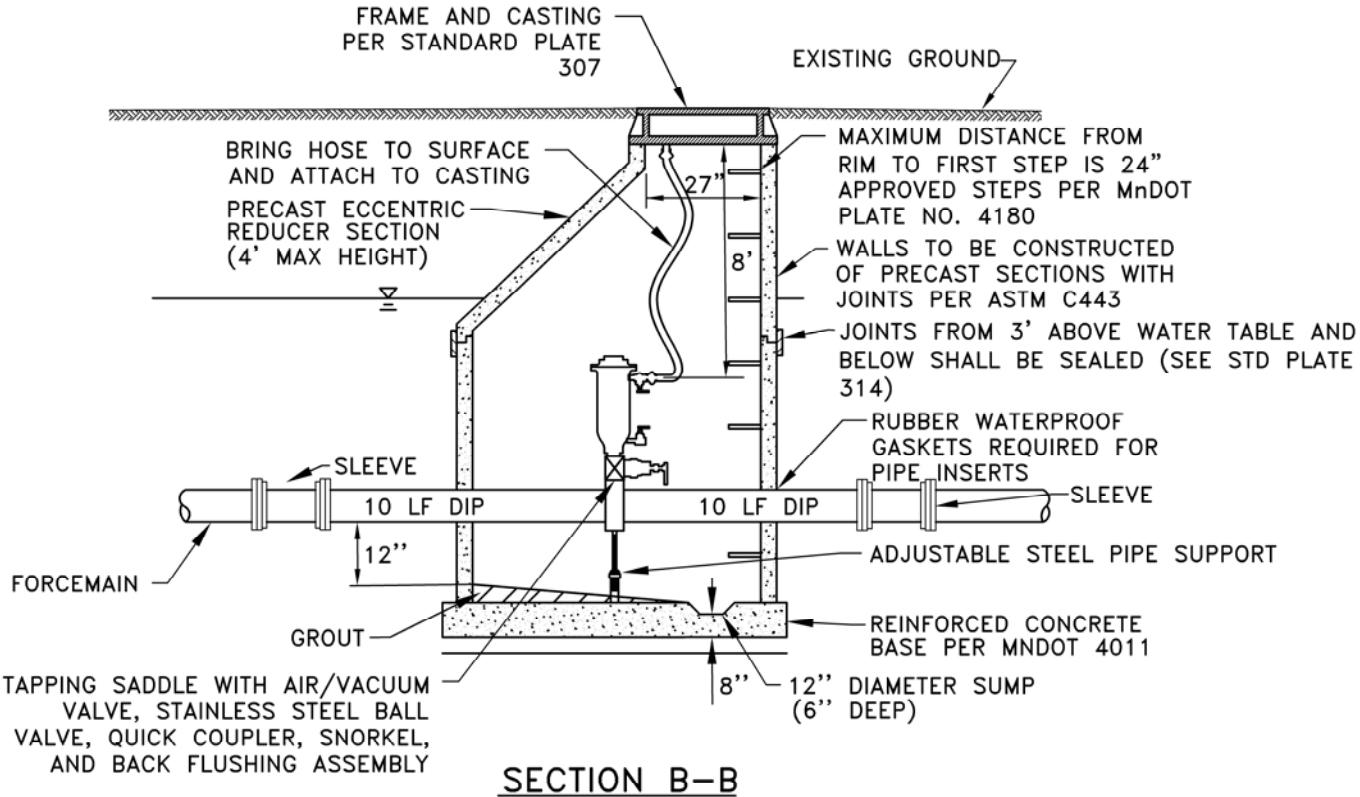
2. THE SEAL SHALL BE MADE OF EPDM RUBBER WITH A MINIMUM THICKNESS OF 60 MILS AND SEALED WITH A NON-HARDENING BUTYL RUBBER MASTIC.

EXTERNAL CHIMNEY SEAL

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 310
REVISED		





SECTION B-B

NOTES:

ARRANGE PIPE JOINTS TO BE AT LEAST SIX FEET FROM CENTER OF MANHOLE.

ALL SANITARY MANHOLES; MOISTURE PROOF (EXTERIOR ONLY) CONSEAL CS-55 (GRAY) OR APPROVED EQUAL. DO NOT COAT RUBBER GASKETS OR BOOTS

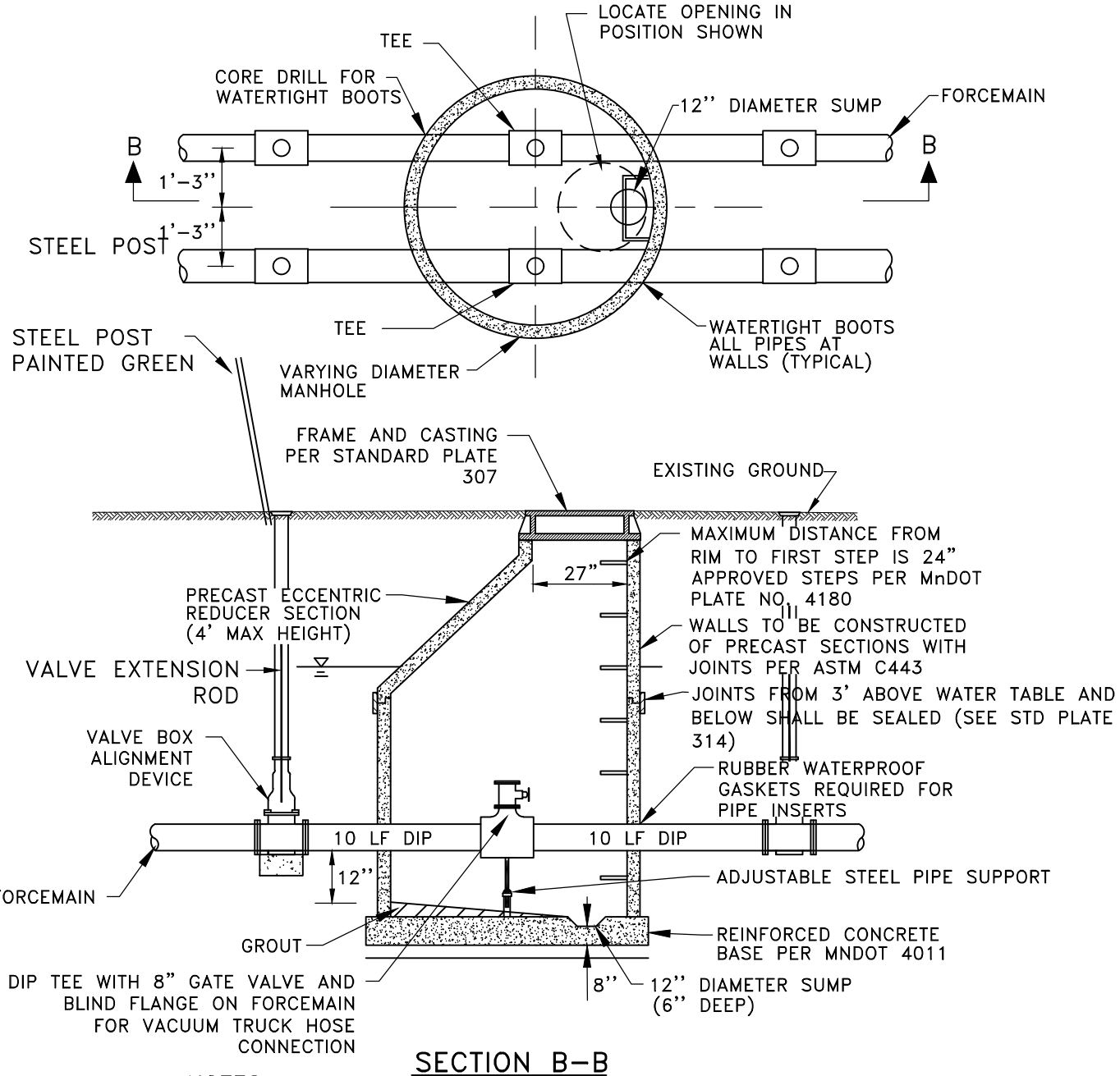
STEEL REINFORCING SHALL BE PER ASTM C478.

AIR/VAVUUM VALVE SHALL BE VAL MATIC MODEL 802A AS MANUFACTURED BY VAL MATIC VALVE AND MANUFACTURING CORP., OR APPROVED EQUAL

FORCEMAIN AIR/VACUUM VALVE

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 312
REVISED		



SECTION B–B

NOTES:

ARRANGE PIPE JOINTS TO BE AT LEAST SIX FEET FROM CENTER OF MANHOLE.

CLEAN OUTS ARE TYPICALLY LOCATED AT LOW POINTS IN FORCE MAIN AND WITH GAVE VALVES ON BOTH SIDES OF MANHOLE.

ALL SANITARY MANHOLES; MOISTURE PROOF (EXTERIOR ONLY) CONSEAL CS–55 (GRAY) OR APPROVED EQUAL. DO NOT COAT RUBBER GASKETS OR BOOTS

STEEL REINFORCING SHALL BE PER ASTM C478.

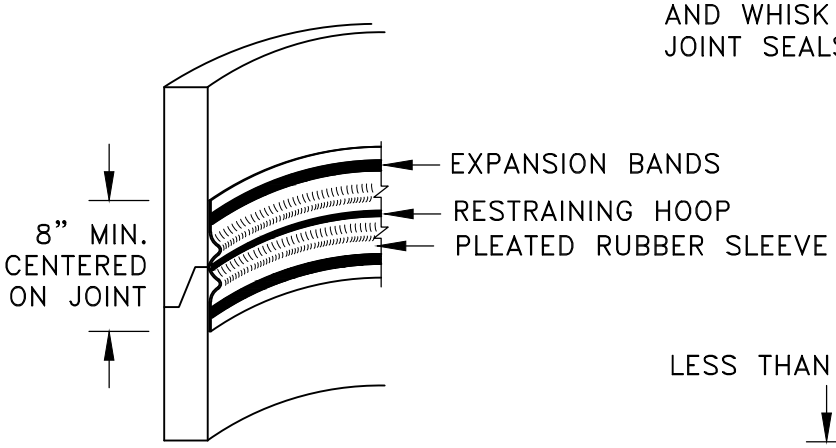
FORCEMAIN CLEANOUT

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 313
REVISED		

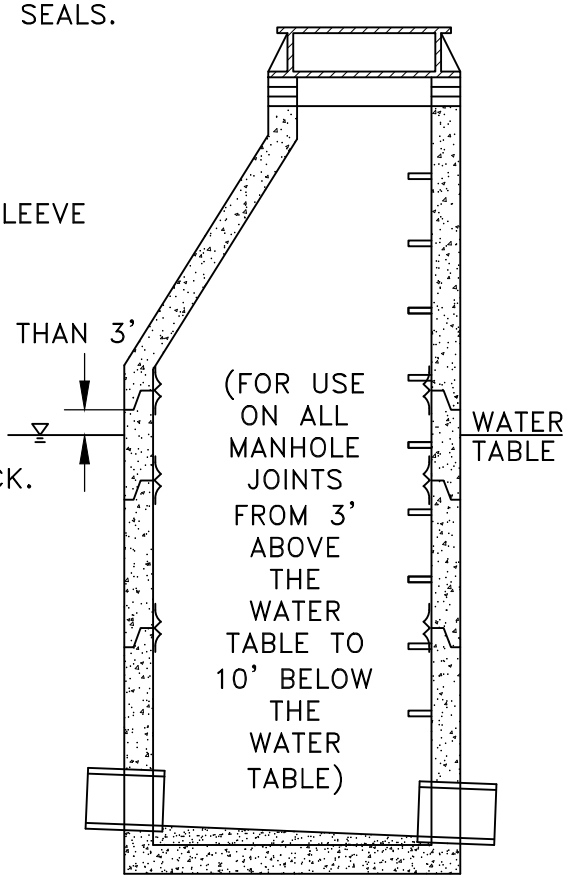
INTERNAL MANHOLE JOINT SEAL

ALL SEALS SHALL BE INSTALL MANUFACTURES SPECIFICATIONS. CLEAN AREA AROUND JOINTS WITH WIRE BRUSH AND WHISK BROOM PRIOR TO PLACING JOINT SEALS.

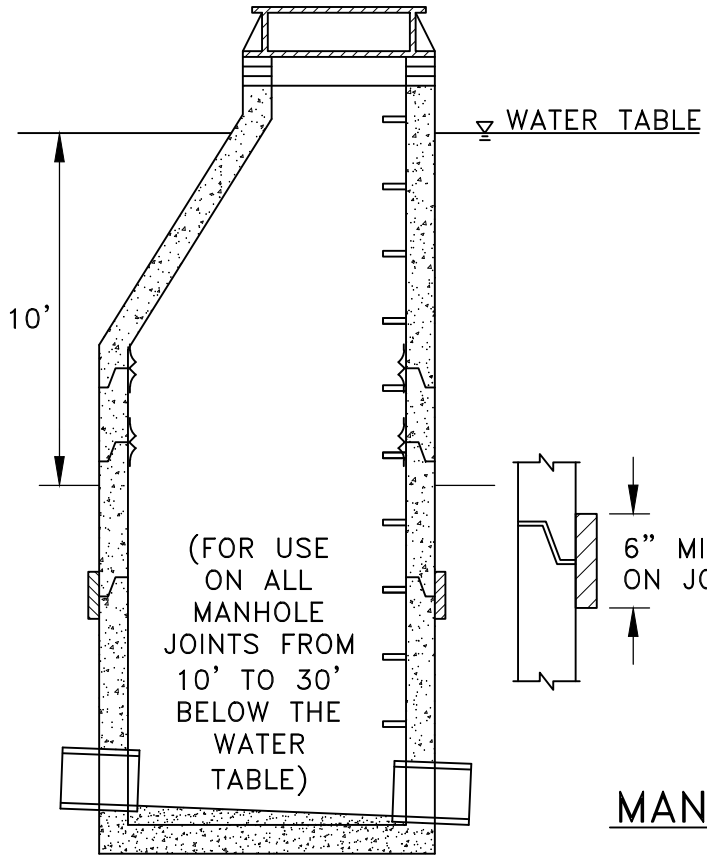


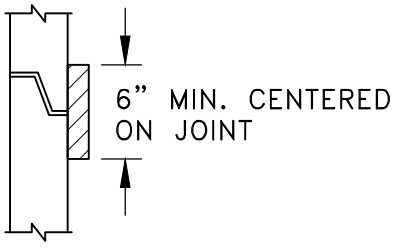
NOTES

1. RUBBER SLEEVE SHALL BE A MIN. OF 3/16" THICK.
2. 1 3/4" WIDE EXPANSION BANDS, 16 GAUGE STAINLESS STEEL. ALL NUTS, BOLTS OR SCREWS SHALL BE STAINLESS STEEL.
3. RESTRAINING HOOP SHALL BE 5/16" DIA. STAINLESS STEEL, PLACED BETWEEN PLEATS OF RUBBER SLEEVE.



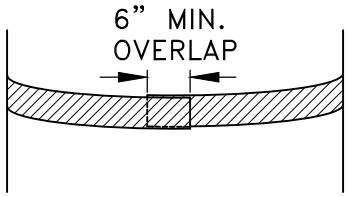
INFI-SHIELD EXTERNAL GATOR WRAP





NOTES

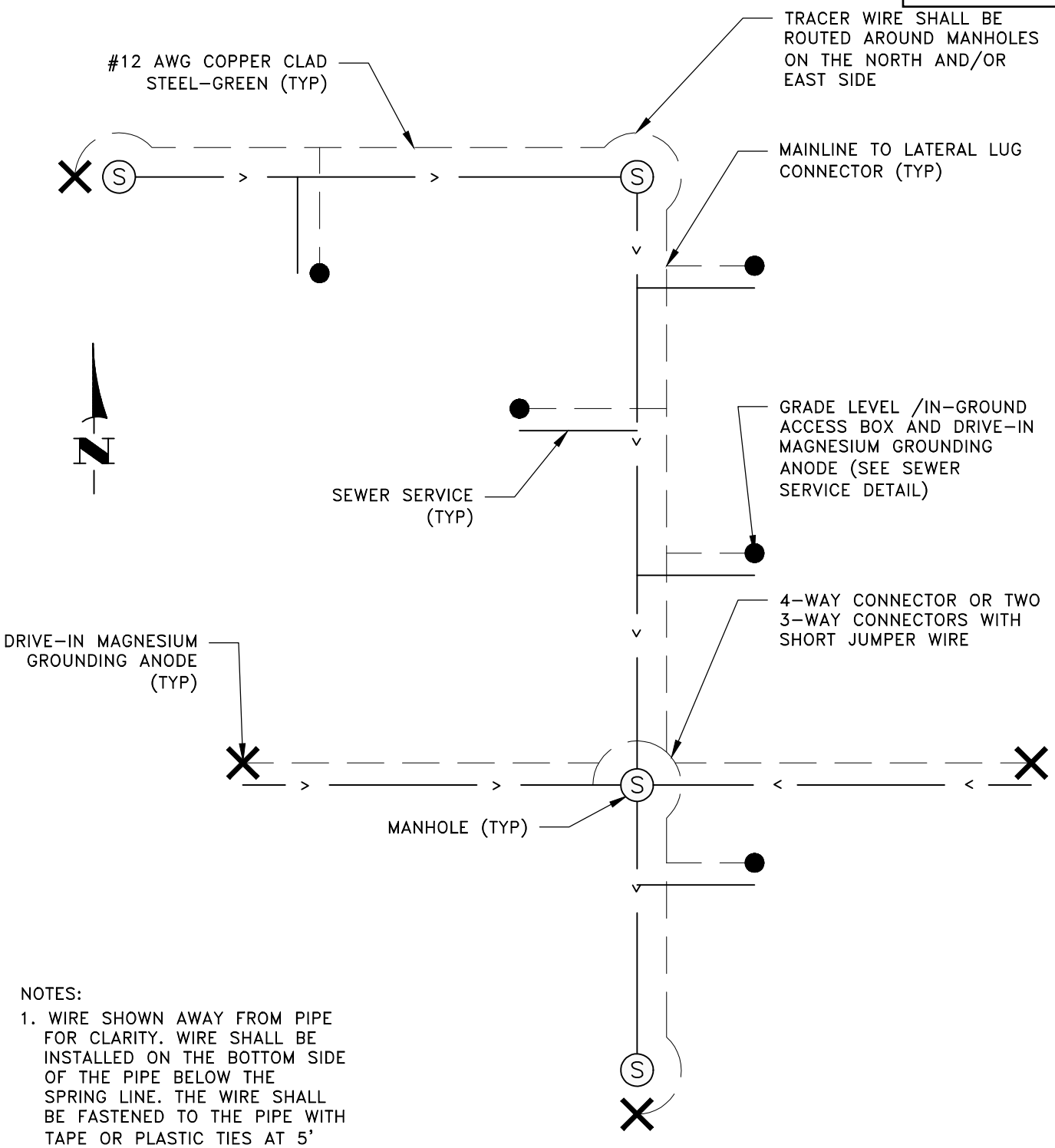
1. EPDM FLEXIBLE RUBBER SLEEVE – 30 MILS THICK
2. NON-HARDENING BUTYL MASTIC ADHESIVE – 30 MILS THICK



MANHOLE JOINT SEAL

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 314
REVISED		



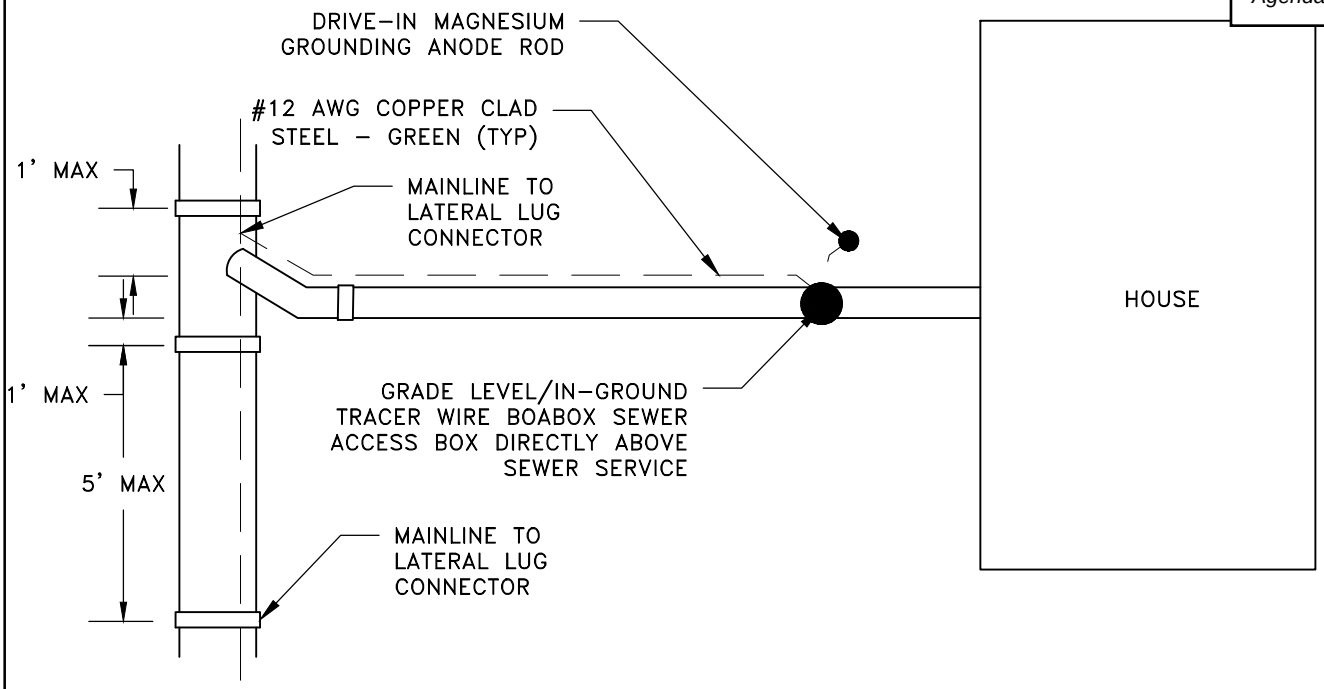
NOTES:

1. WIRE SHOWN AWAY FROM PIPE FOR CLARITY. WIRE SHALL BE INSTALLED ON THE BOTTOM SIDE OF THE PIPE BELOW THE SPRING LINE. THE WIRE SHALL BE FASTENED TO THE PIPE WITH TAPE OR PLASTIC TIES AT 5' INTERVALS

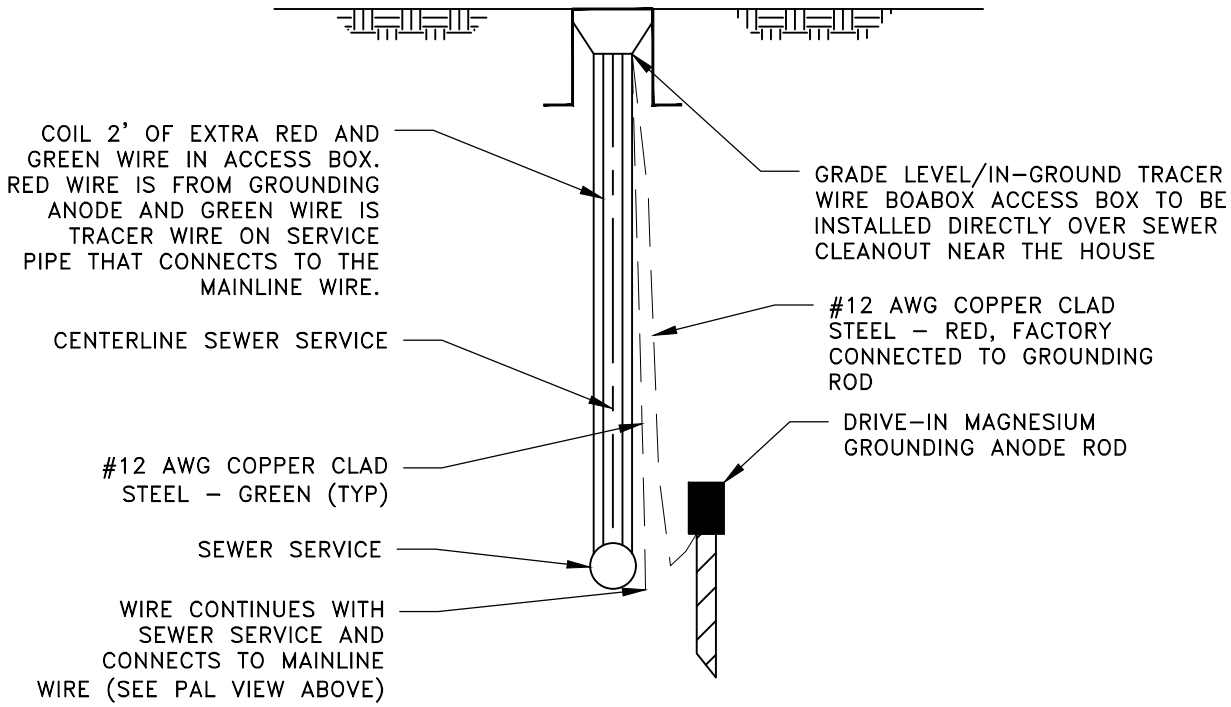
TRACER WIRE PLAN (SEWER)

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 315
REVISED		



SEWER SERVICE – PLAN VIEW

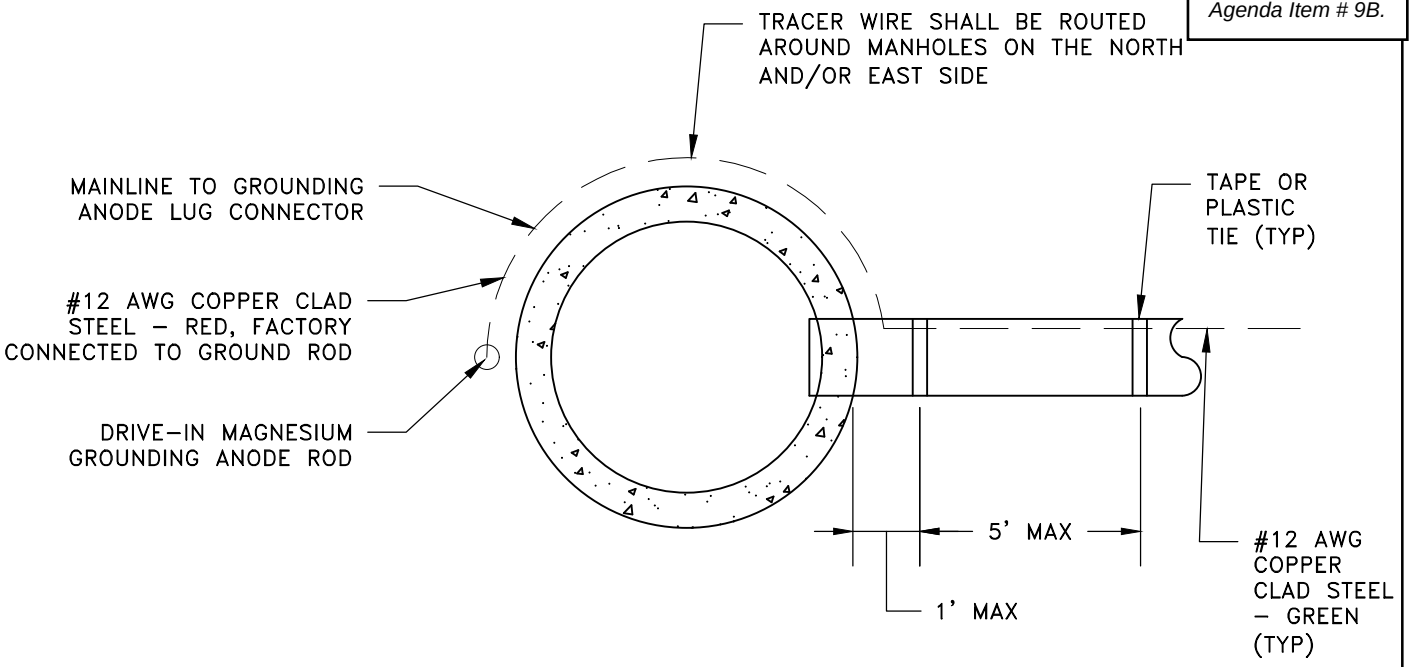


SEWER SERVICE – SECTION VIEW

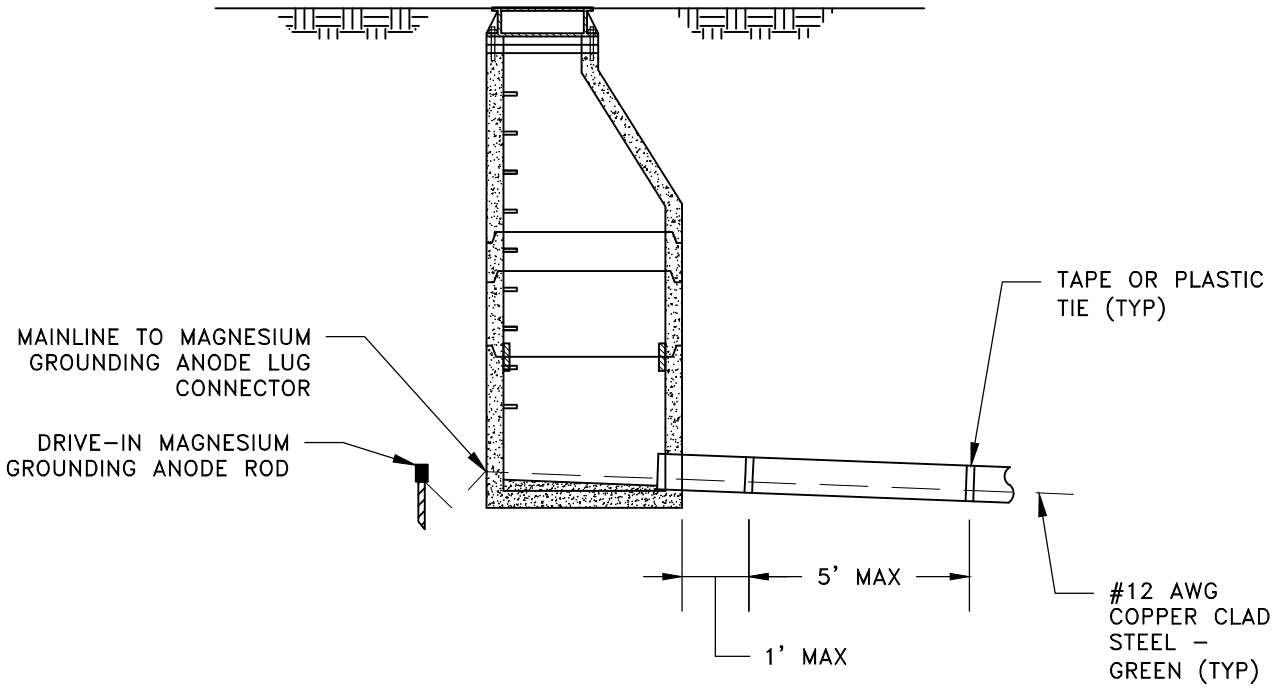
TRACER WIRE SEWER SERVICE DETAIL

NO SCALE

APPROVED REVISED	City of St. Francis	STANDARD PLATE NO. 316



SEWER MANHOLE – PLAN VIEW

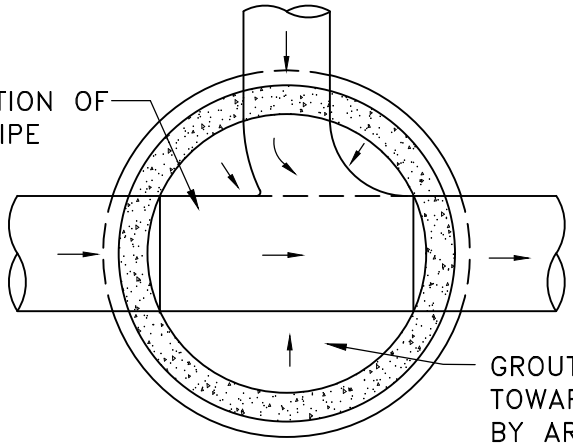


SEWER MANHOLE – SECTION VIEW

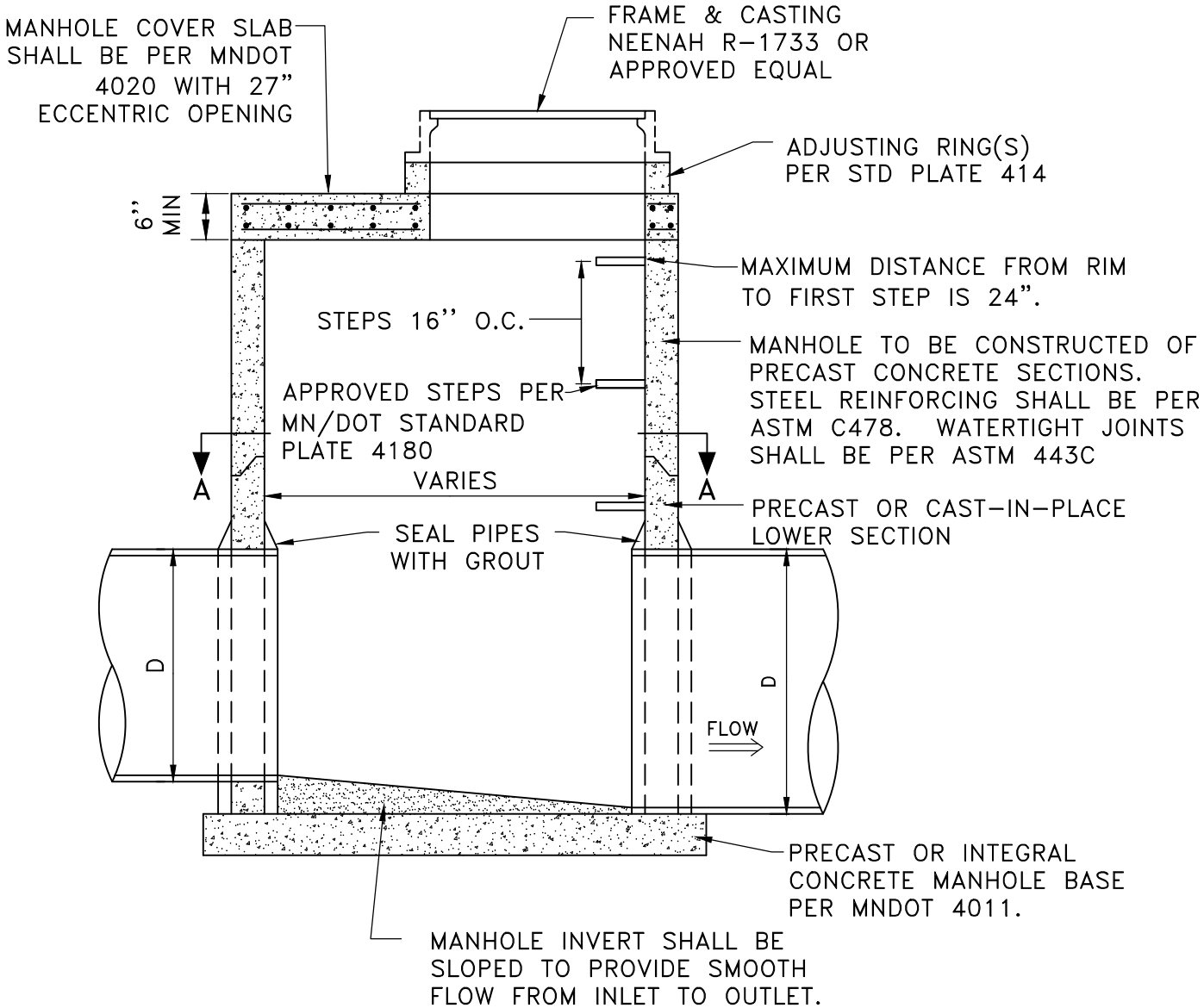
TRACER WIRE SEWER MANHOLE DETAIL

NO SCALE

APPROVED REVISED	City of St. Francis	STANDARD PLATE NO. 317



SECTION A–A

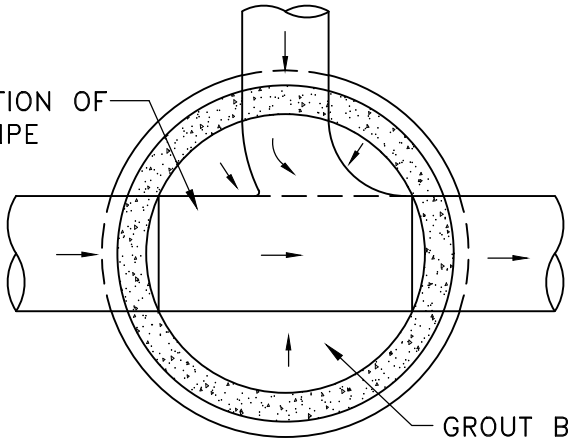


MAXIMUM FILL HEIGHT 15 FT.

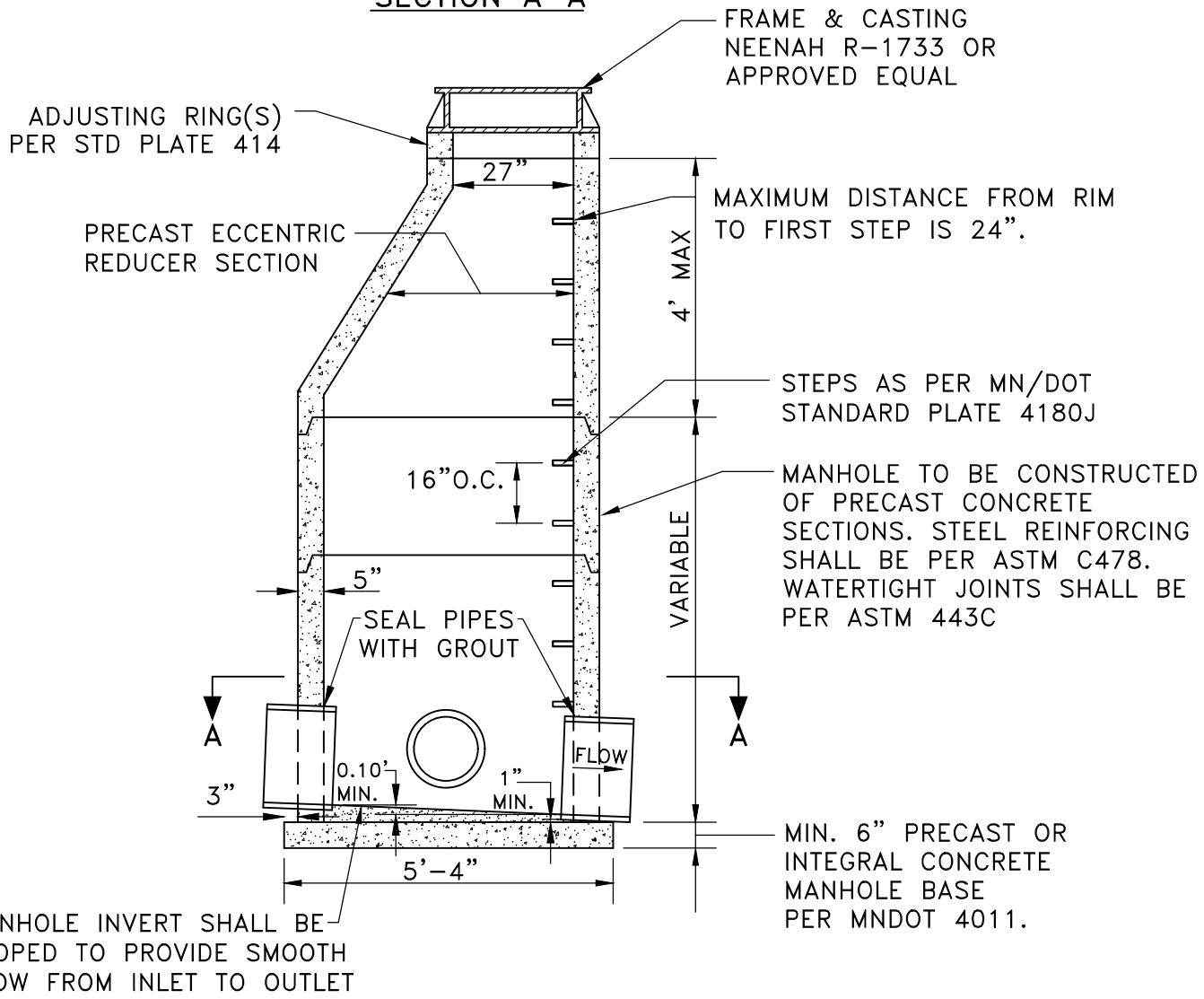
SLAB–TOP MANHOLE

(STORM SEWER)
NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 400
REVISED		



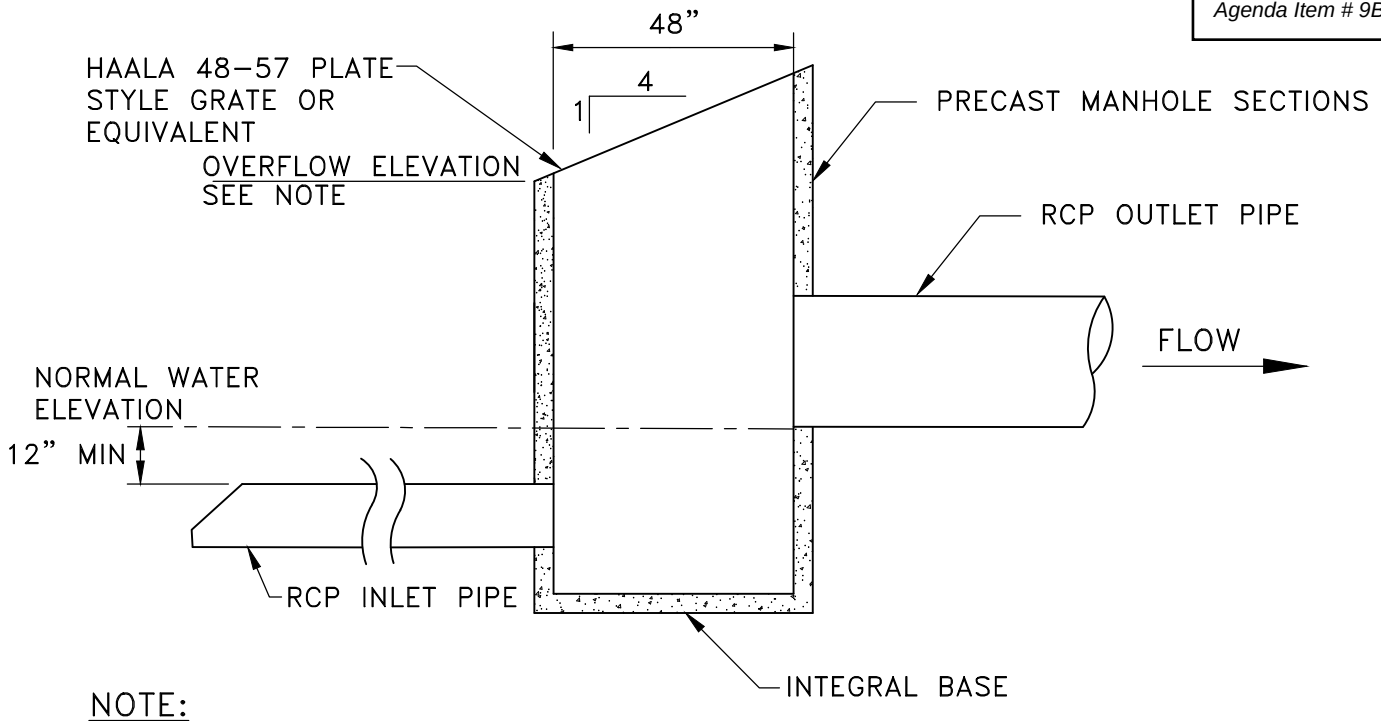
SECTION A–A



STORM SEWER STANDARD MANHOLE DEEPER THAN 15'

NO SCALE

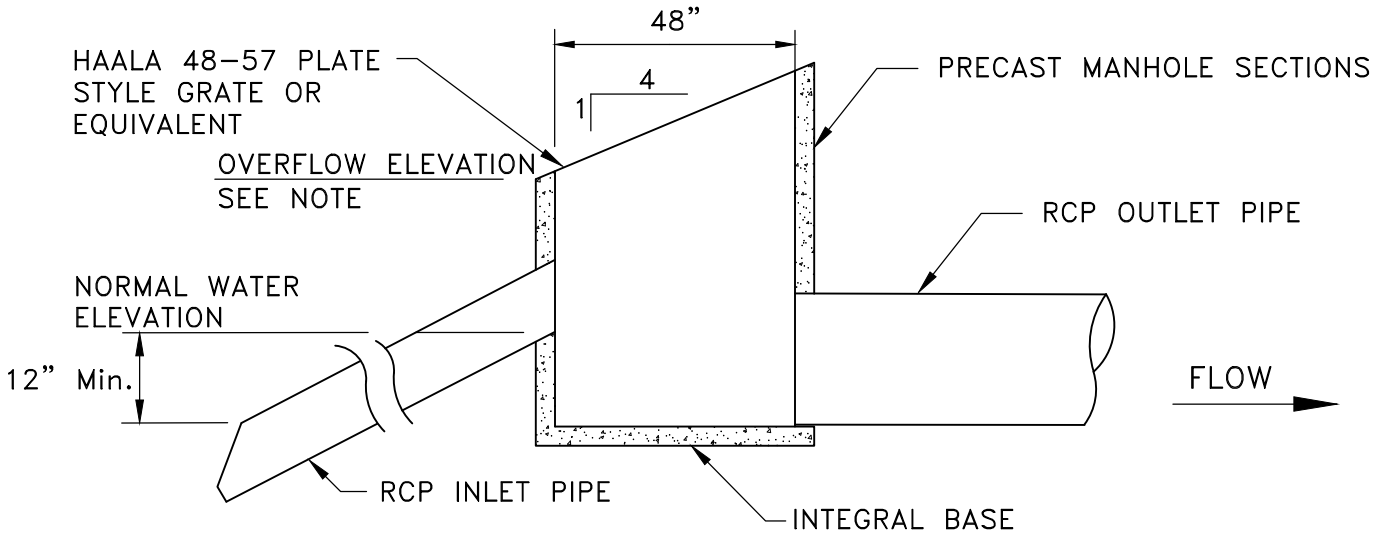
APPROVED	City of St. Francis	STANDARD PLATE NO. 401
REVISED		



NOTE:
THE OVERFLOW ELEVATION SHALL BE AT OR ABOVE THE PEAK 2–YEAR STORM EVENT ELEVATION

SKIMMER STRUCTURE

NO SCALE

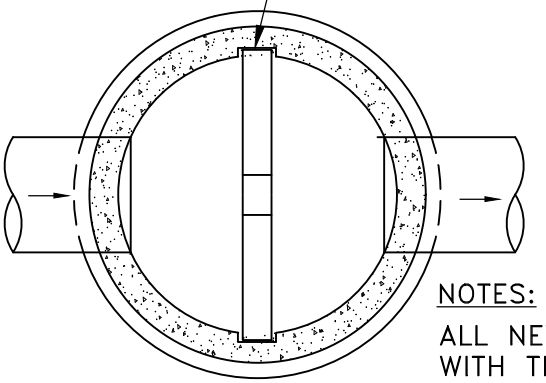


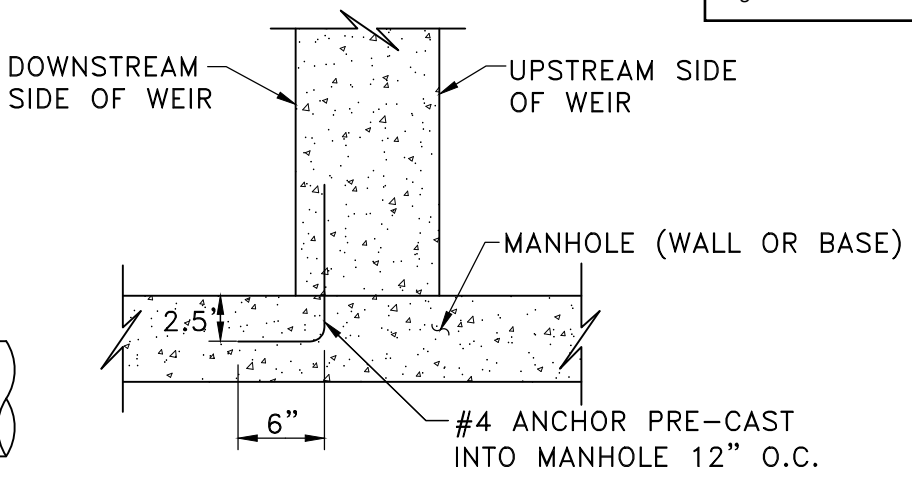
NOTE:
THE OVERFLOW ELEVATION SHALL BE AT OR ABOVE THE PEAK 2–YEAR STORM EVENT ELEVATION, BUT NO HIGHER THAN THE 100–YEAR ELEVATION

SKIMMER STRUCTURE

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 402
REVISED		





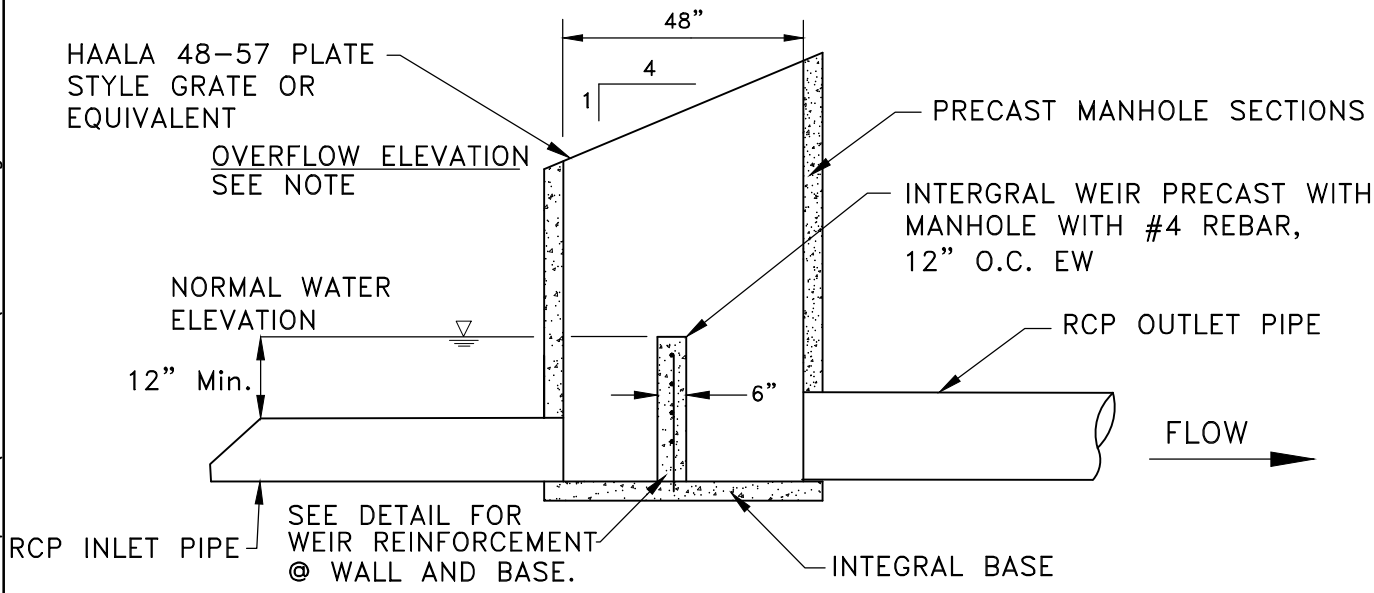
NOTES:

ALL NEW MANHOLES SHALL HAVE AN INTEGRAL WEIR PRECAST WITH THE MANHOLE.

*IF NECESSARY, AS AN ALTERNATIVE TO THE PRECAST WEIR AND ANCHORS: HVA ADHESIVE ANCHOR SYSTEM, WITH HVA ADHESIVE CAPSULES AND #5 REBAR, AS MANUFACTURED BY HILTI CORP OR APPROVED EQUAL MAY BE USED.

REINFORCEMENT BARS IN WEIR NOT SHOWN.

WEIR REINFORCEMENT @ WALL AND BASE



NOTE:
THE OVERFLOW ELEVATION SHALL BE AT OR ABOVE THE PEAK 2-YEAR STORM EVENT ELEVATION, BUT NO HIGHER THAN THE 100 YEAR ELEVATION

SKIMMER STRUCTURE WITH WEIR

NO SCALE

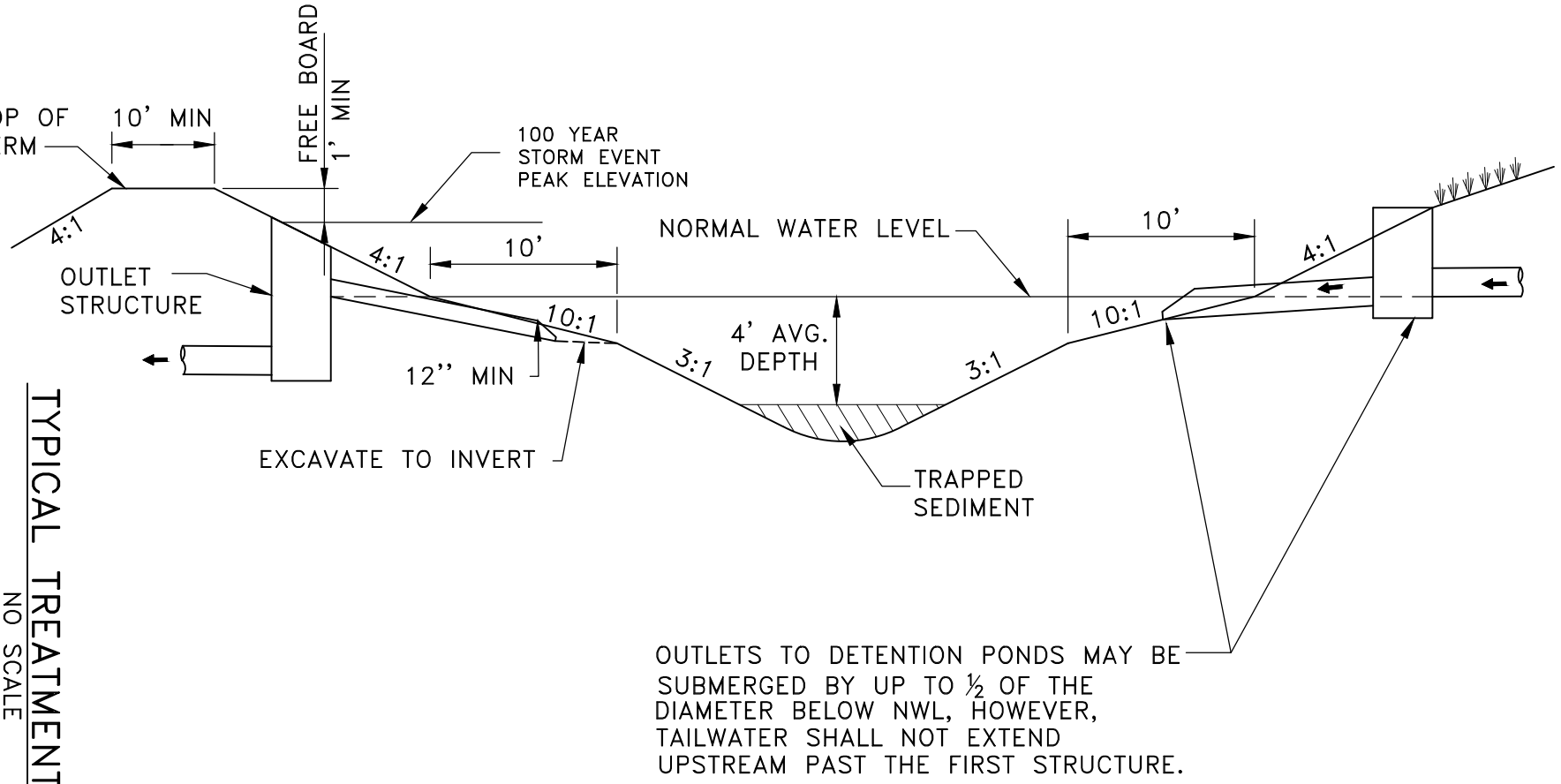
APPROVED	City of St. Francis	STANDARD PLATE NO. 403
REVISED		

APPROVED

REVISED

City of St. Francis

STANDARD PLATE NO. 404

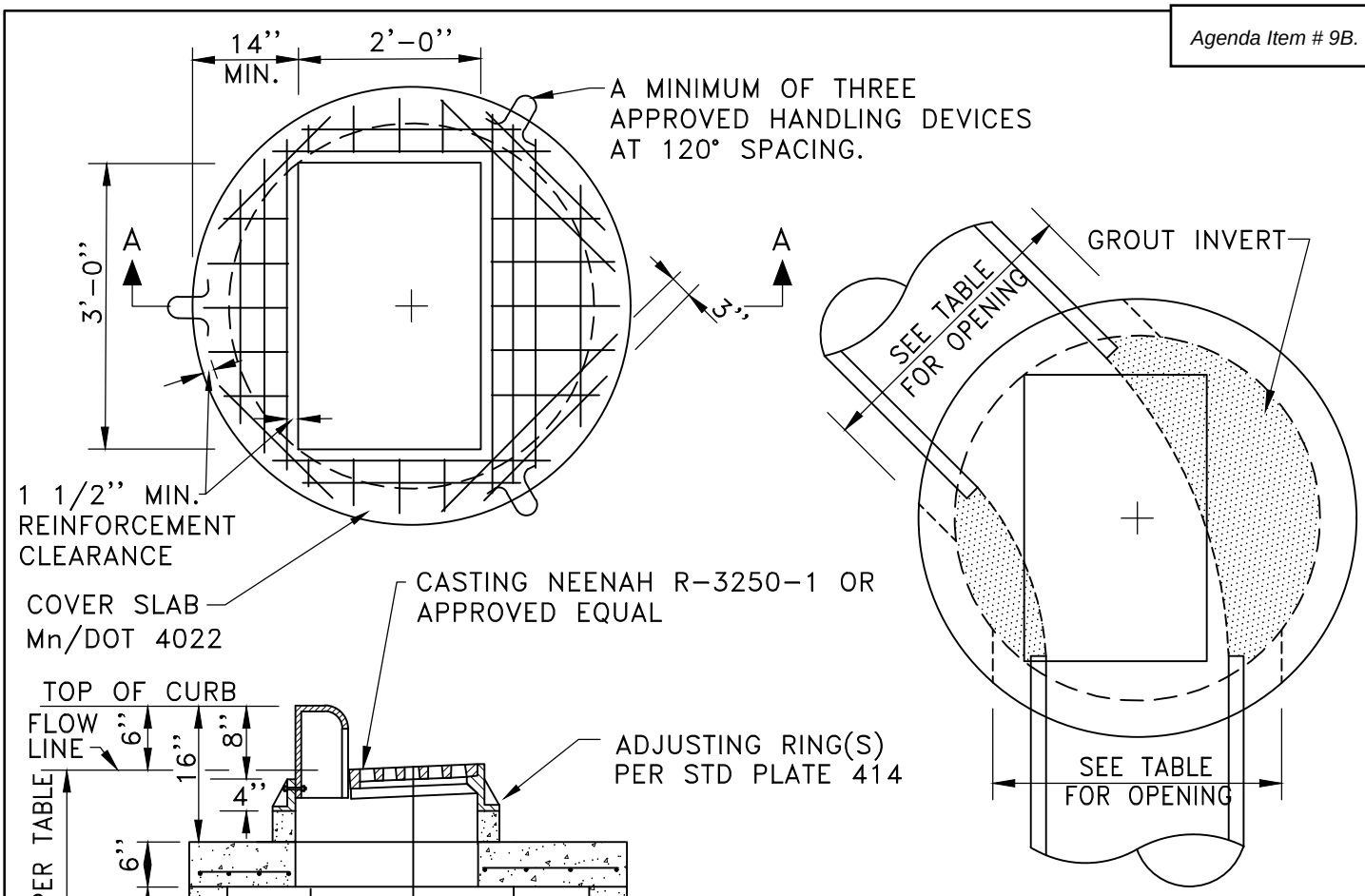


TYPICAL TREATMENT BASIN

NO SCALE

NOTE:

1. SLOPES SHALL BE NO STEEPER THAN THOSE SHOWN.
2. AN STABILIZED EMERGENCY OVERFLOW SHALL BE PROVIDED.
3. 10' WIDE ACCESS ROUTE TO BE PROVIDED TO SKIMMER STRUCTURE/RIPIRAP OVERFLOW



SECTION A-A

STANDARD OPENINGS	
PIPE DIA. (IN.)	OPENING SIZE (IN.)
15	24
18	26
21	30
24	34

MINIMUM C.B. DEPTH - FLOW LINE TO INVERT		
PIPE DIA.	MIN. DEPTH	MINIMUM DEPTH WITH 2 RINGS
15	41 IN.	41 IN.
18	45 IN.	45 IN.
21	48 IN.	48 IN.
24	51 IN.	51 IN.

48 INCH DIAMETER SHALLOW DEPTH CATCH BASIN

MAXIMUM 24 INCH DIAMETER PIPE SIZE

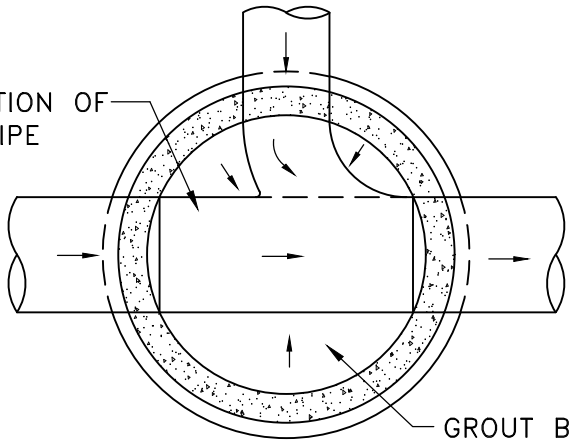
NO SCALE

APPROVED

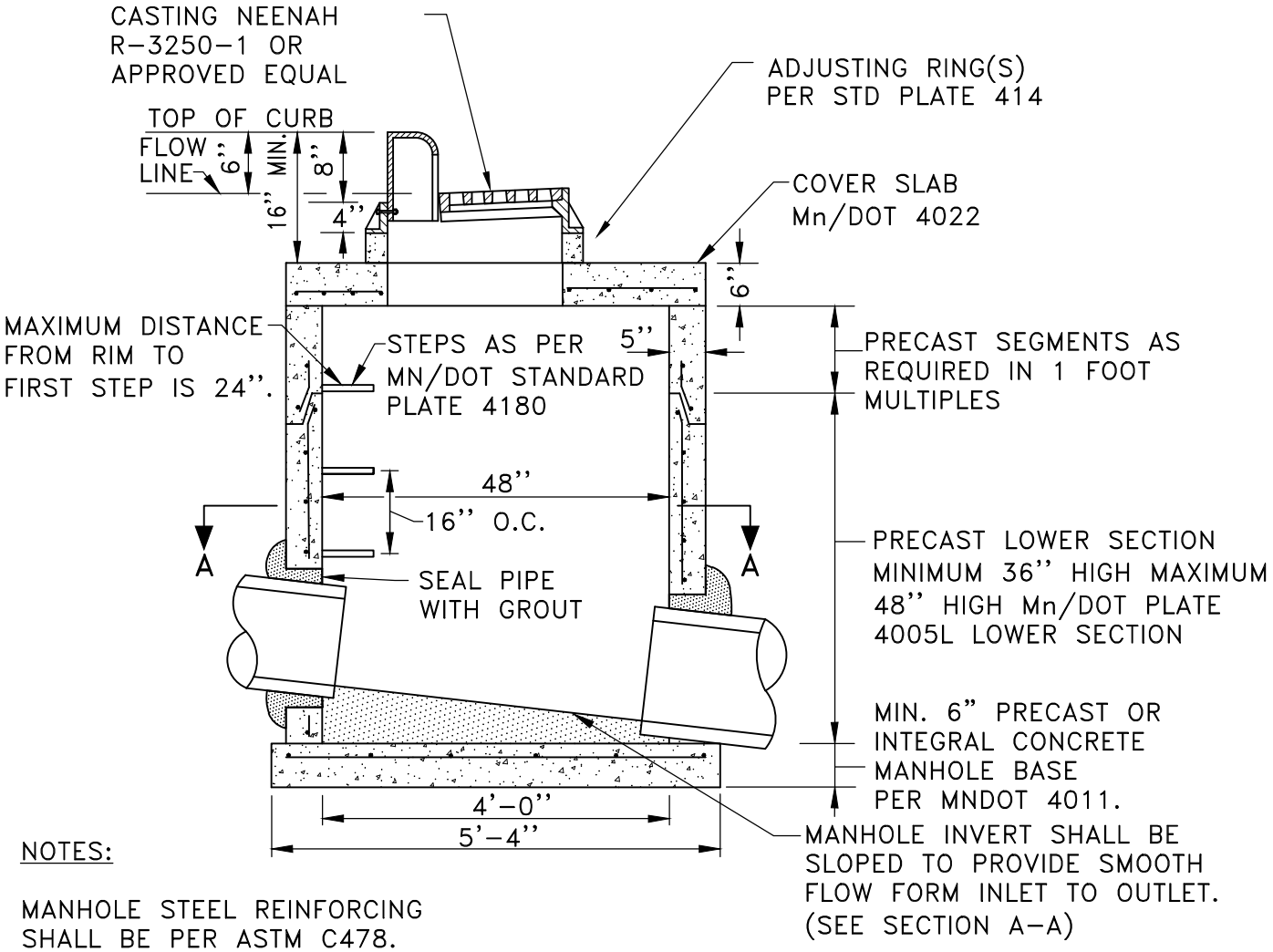
REVISED

City of St. Francis

STANDARD PLATE NO. 405



SECTION A–A



NOTES:

MANHOLE STEEL REINFORCING SHALL BE PER ASTM C478.

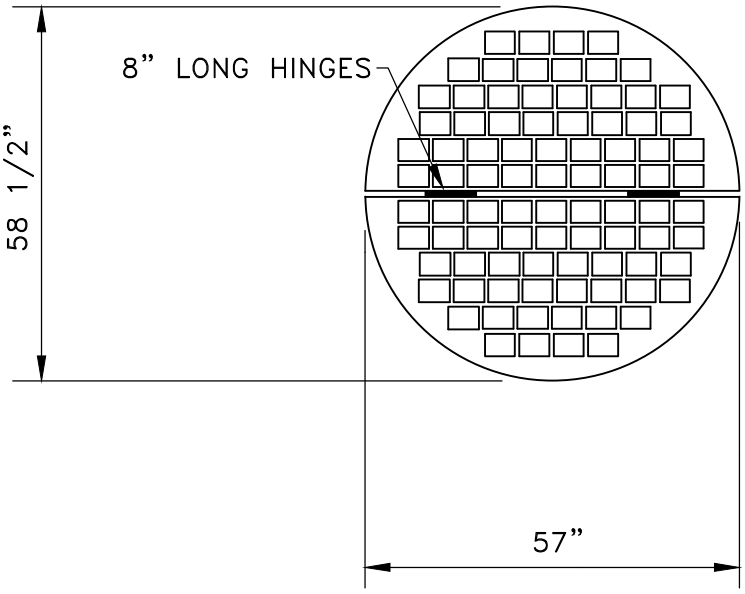
STANDARD STORM MANHOLE – CATCH BASIN

MINIMUM COVER FLOW LINE – TO TOP OF PIPE = 2 FEET

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 406
REVISED		

GALVANIZED GRATE



TOP VIEW

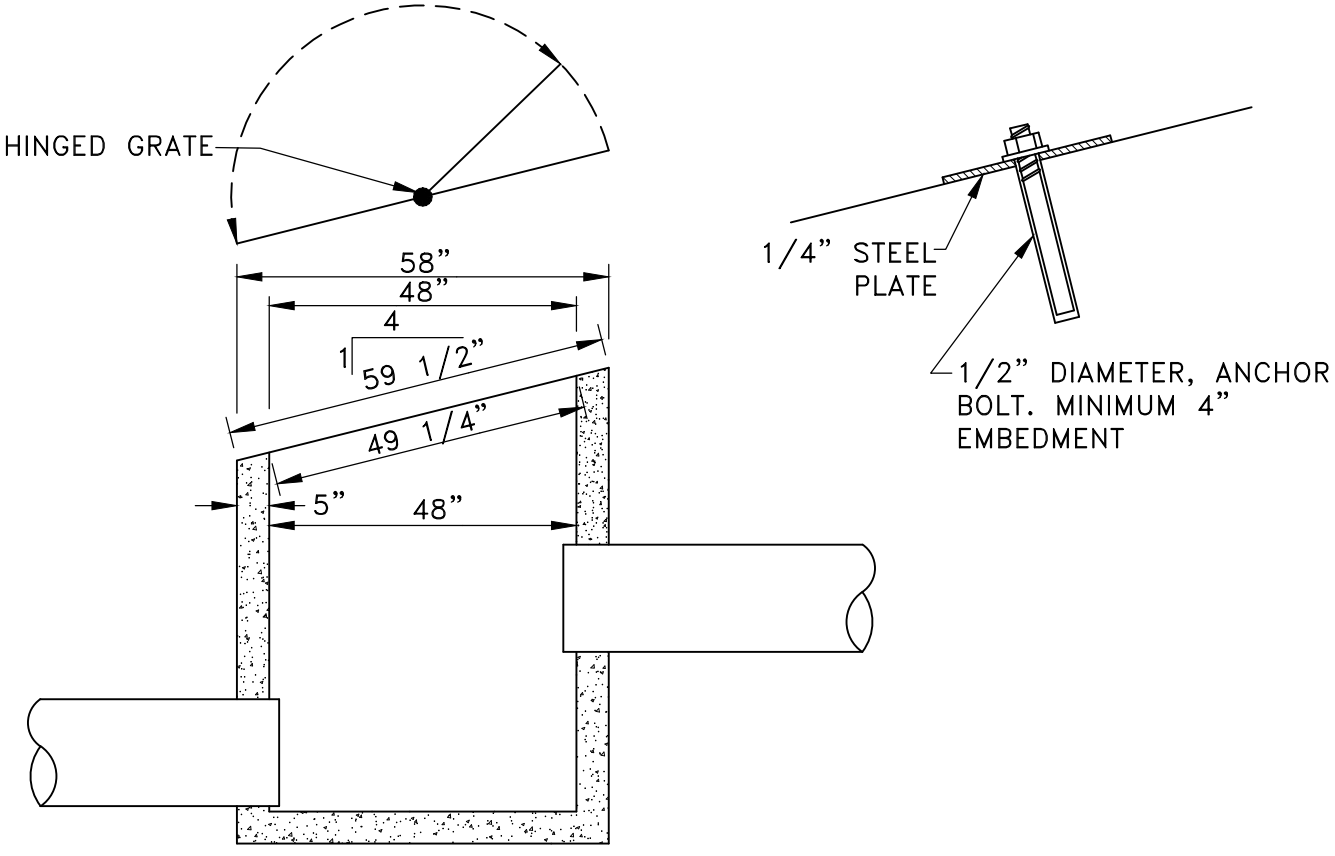
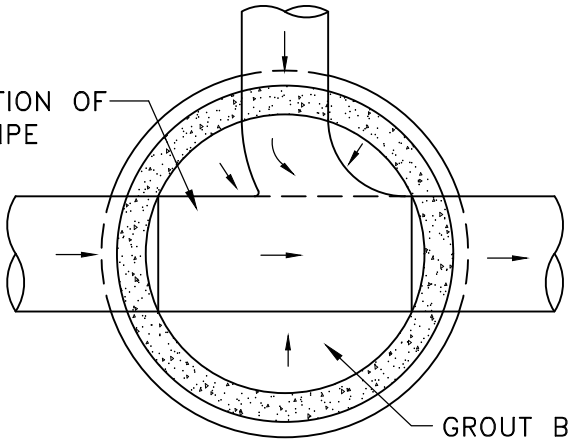


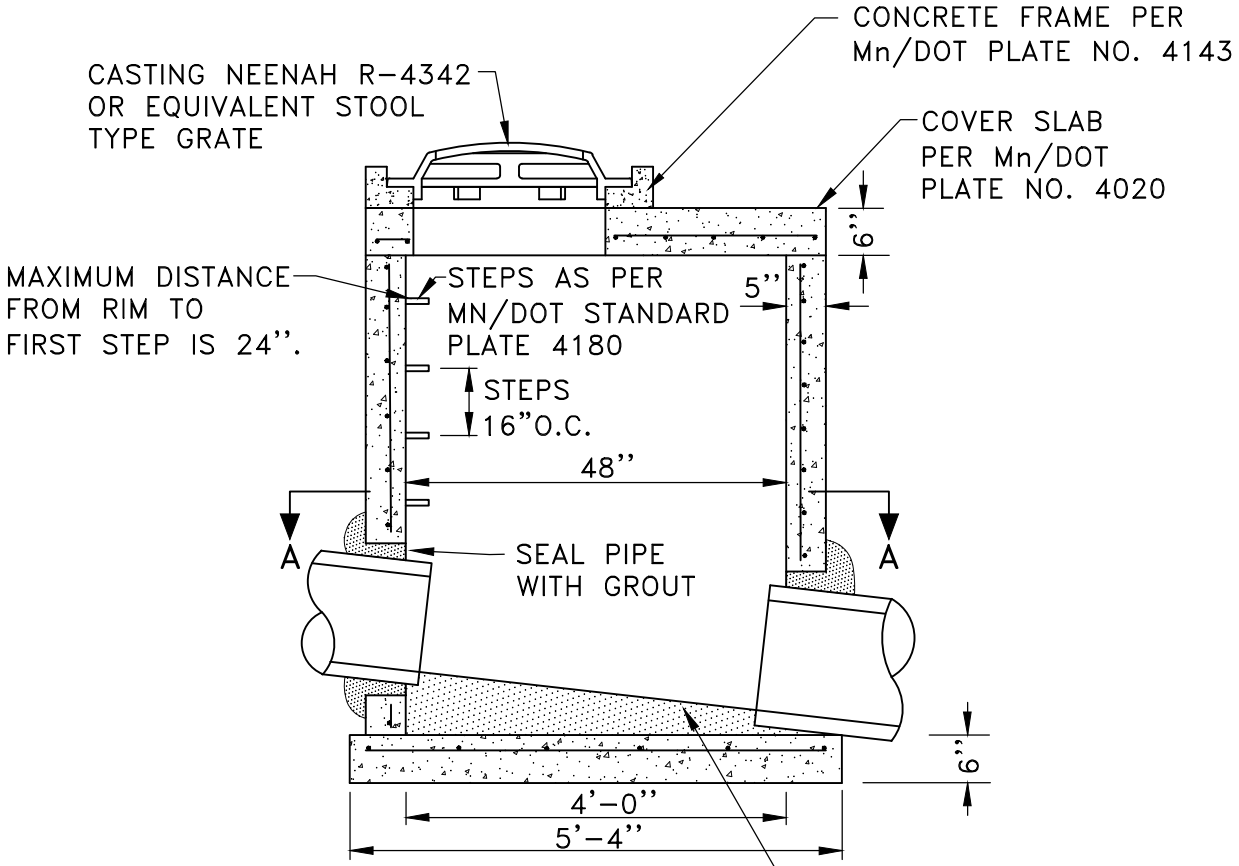
PLATE STYLE GRATE FOR 48" DIA. OUTLET STRUCTURE

NO SCALE

APPROVED REVISED	City of St. Francis	STANDARD PLATE NO. 407



SECTION A–A



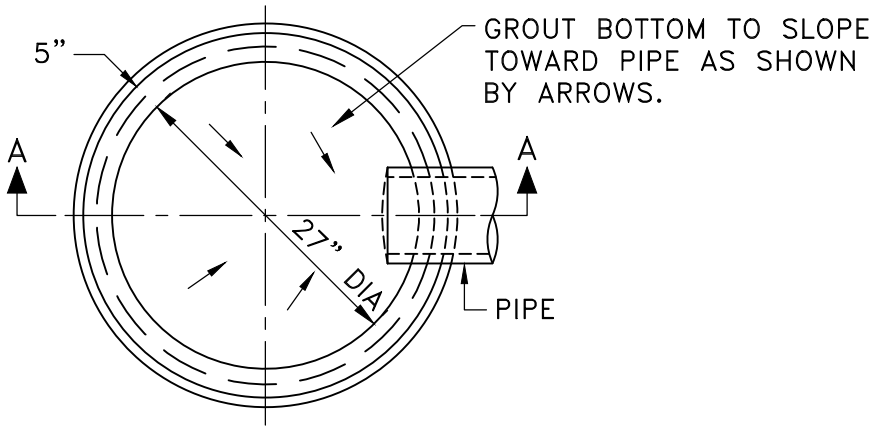
NOTES:

MANHOLE STEEL REINFORCING SHALL BE PER ASTM C478.

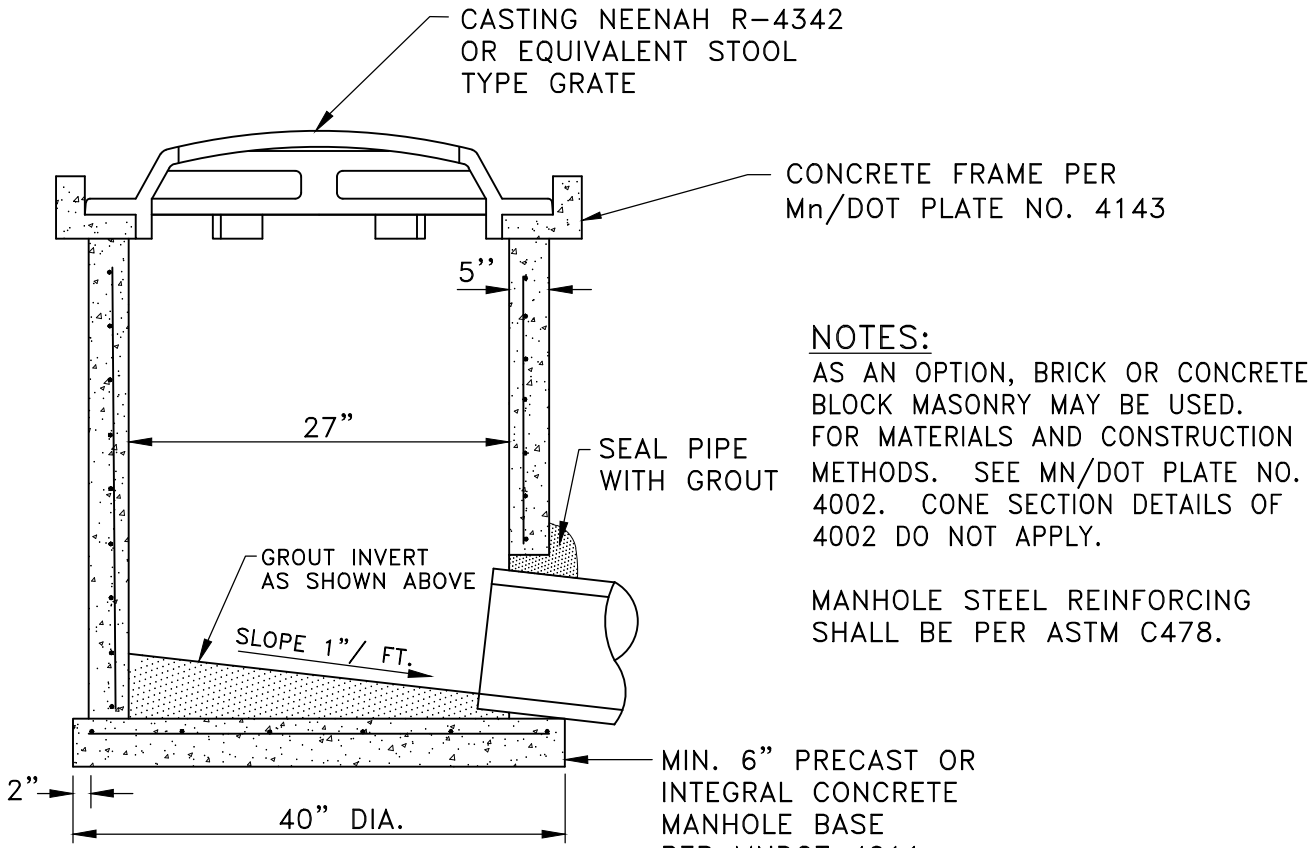
STANDARD STORM MANHOLE–YARD INLET

NO SCALE

APPROVED REVISED	City of St. Francis	STANDARD PLATE NO. 408



TOP VIEW



SECTION A–A

NOTES:

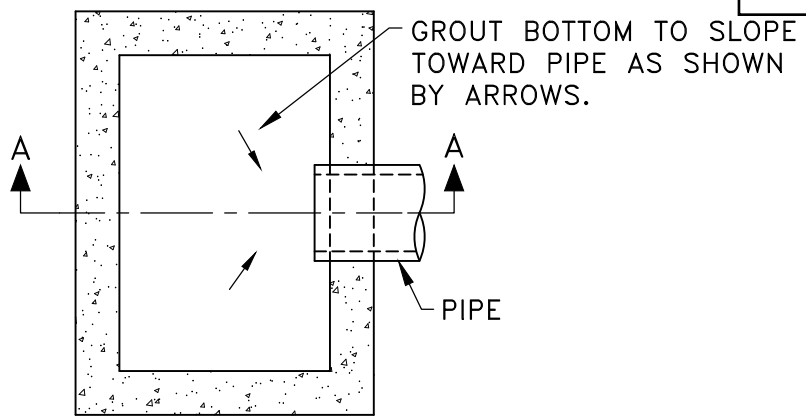
AS AN OPTION, BRICK OR CONCRETE BLOCK MASONRY MAY BE USED. FOR MATERIALS AND CONSTRUCTION METHODS. SEE MN/DOT PLATE NO. 4002. CONE SECTION DETAILS OF 4002 DO NOT APPLY.

MANHOLE STEEL REINFORCING SHALL BE PER ASTM C478.

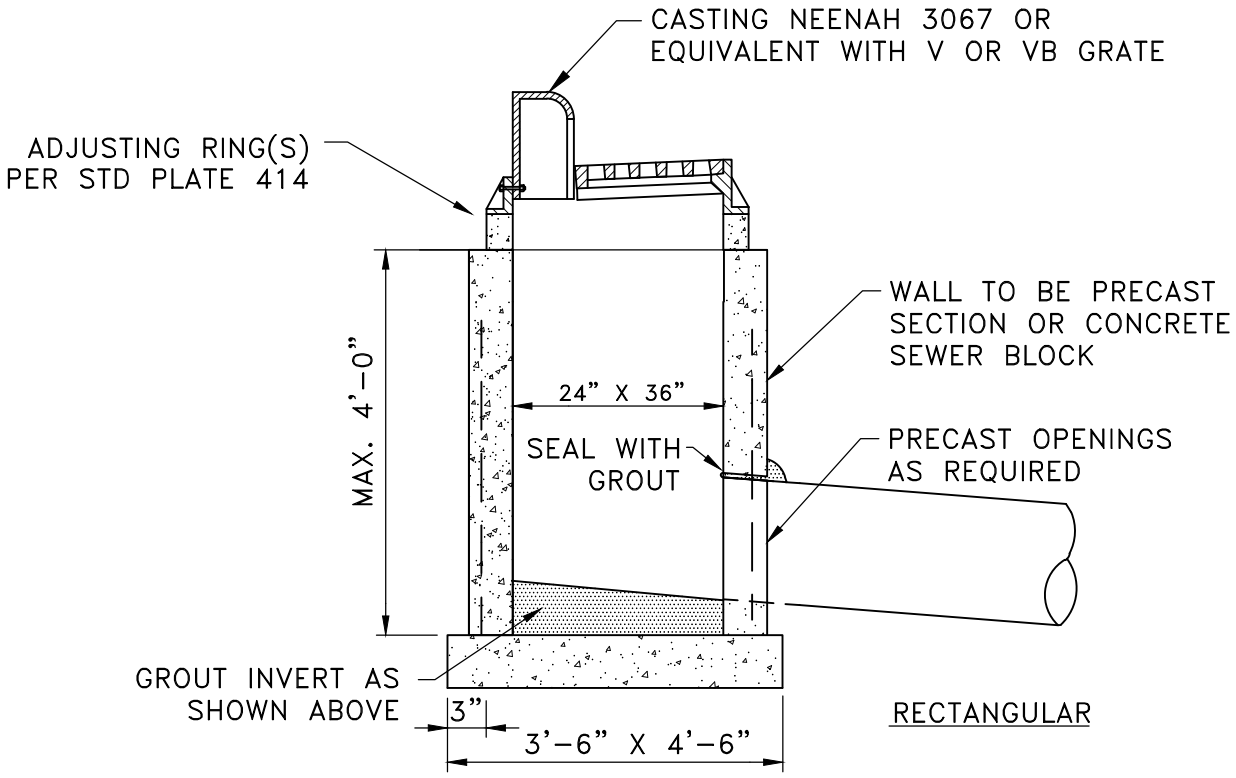
27” PRECAST CATCH BASIN YARD INLET

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 409
REVISED		



TOP VIEW



SECTION A–A

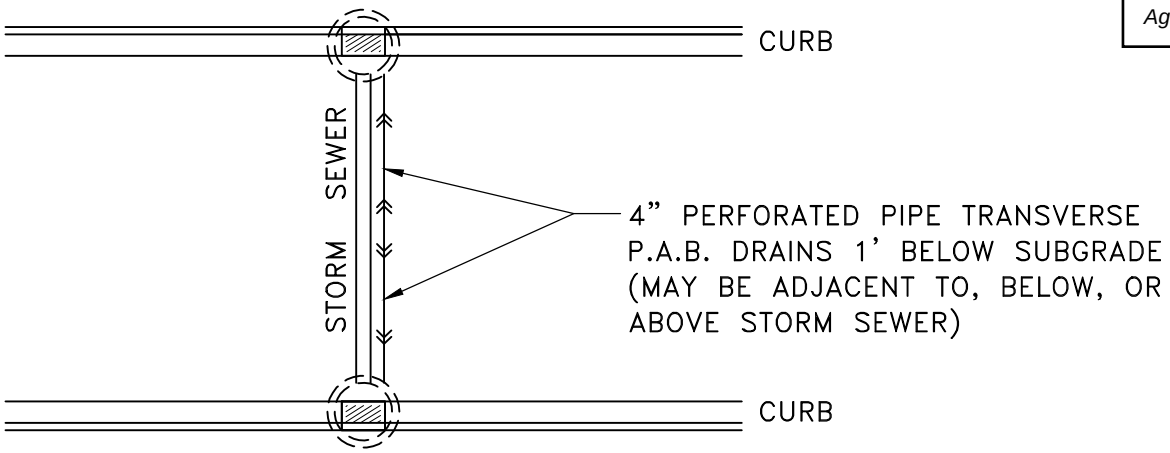
NOTES:

1. CONCRETE BASE SHALL BE 6" POURED IN PLACE OR 5" PRECAST SLAB.
2. MANHOLE STEEL REINFORCING SHALL BE PER ASTM C478.

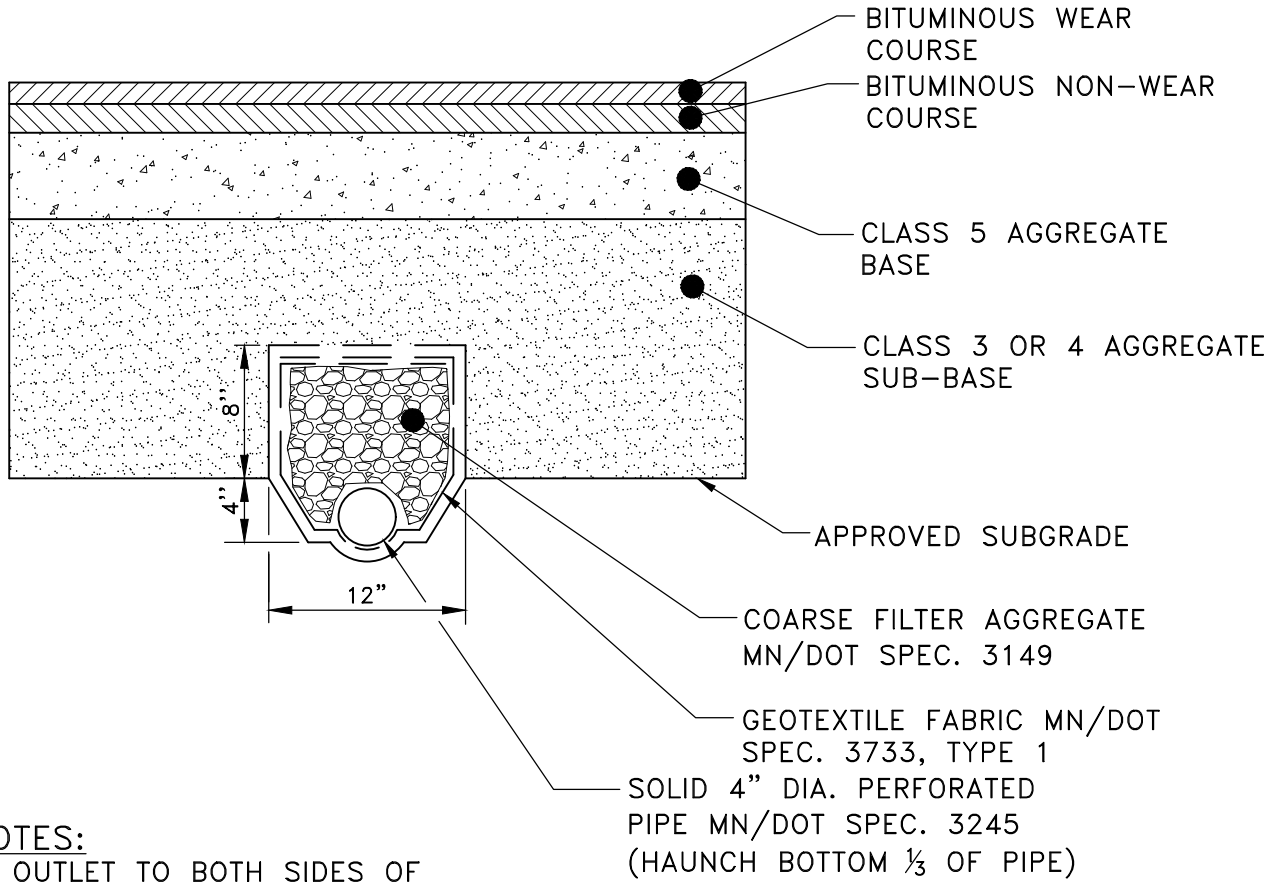
2' x 3' CATCH BASIN

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 410
REVISED		



TOP VIEW



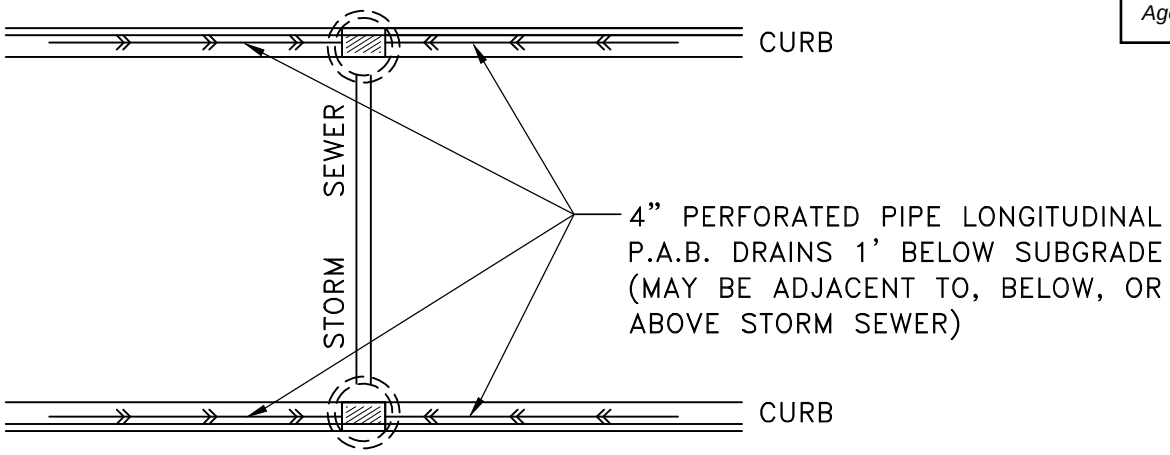
NOTES:

1. OUTLET TO BOTH SIDES OF ROADWAY.
2. MINIMUM TRANSVERSE SLOPE OF PERFORATED PIPE SHALL BE 2%.

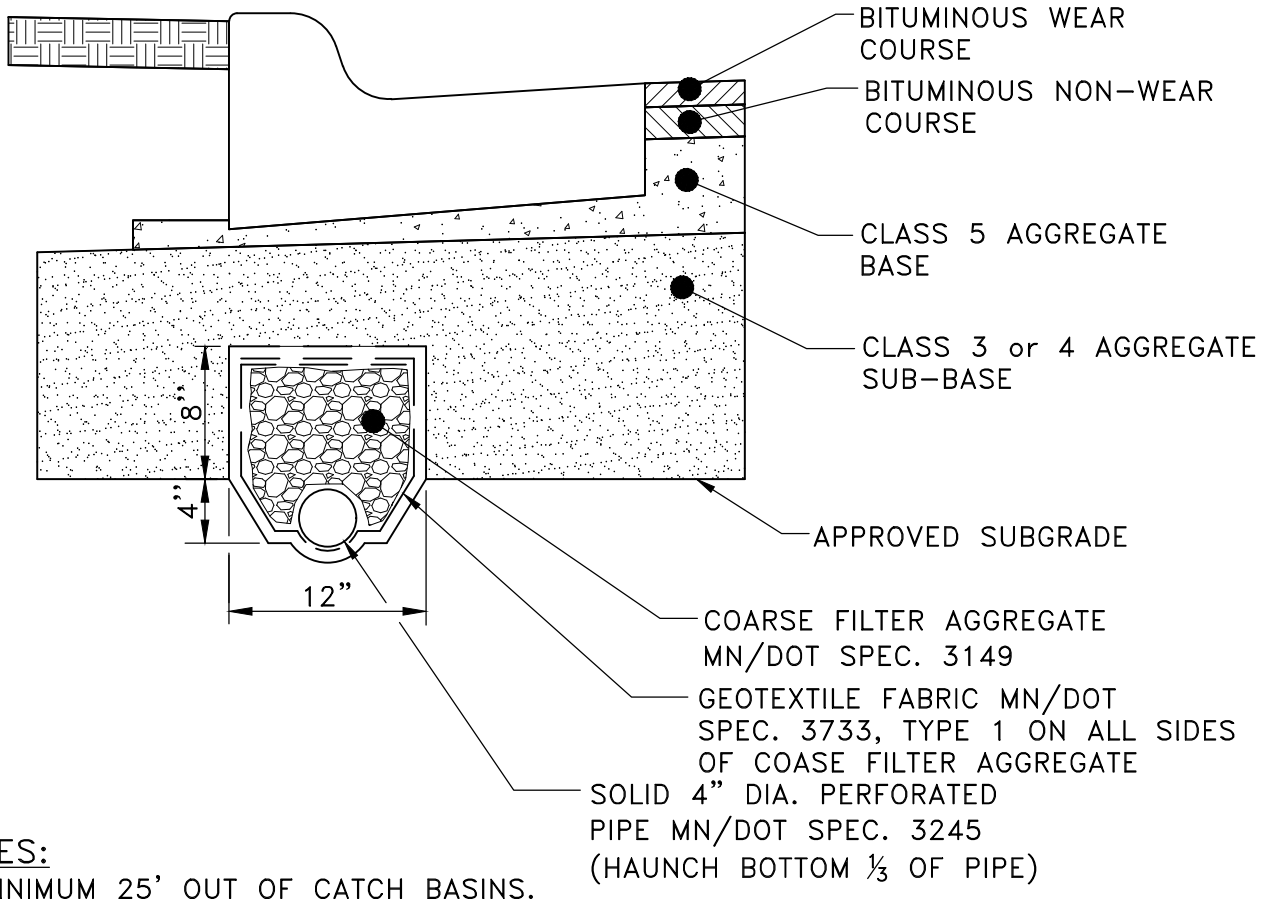
TRANSVERSE PERMEABLE AGGREGATE BASE (P.A.B.) DRAIN

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 411
REVISED		



TOP VIEW



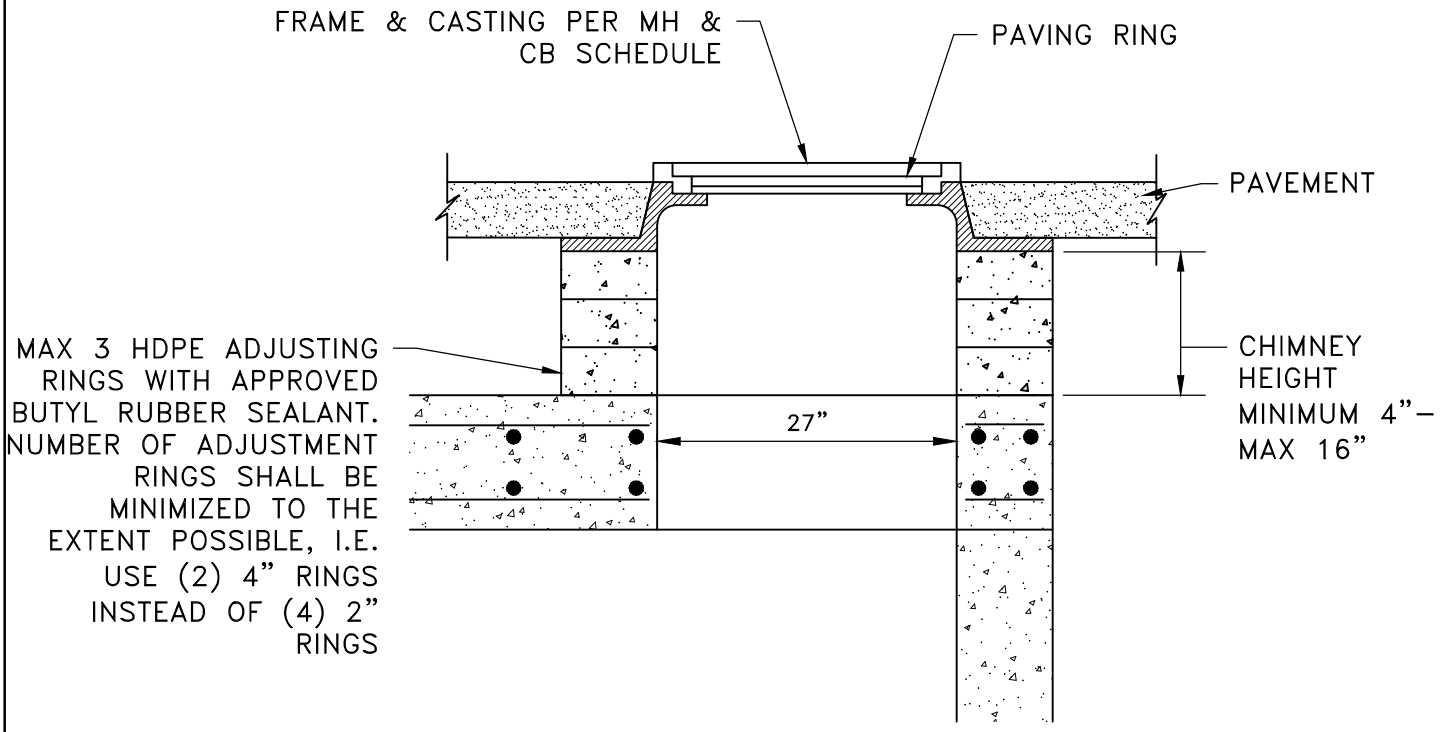
NOTES:

1. MINIMUM 25' OUT OF CATCH BASINS.
2. MINIMUM SLOPE OF PERFORATED PIPE SHALL BE 1%.

LONGITUDINAL PERMEABLE AGGREGATE BASE (P.A.B.) DRAIN

NO SCALE

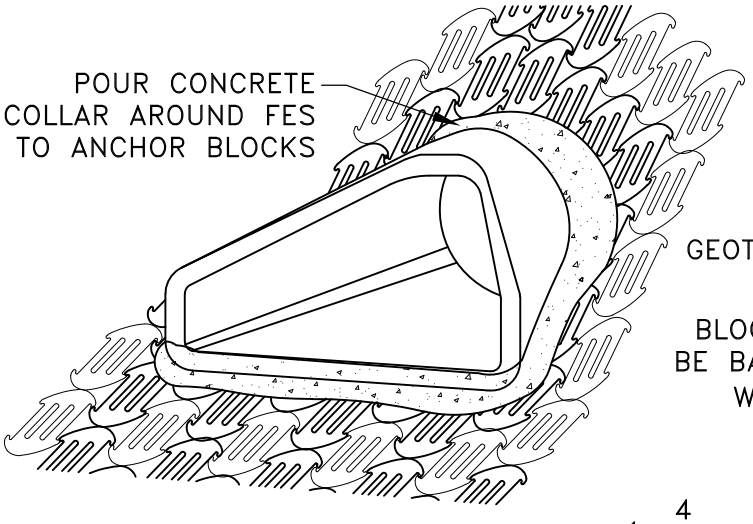
APPROVED	City of St. Francis	STANDARD PLATE NO. 412
REVISED		

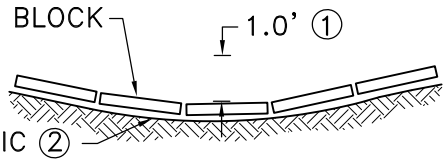


STORM MANHOLE ADJUSTMENT RINGS

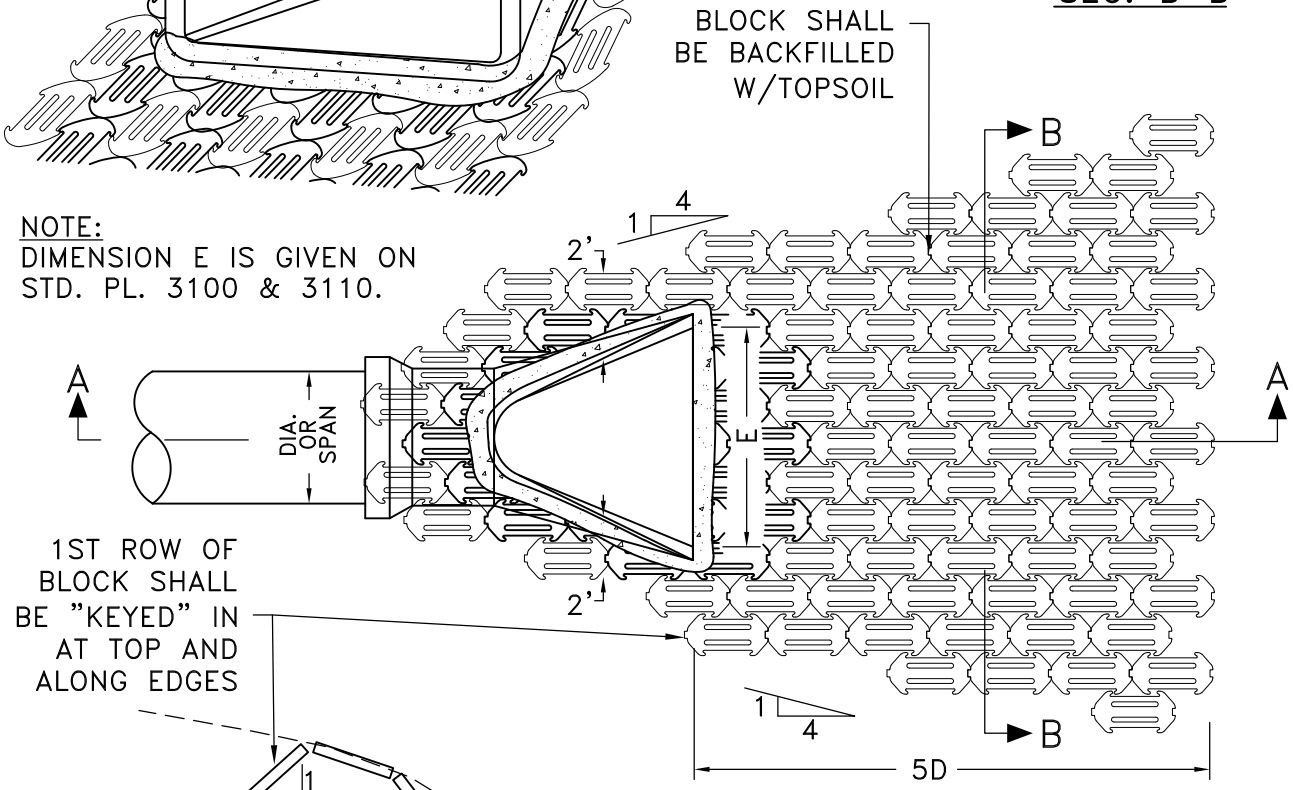
NO SCALE

APPROVED REVISED	City of St. Francis	STANDARD PLATE NO. 414

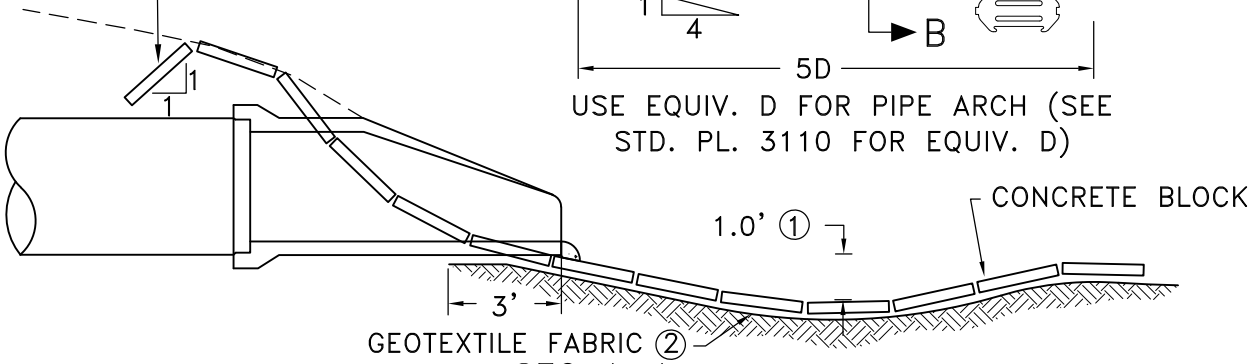




SEC. B–B



USE EQUIV. D FOR PIPE ARCH (SEE STD. PL. 3110 FOR EQUIV. D)



SEC A–A

ARTICULATED CONCRETE BLOCK SHALL BE A HANDPLACED INTERLOCKING CONCRETE BLOCK SYSTEM, CABLE CONNECED CONCRETE BLOCK MAT, OR APPROVED EQUAL.

① FOR PIPES GREATER THAN OR EQUAL TO 48", USE 2.0'

② GEOTEXTILE FABRIC PER Mn/DOT SPEC. 3733. FABRIC SHALL BE OVERSIZED A MINIMM OF 12" AND COVER THE ENTIRE AREA UNDER THE BLOCK MAT AND EXTEND UNDER THE CULVERT APRON 3 FEET.

③ IF A CABLE CONCRETE SYSTEM IS USED, MULTIPLE MATS MUST BE TIED TOGETHER PER MANUFACTURERS SPEC. AND ALL CABLES PROTRUDING BEYOND THE FINISHED EDGES SHALL BE CUT FLUSH TO THE BLOCK.

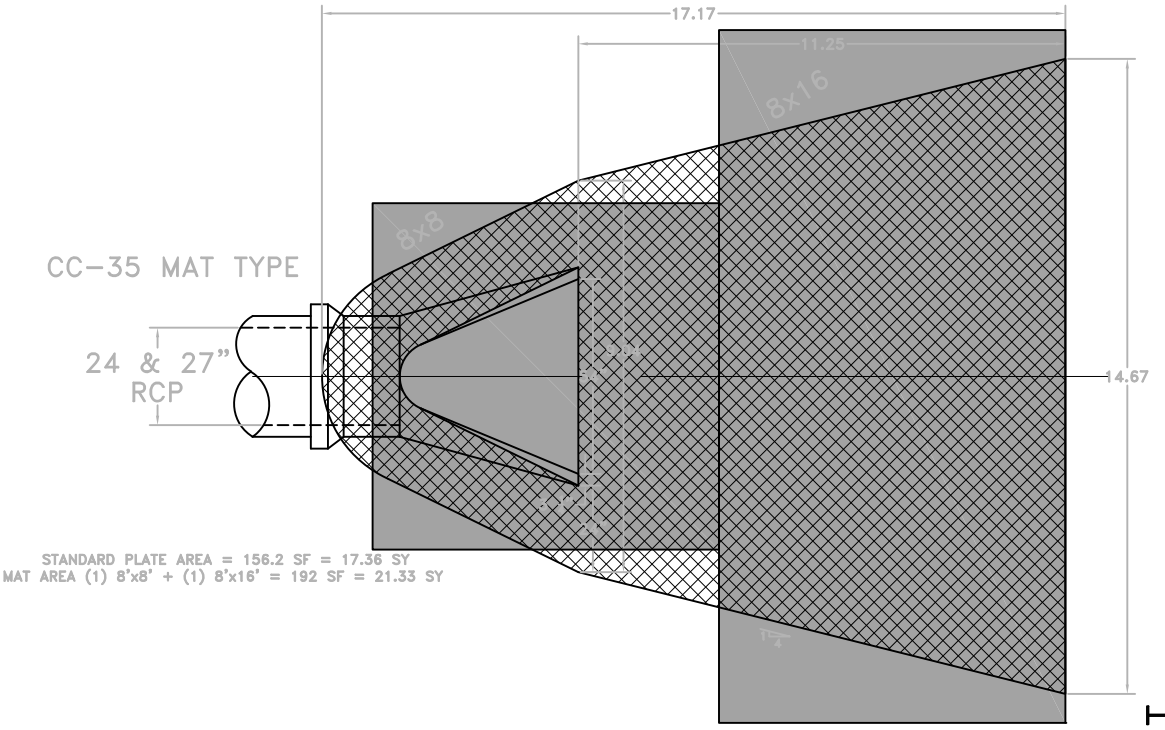
ARTICULATED CONCRETE BLOCK AT R.C.P. OUTLET

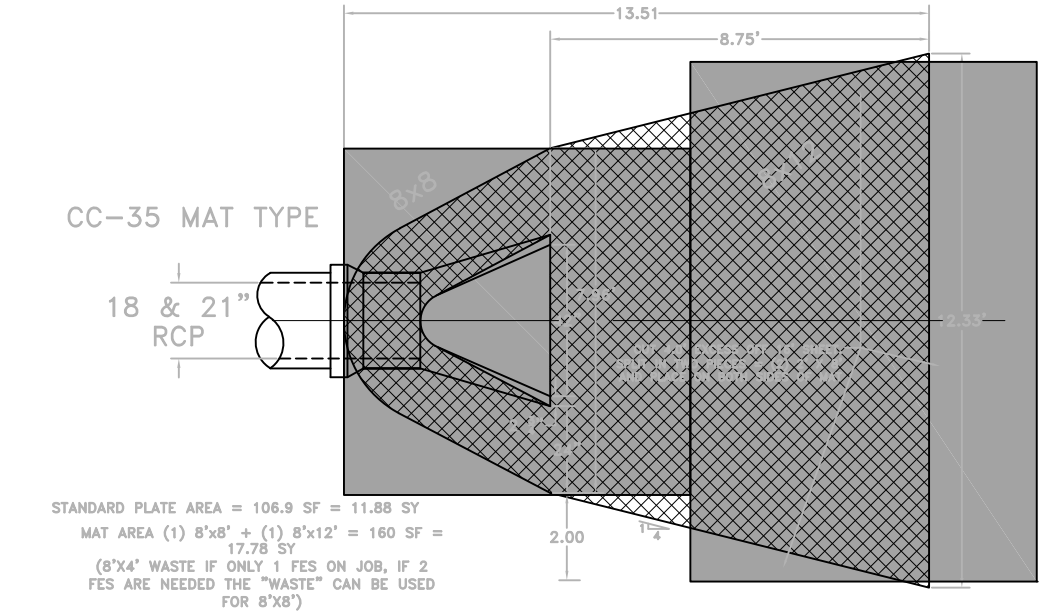
NO SCALE

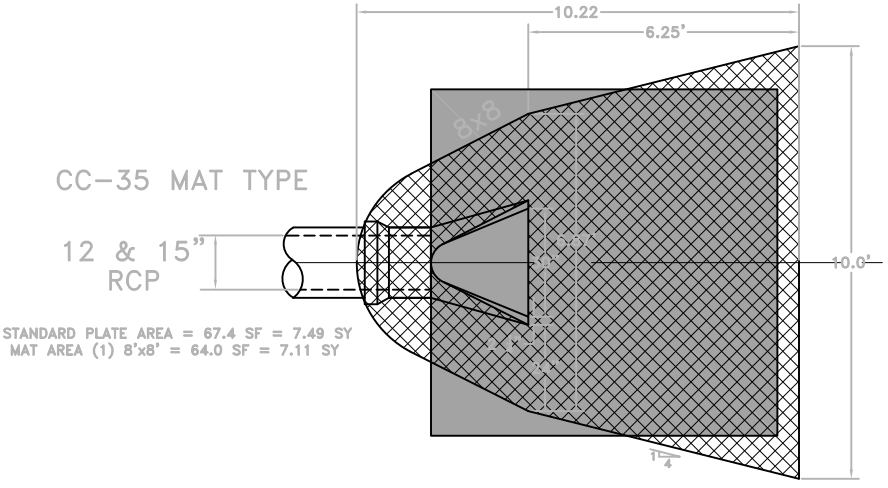
APPROVED	City of St. Francis	STANDARD PLATE NO. 500
REVISED		

ARTICULATED CONCRETE BLOCK MAT LAYOUT

NO SCALE







STANDARD PLATE NO.
501

SHEET 1 OF 3

City of St. Francis

APPROVED

ISED

129

Dec 27, 2022 - 7:41pm
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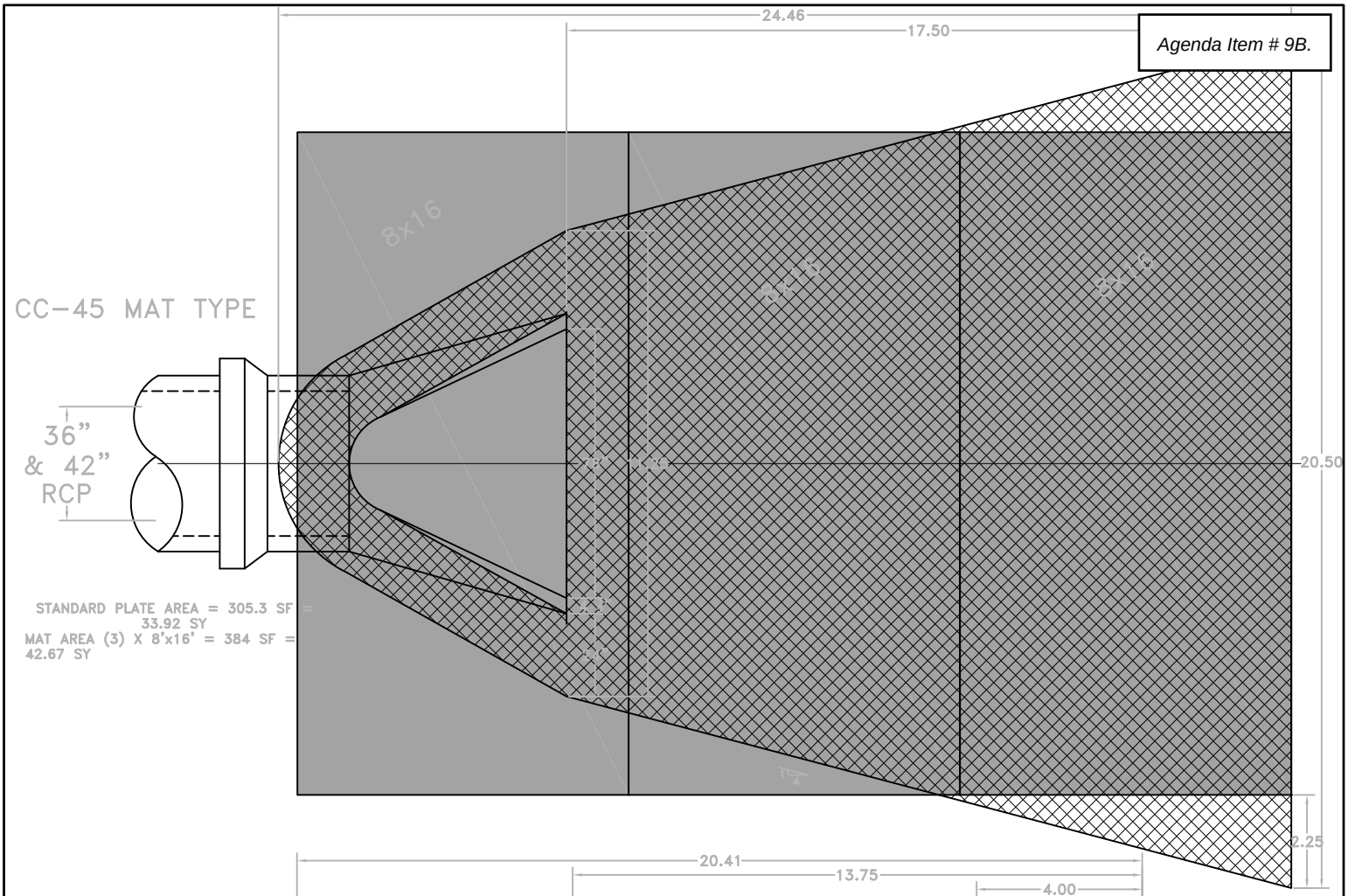

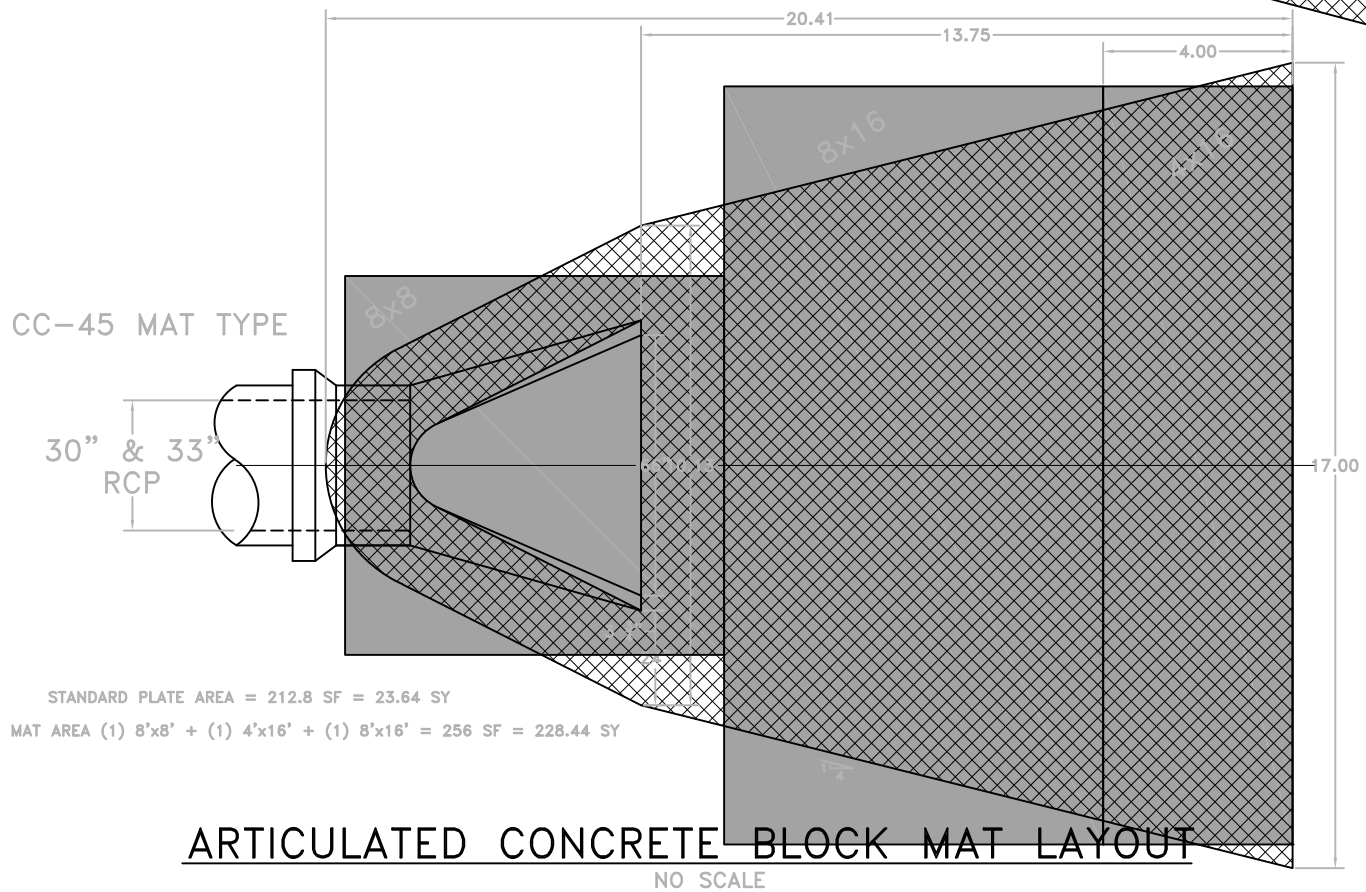

ARTICULATED CONCRETE BLOCK MAT LAYOUT

NO SCALE

Dec. 27, 2022 – 7:47pm
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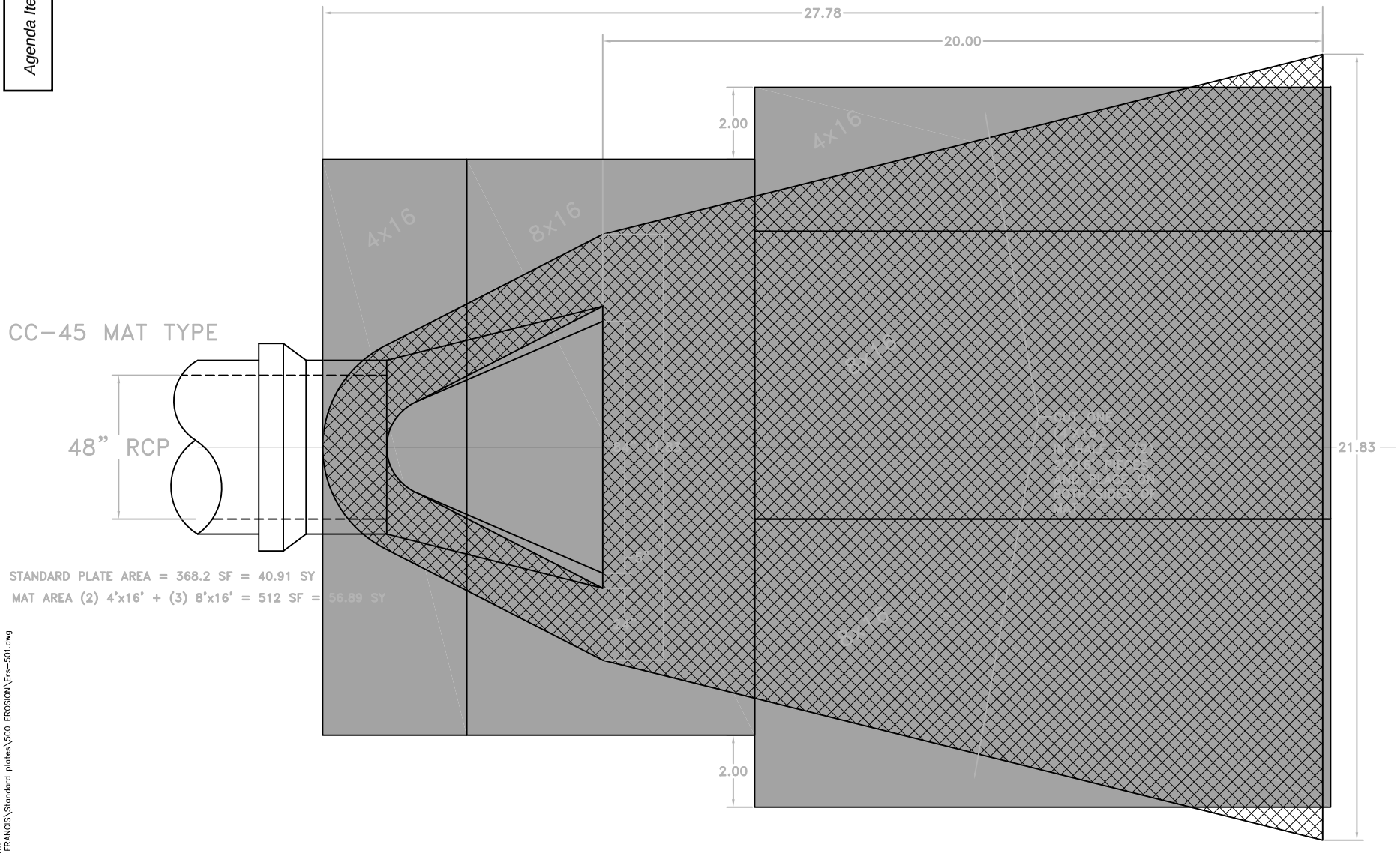
APPROVED	City of St. Francis	STANDARD PLATE NO. 501
REVISED		SHEET 2



Dec 27, 2022 - 7:53pm
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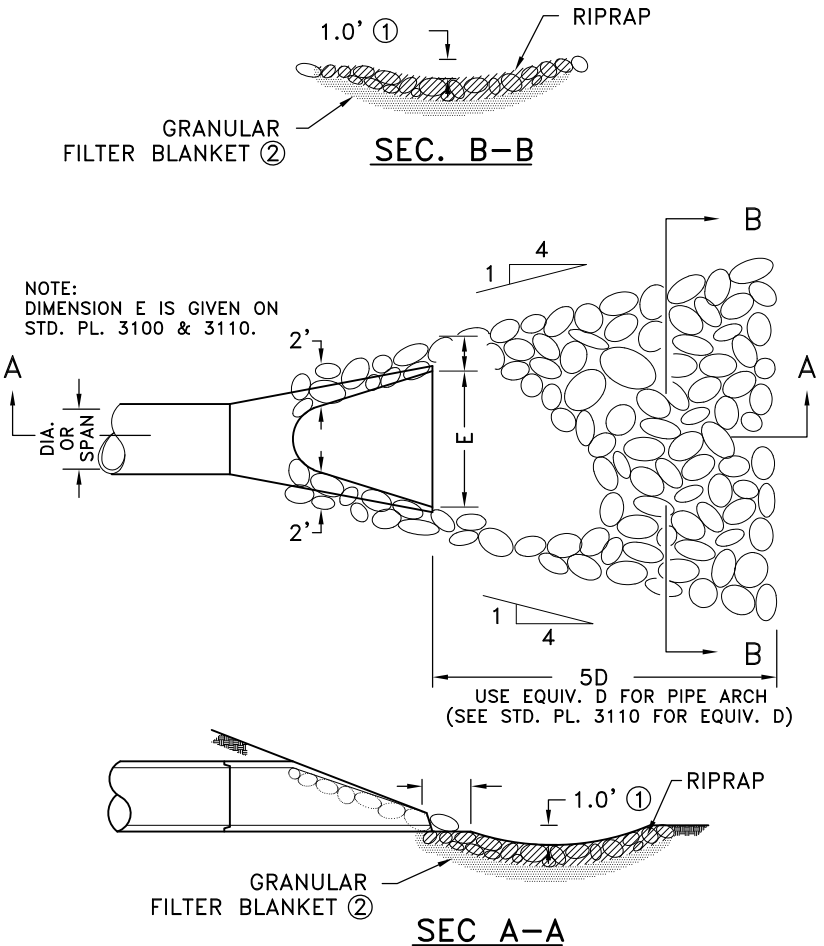
ARTICULATED CONCRETE BLOCK MAT LAYOUT

NO SCALE

APPROVED REVISED	City of St. Francis	STANDARD PLATE NO. 501	SHEET 3 OF 3



		CLASS III d50=9"	CLASS IV d50=12"
DIA OF ROUND PIPE (IN)	L (FT)*	18" DEPTH RIPRAP (CU YD)	24" DEPTH RIPRAP (CU YD)
12	8	8	10
15	8	8	10
18	10	10	15
21	10	15	15
24	12	15	20
27	12	15	20
30	14	20	25
36	16	25	30
42	18	30	40
48	20	40	50

*"L" DIMESNTION IS MINIMUM REQUIRED. RIPRAP SHALL EXTEND TO POND BOTTOM

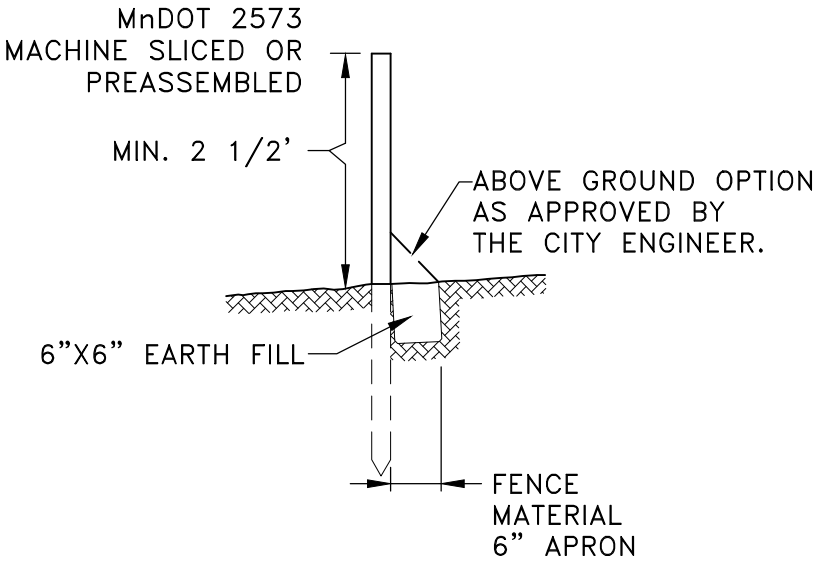
① FOR PIPES GREATER THAN OR EQUAL TO 48'", USE 2.0'

② THE CONTRACTOR MAY SUBSTITUTE A GEOTEXTILE FABRIC, SPEC. 3601 FOR THE GRANULAR FILTER BLANKET UNLESS OTHERWISE SPECIFIED IN THE PLANS. THE FABRIC SHOULD COVER THE AREA OF THE RIPRAP AND EXTEND UNDER THE CULVERT APRON 3 FEET.

RIP–RAP AT R.C.P. OUTLET

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 502
REVISED		



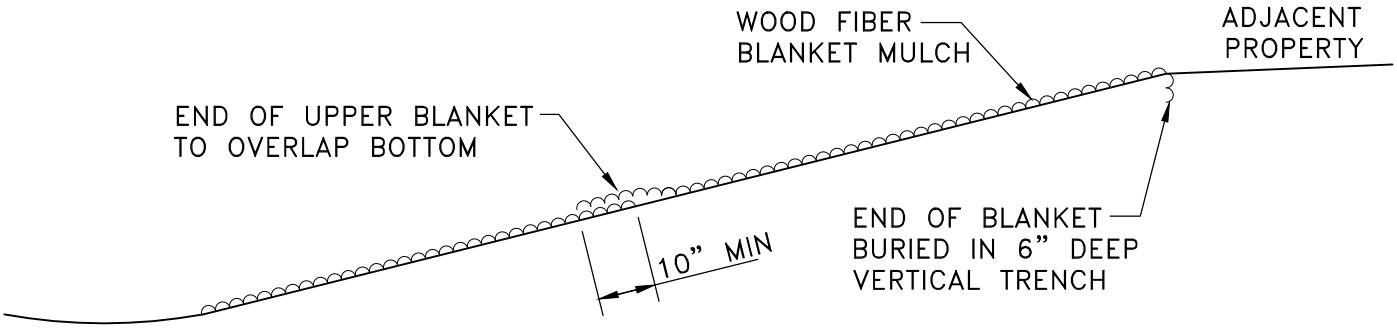
5' POSTS – 8' MAX. ON CENTER
MINIMUM 2' PENETRATION

REF. MnDOT 3886

SILT FENCE

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 503
REVISED		



NOTE:
WOOD FIBER BLANKET SHALL BE PLACED AND STAPLED ACCORDING TO Mn/DOT SPECIFICATION 2575.3K2 WITH THE FOLLOWING EXCEPTIONS. ADJACENT STRIP EDGES SHALL BE OVERLAPPED A MINIMUM OF 6".

PLASTIC OR WOOD BIODEGRADABLE STAKES OR STAPLES SHALL BE USED IN PLACE OF METAL WIRE STAPLES.

ECOSTAKES AND BIOSTAKES ARE ACCEPTABLE PRODUCTS FOR USE TO FASTEN WOOD FIBER BLANKET.

WOOD FIBER BLANKET INSTALLATION ON A CUT SLOPE

NO SCALE

Dec 27, 2022 - 8:20pm
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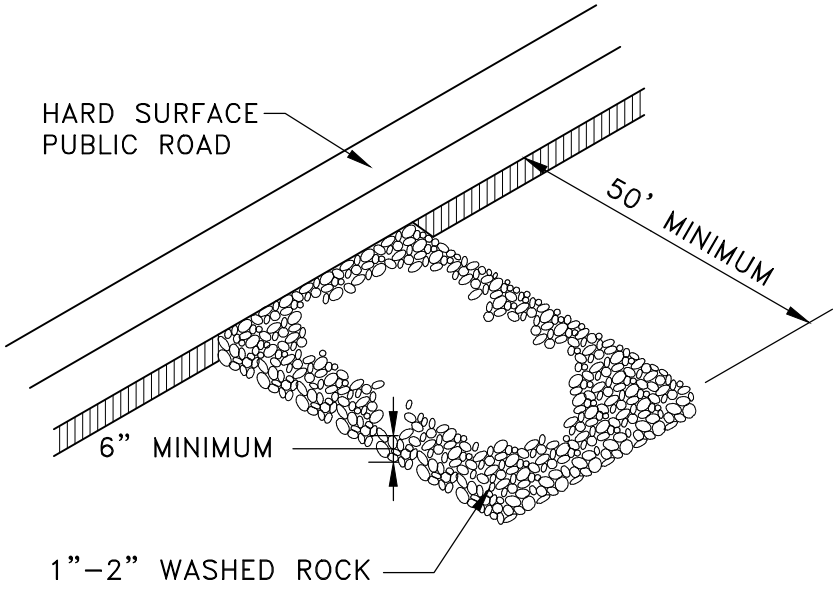
APPROVED	City of St. Francis	STANDARD PLATE NO. 504
REVISED		



ROCK CONSTRUCTION ENTRANCE

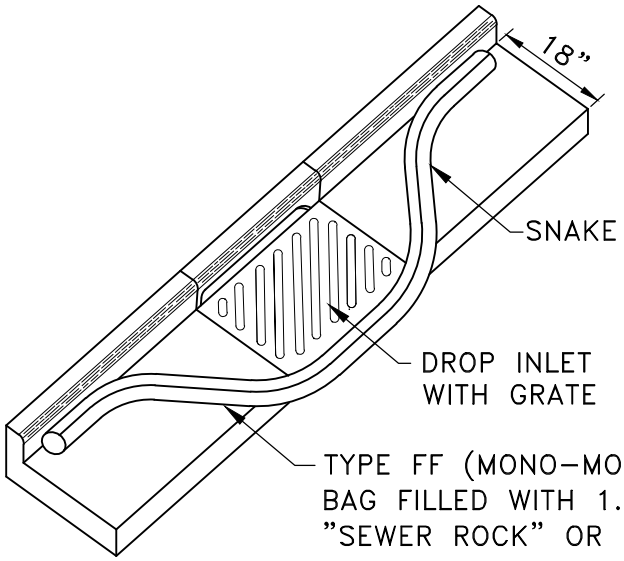
NO SCALE

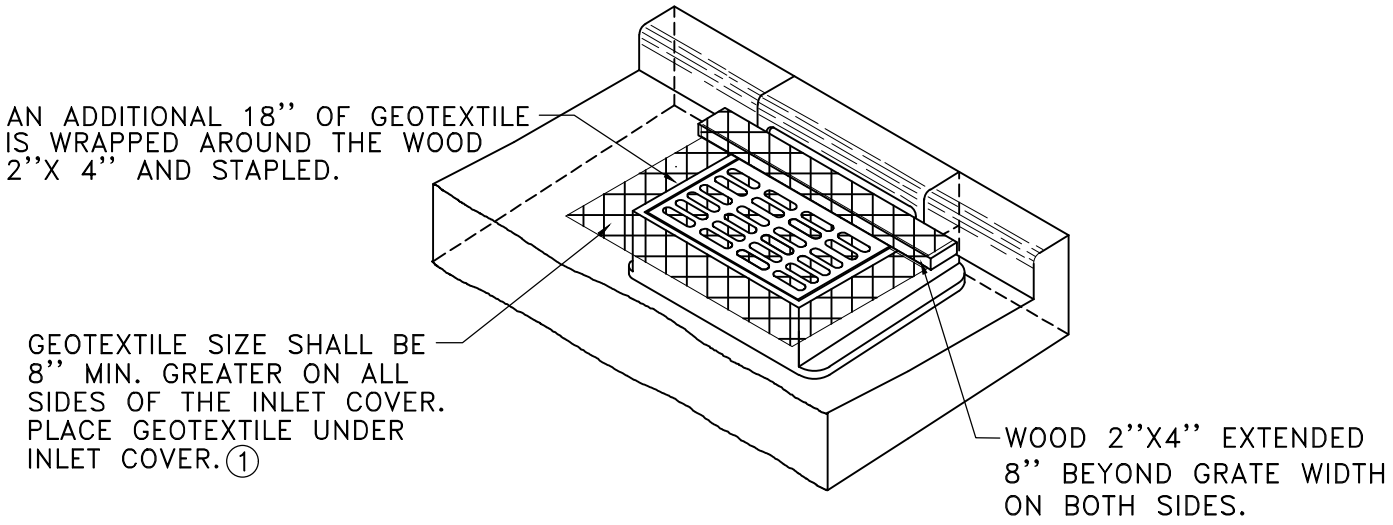
APPROVED

REVISED

City of St. Francis

STANDARD PLATE NO. 505





① ALL GEOTEXTILE USED FOR INLET PROTECTION SHALL BE MONOFILAMENT IN BOTH DIRECTIONS, MEETING SPEC. 3886 FOR MACHINE SLICED.

② WIMCO'S MAY BE USED IN PLACE OF ABOVE.

③ ALL DROP INLET PROTECTION SHALL BE REMOVED PRIOR TO WINTER FREEZE.

DROP INLET PROTECTION

NO SCALE

Dec 27, 2022 - 8:21pm
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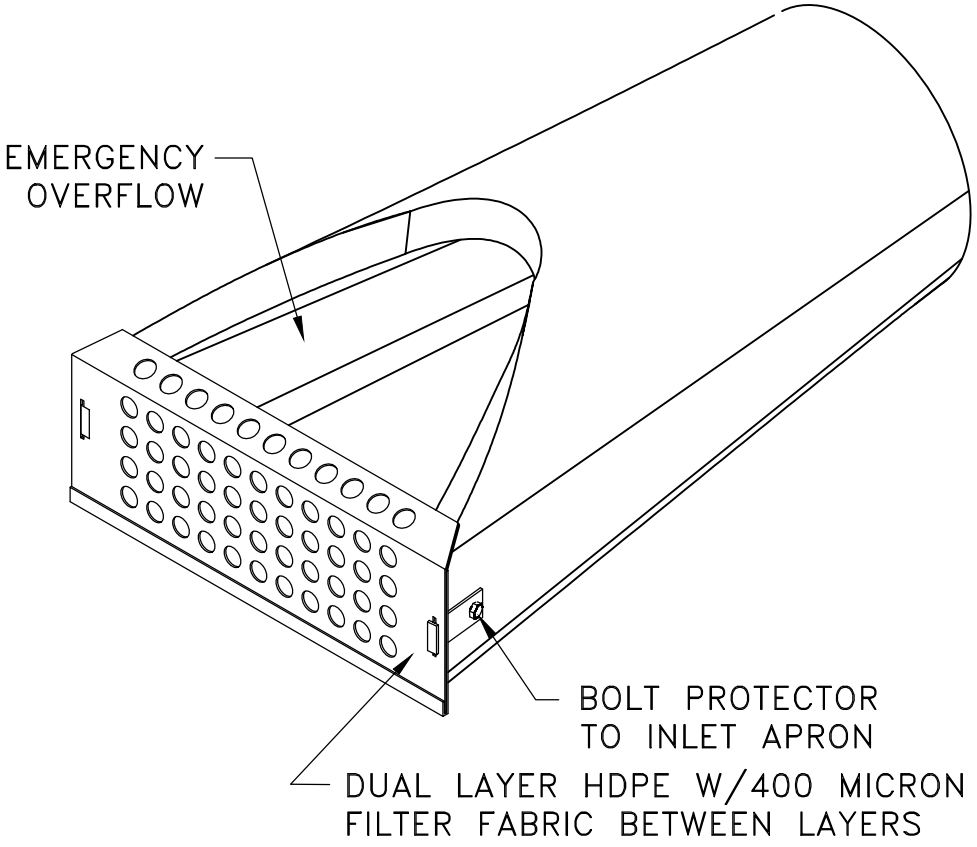
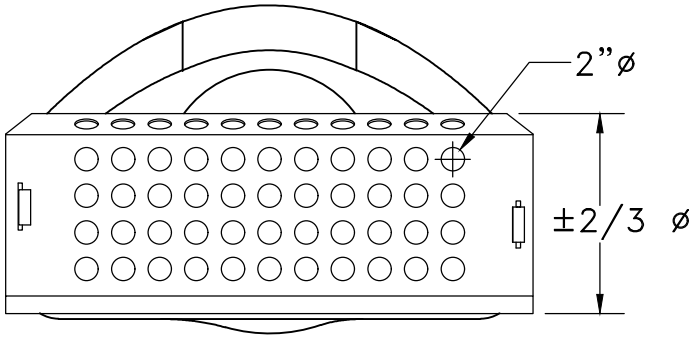
APPROVED	City of St. Francis	STANDARD PLATE NO. 506
REVISED		

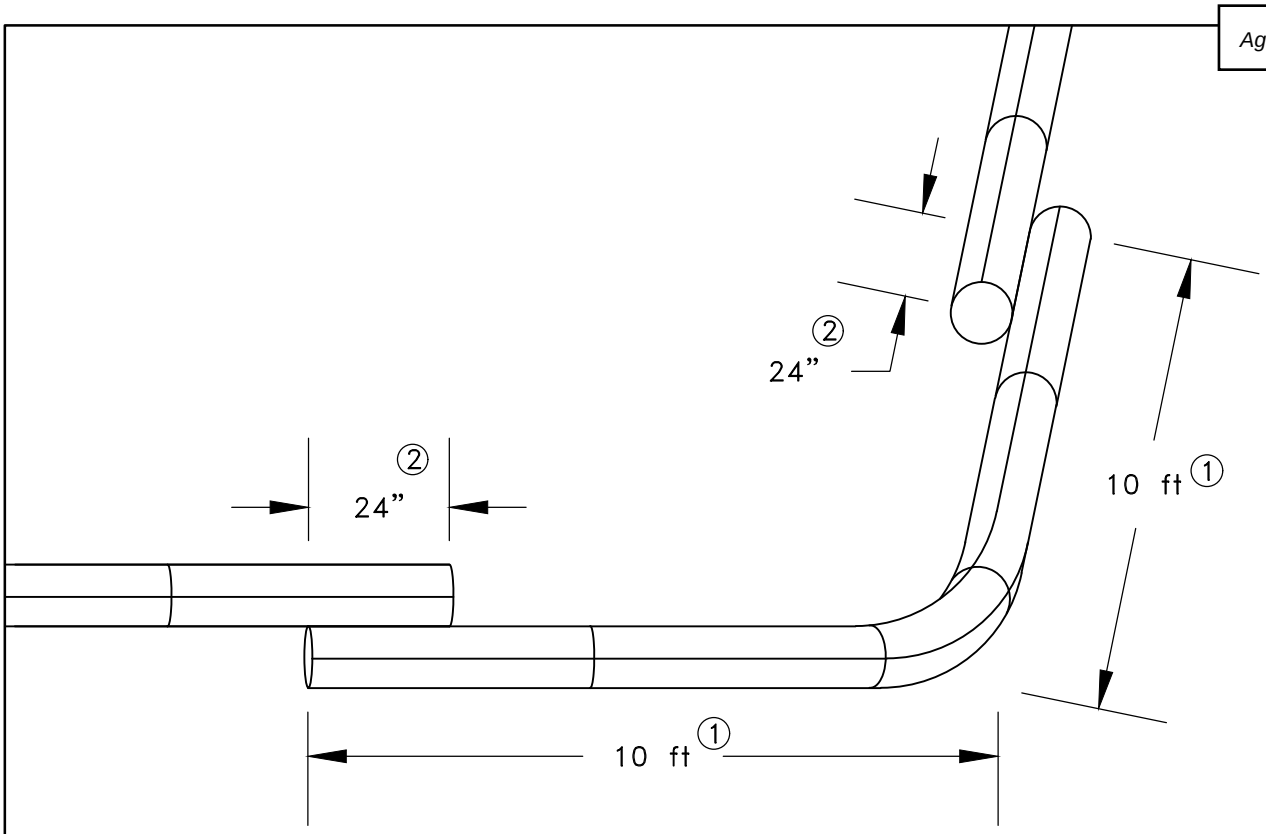


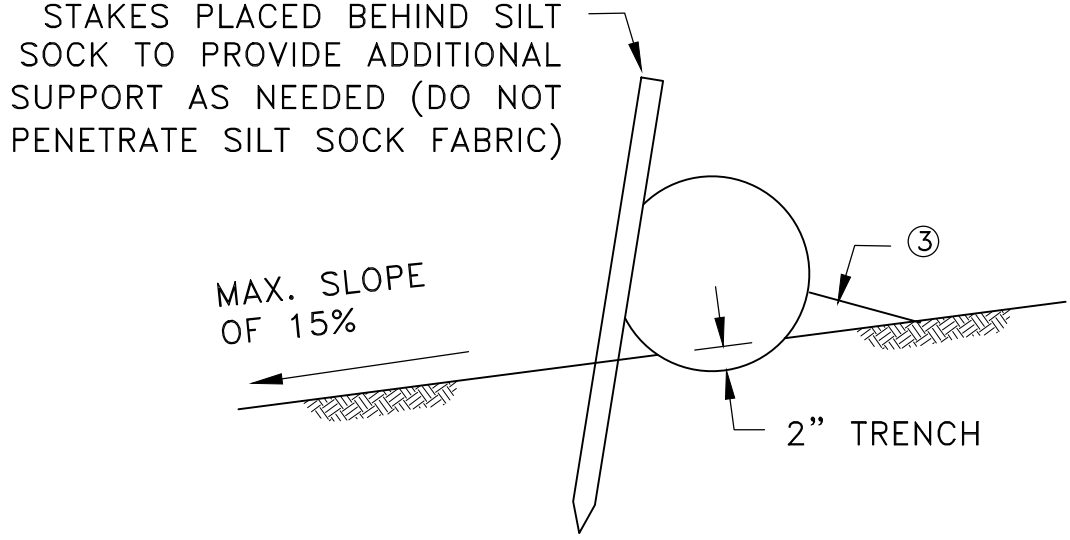


CULVERT CONTROL END

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 507
REVISED		





① BREAKS IN SILT SOCK SHALL BE LOCATED A MINIMUM OF 10 FEET FROM ANY SHARP BEND OR CHANGE IN SOCK DIRECTION.

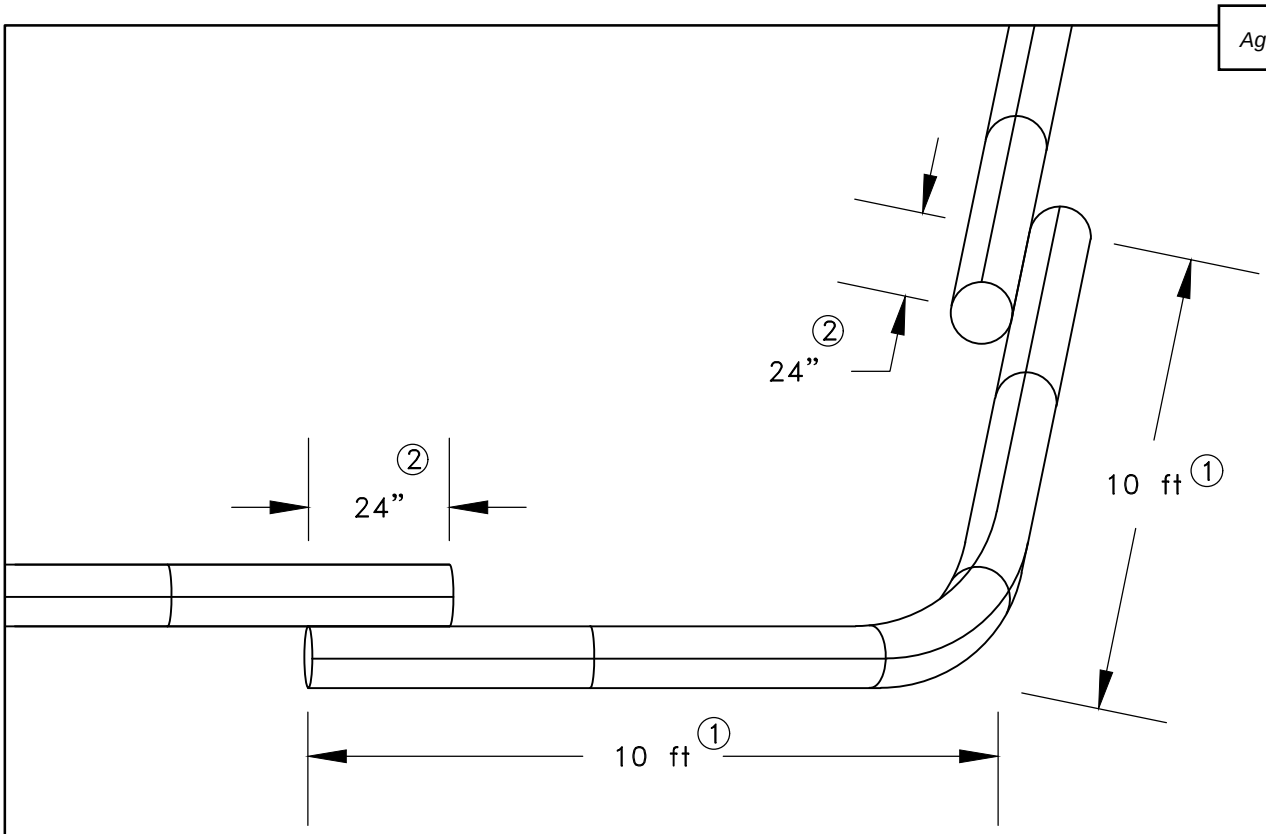
② SOCK’S SHALL BE OVERLAPPED A MINIMUM OF 24” WITH THE UPSLOPE SIDE INFRONT.

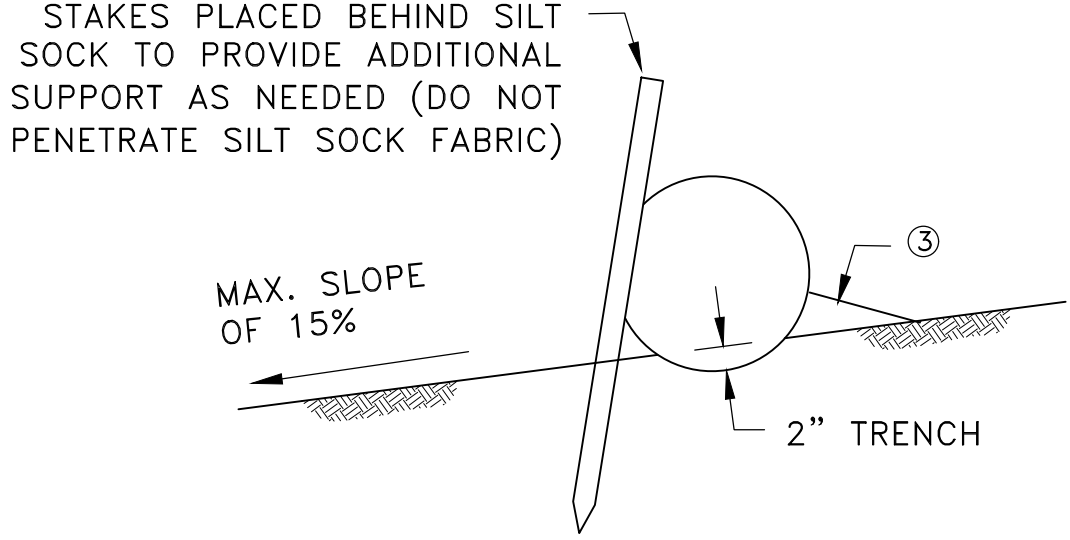
③ SEDIMENT ACCUMULATION OF 1/2 THE SOCK HEIGHT MUST BE REMOVED.

SILT SOCK

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 508
REVISED		





① BREAKS IN SILT SOCK SHALL BE LOCATED A MINIMUM OF 10 FEET FROM ANY SHARP BEND OR CHANGE IN SOCK DIRECTION.

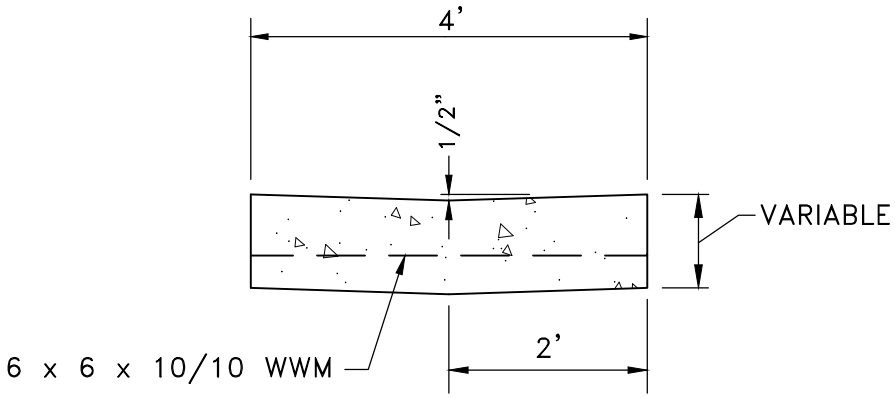
② SOCK’S SHALL BE OVERLAPPED A MINIMUM OF 24” WITH THE UPSLOPE SIDE INFRONT.

③ SEDIMENT ACCUMULATION OF 1/2 THE SOCK HEIGHT MUST BE REMOVED.

SILT SOCK

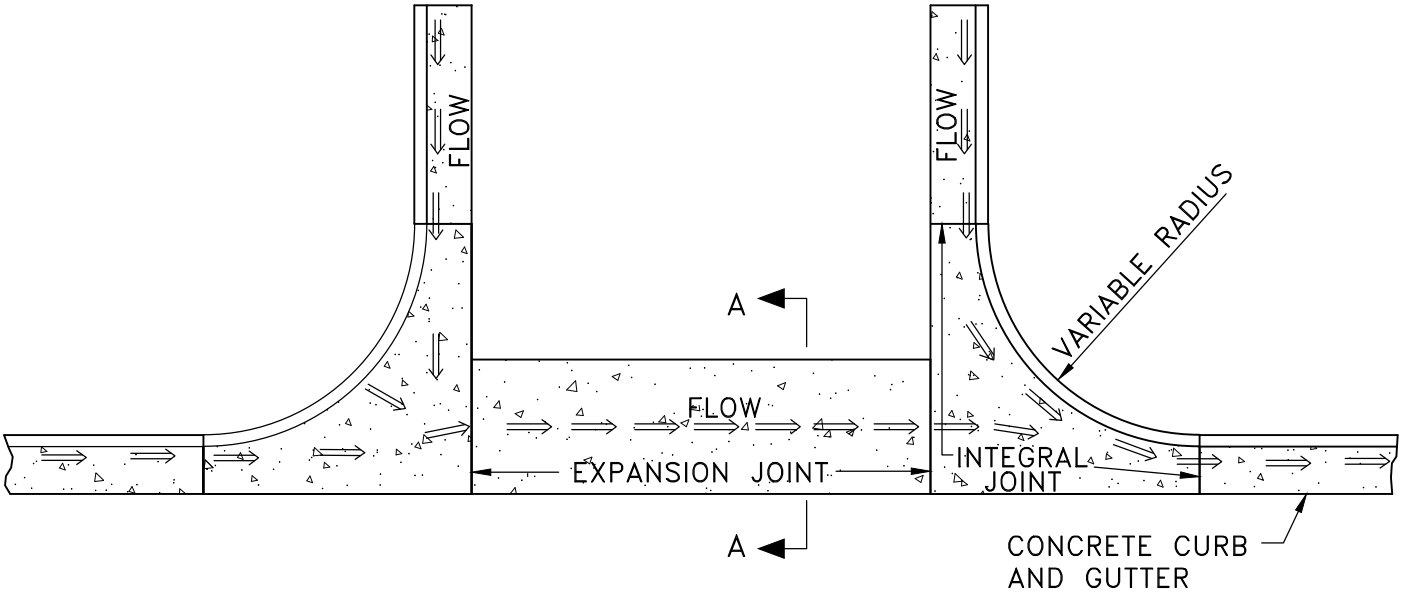
NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 509
REVISED		



NOTE:
DEPTH OF CONCRETE SHALL BE DETERMINED BY TYPE OF CURB AND GUTTER

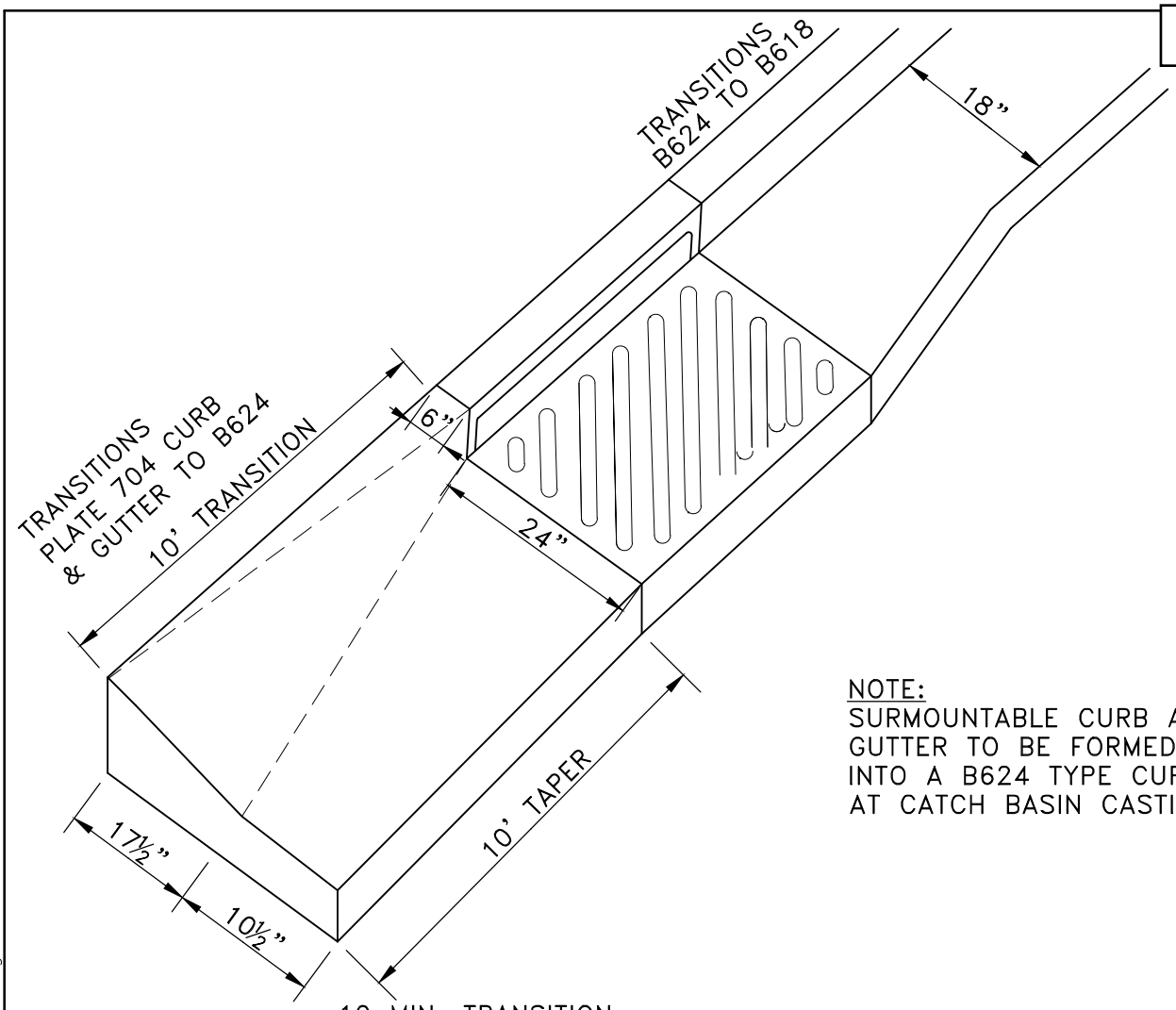
SECTION AA



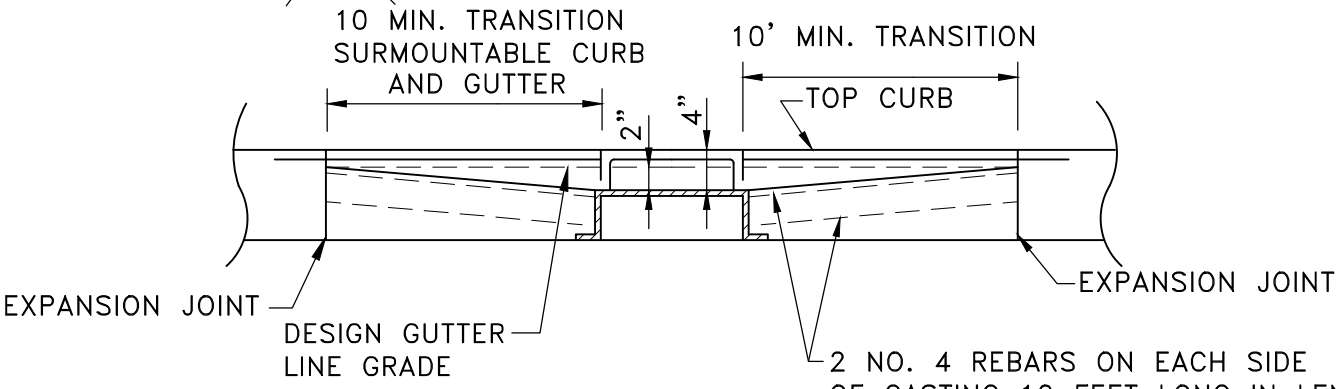
TYPICAL CROSS GUTTER

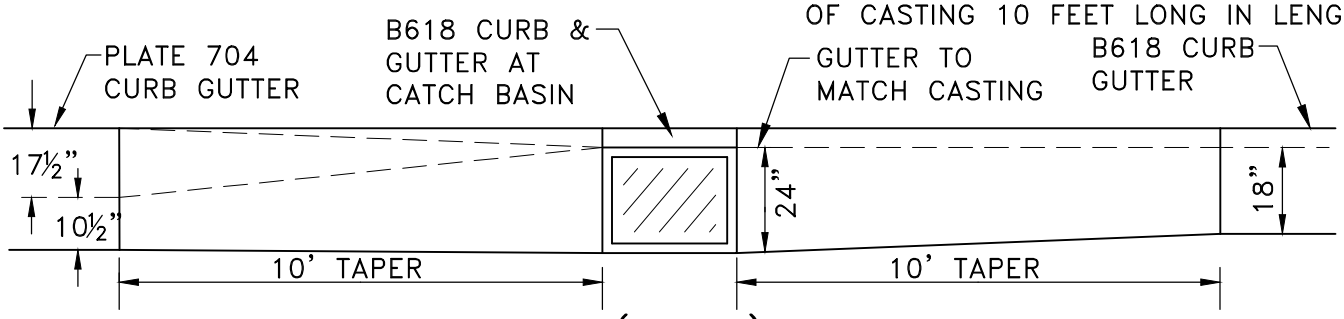
NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 702
REVISED		



NOTE:
SURMOUNTABLE CURB AND GUTTER TO BE FORMED INTO A B624 TYPE CURB AT CATCH BASIN CASTING.

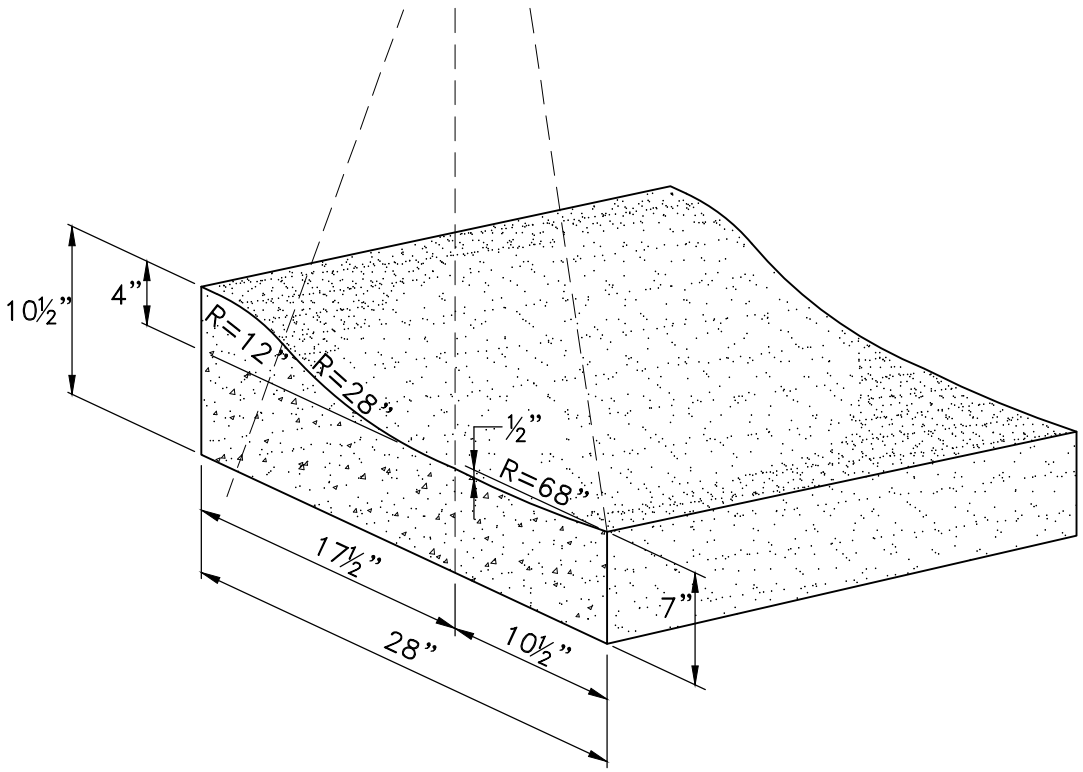




CURB TRANSITION (B624) AT CATCH BASIN

NOT TO SCALE

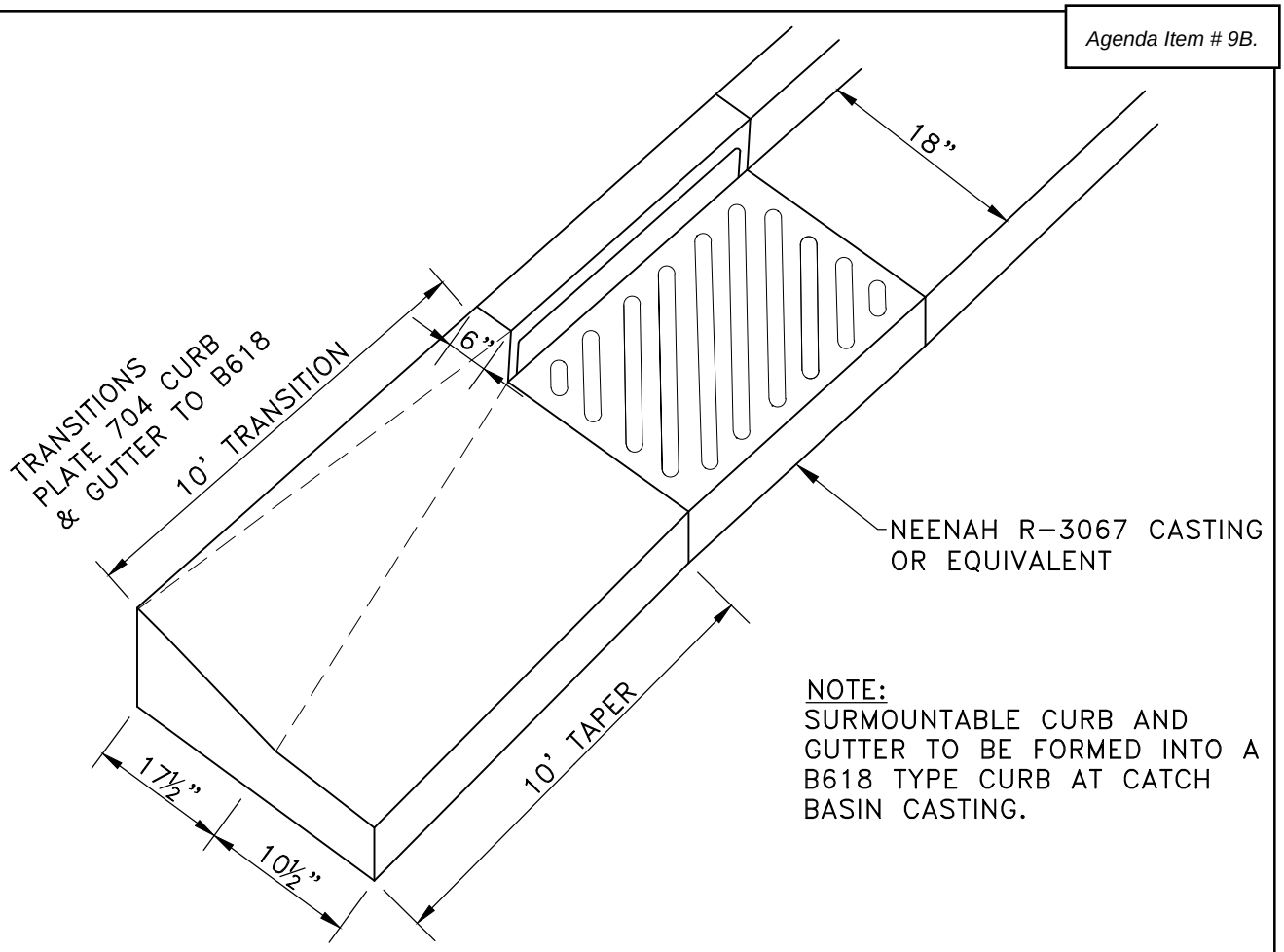
APPROVED	City of St. Francis	STANDARD PLATE NO. 703
REVISED		



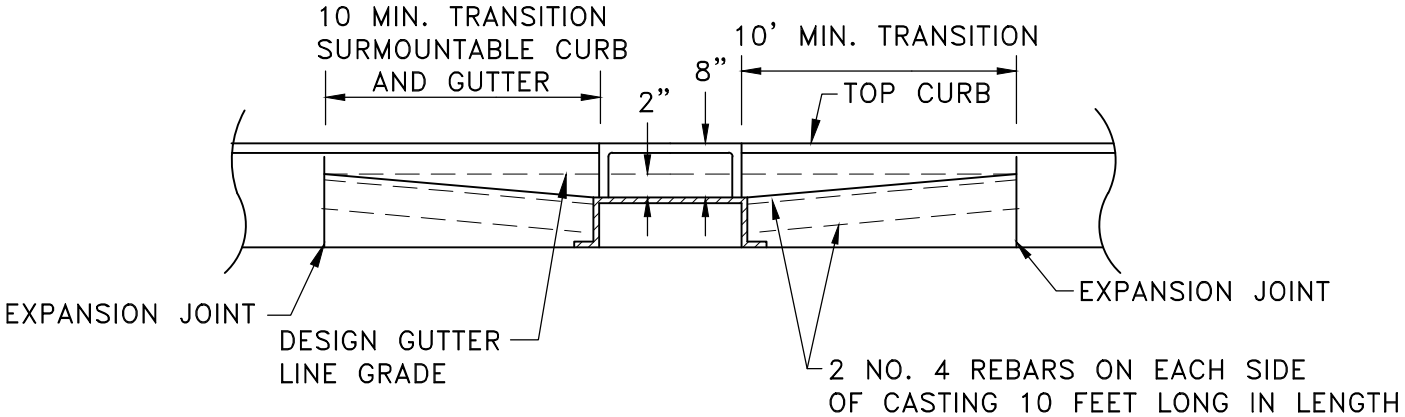
SURMOUNTABLE CONCRETE CURB AND GUTTER

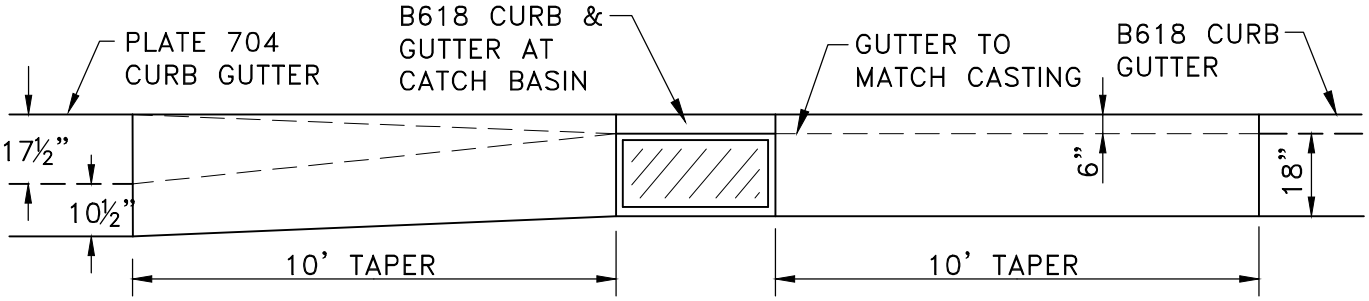
NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 704
REVISED		



NOTE:
SURMOUNTABLE CURB AND GUTTER TO BE FORMED INTO A B618 TYPE CURB AT CATCH BASIN CASTING.

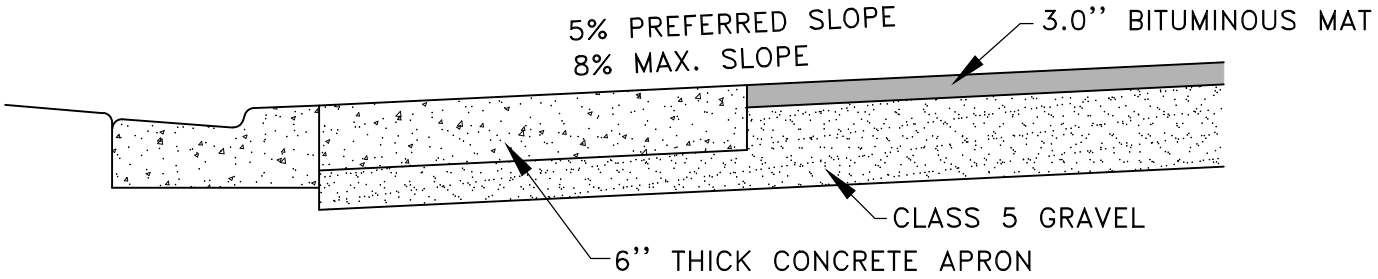




CURB TRANSITION (B618) AT CATCH BASIN

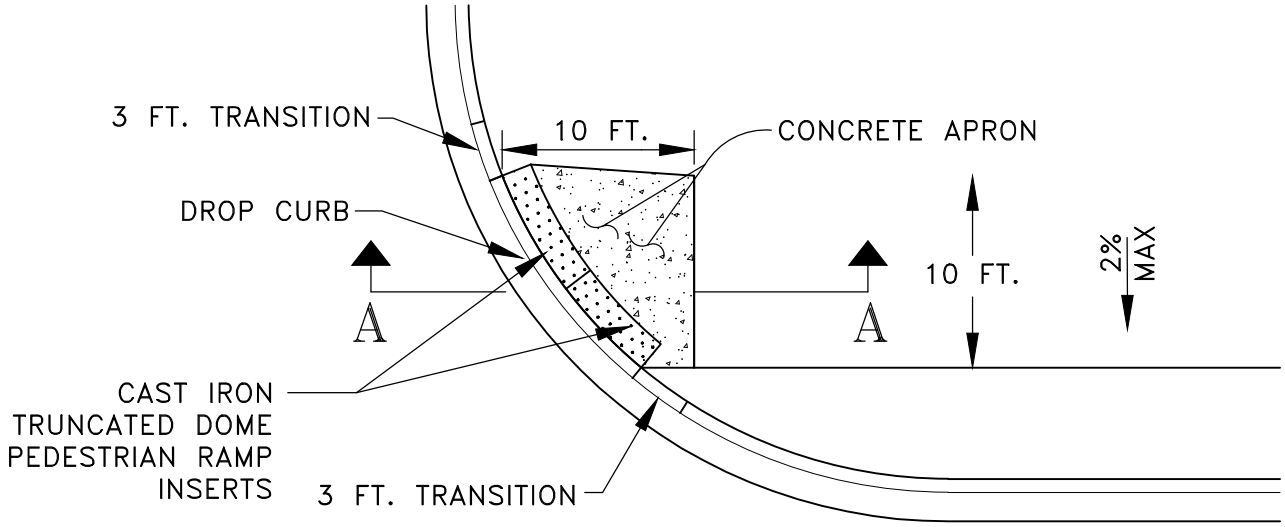
NOT TO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 705
REVISED		



SECTION A–A

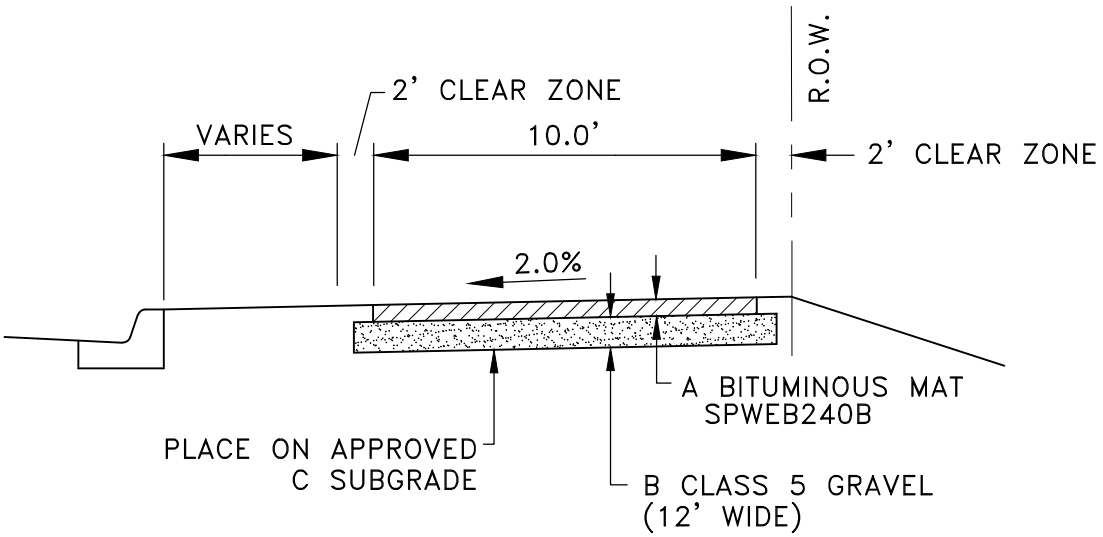
NO SCALE



TYPICAL DROP CURB – BIKE TRAIL

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 706
REVISED		



TYPICAL SECTION – BIKE TRAIL

NO SCALE

LEGEND				
AASHTO	R VALUE	BITUMINOUS SURFACE	AGGREGATE BASE	
SUBGRADE SOIL CLASS		WEAR 2360*** A	CLASS 5 3138 B*	CLASS 3 OR 4 3138 C*
A–3	R–70	** 3"	** 6"	–
A–4	R–20	3"	6"	–
A–6	R–15	3"	6"	–
A–7	R–10	3"	8"	–
	R–5	3"	6"	12"

* SUBJECT TO REVIEW BY QUALIFIED SOILS ENGINEER

** MINIMUM ALLOWABLE DESIGN THICKNESS

*** ASPHALT BINDER GRADE = B

NOTES: R VALVE IS A MEASURE OF EMBANKMENT SOIL RESISTANCE STRENGTH AS DETERMINED BY THE HVEEM STABILOMETER METHOD.

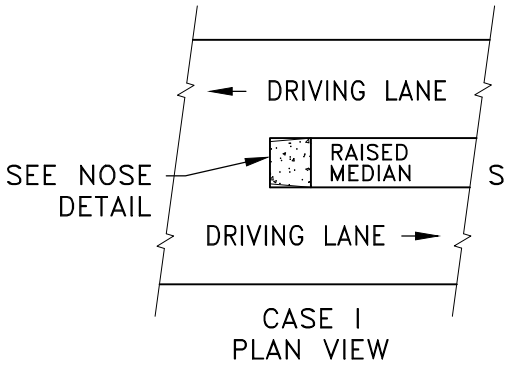
APPROVED

REVISED

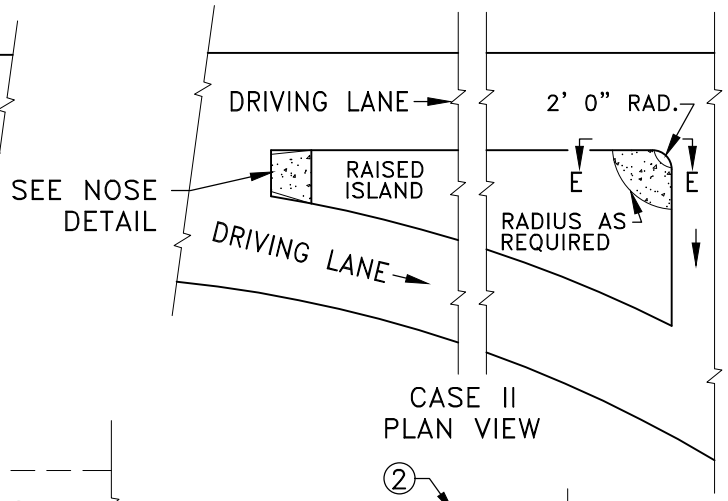
City of St. Francis

STANDARD PLATE NO. 707

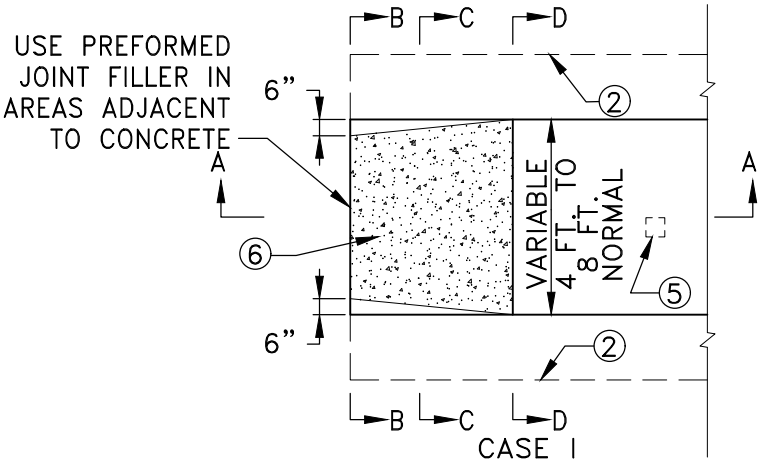
Dec 27, 2022 - 8:24pm
K:\cad_eng\Details\ST FRANCIS\Standard plates\700 CURB GUTTER\TRAIL-707.dwg



CASE I
PLAN VIEW

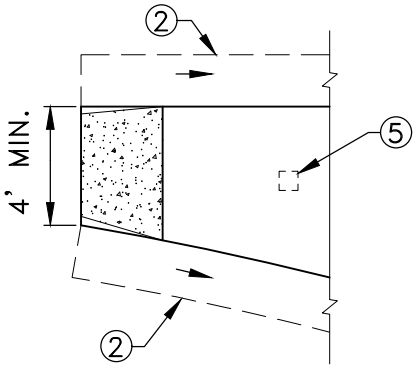


CASE II
PLAN VIEW

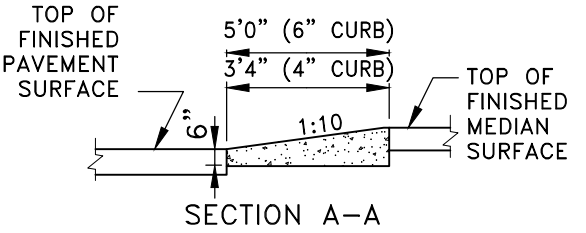


CASE I
NOSE DETAIL

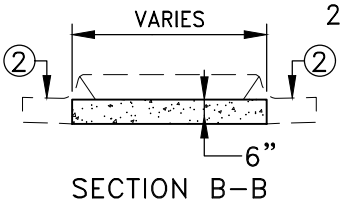
PLAN VIEW



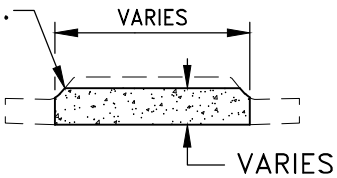
CASE I
NOSE DETAIL
SEE CASE I FOR DIMENSIONS



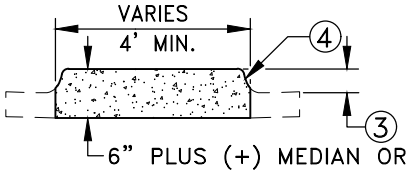
SECTION A–A



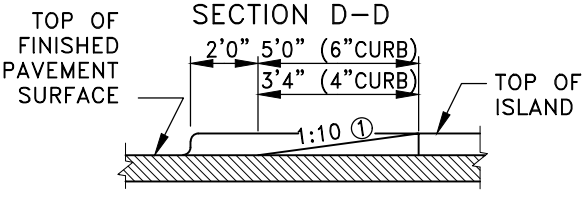
SECTION B–B



SECTION C–C



SECTION D–D



SECTION E–E

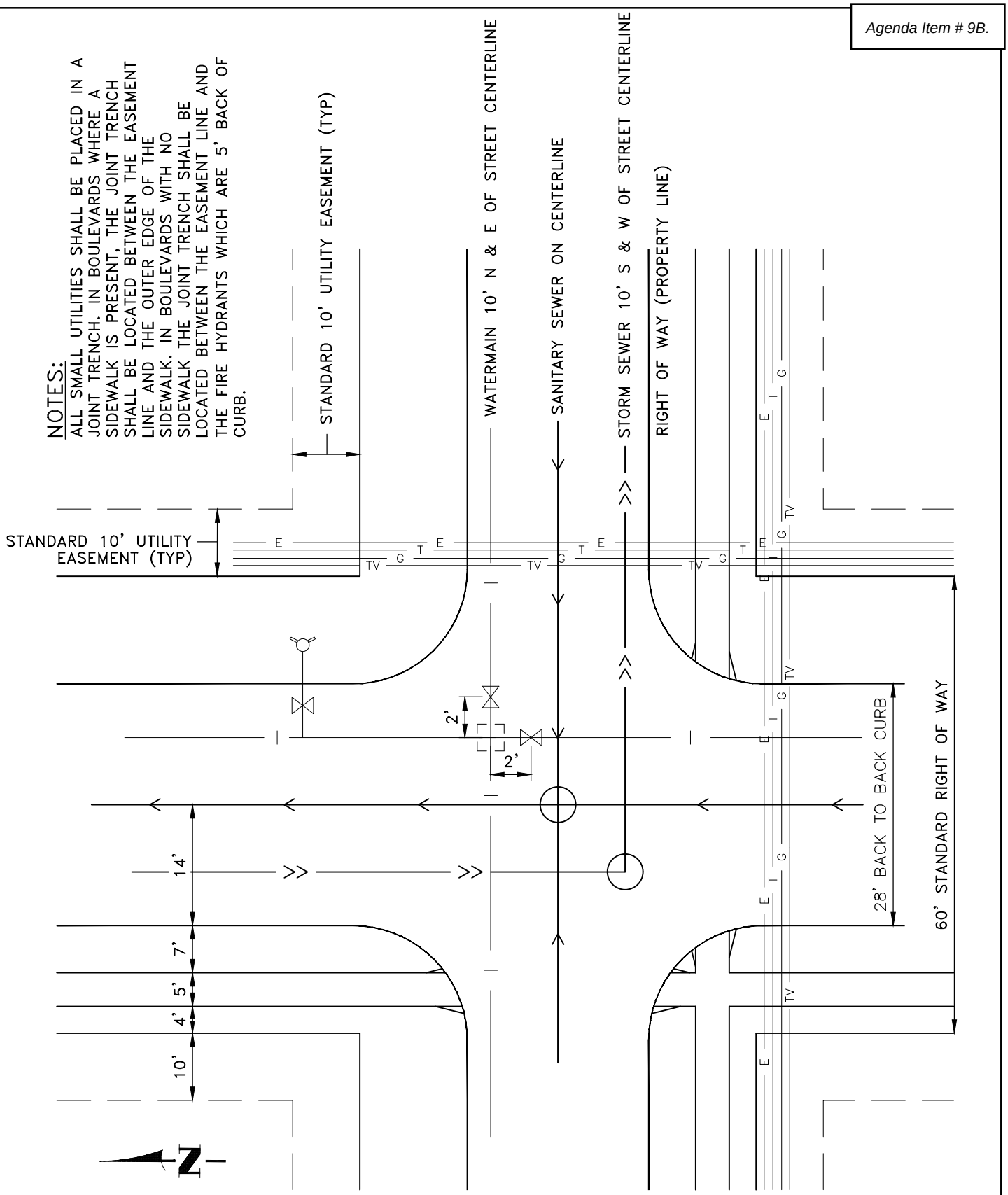
NOTES:

① TYPICAL SLOPE ALONG GUTTER LINE EACH DIRECTION
② GUTTER, IF REQUIRED
③ VARIABLE MEDIAN OR CURB HEIGHT
④ SHAPE SAME AS MEDIAN OR CURB
⑤ PROVIDE ONE 6" X 6" OPENING IN MEDIAN FOR SIGNING IF REQUIRED.
⑥ PAID FOR AS CONCRETE WALK, INCLUDES GUTTER IF REQUIRED

CONCRETE APPROACH NOSE DETAIL

NO SCALE

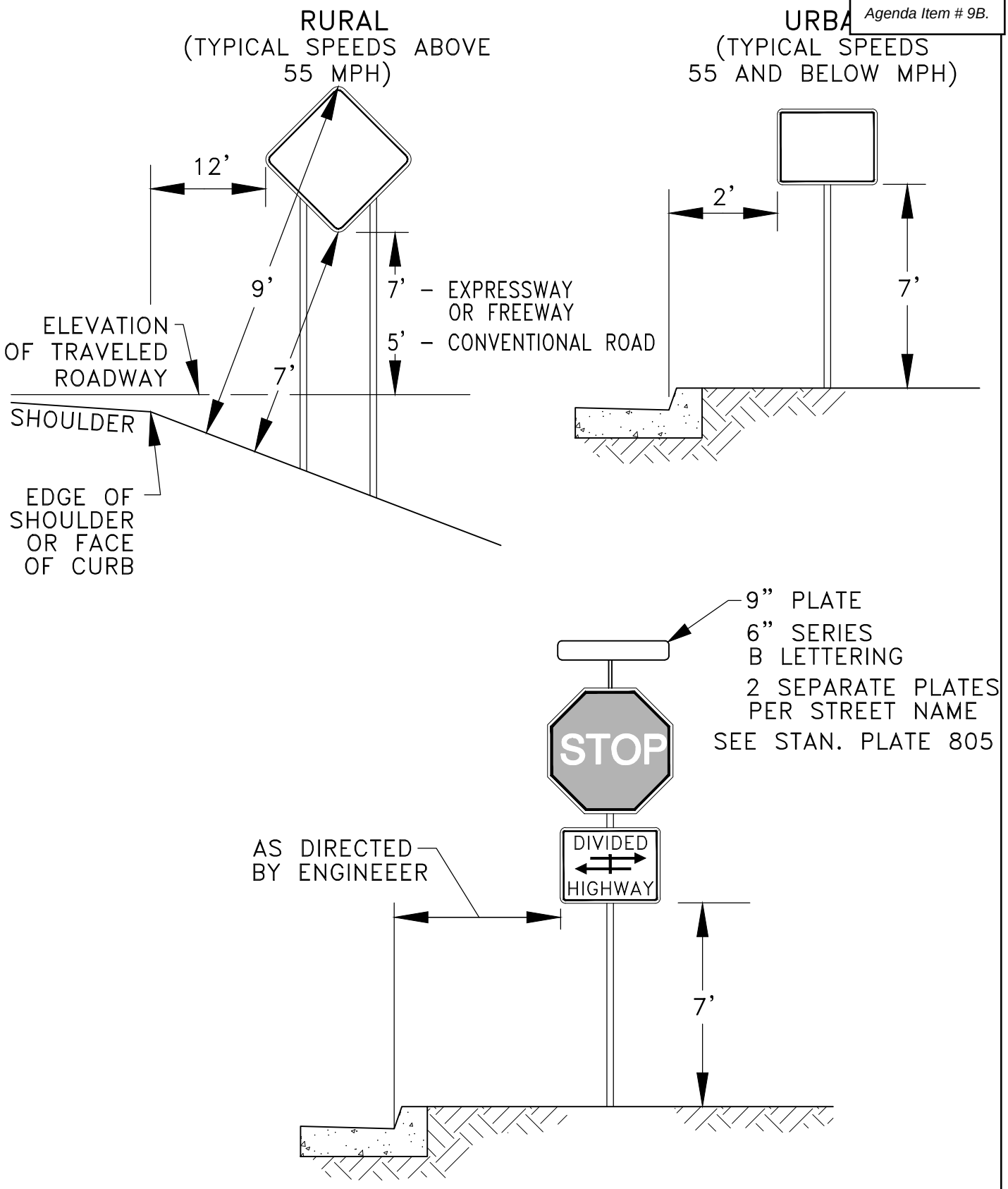
APPROVED	City of St. Francis	STANDARD PLATE NO. 708
REVISED		



LOCATION OF PUBLIC UTILITIES

NO SCALE

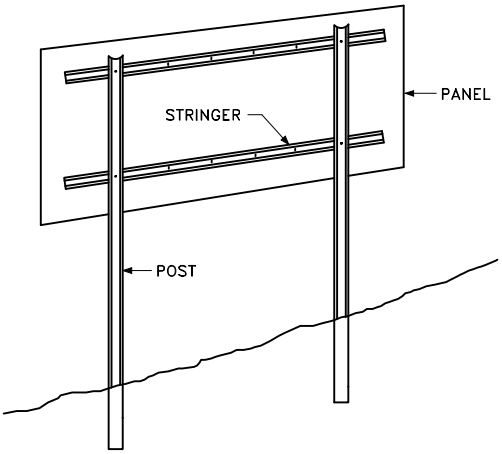
APPROVED	City of St. Francis	STANDARD PLATE NO. 900
REVISED		



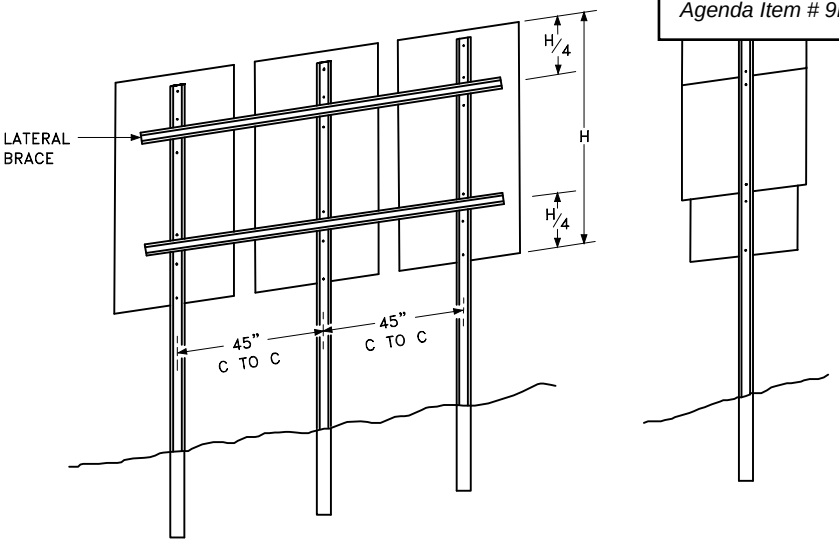
LATERAL OFFSET AND VERTICAL CLEARANCE REQUIREMENTS FOR TYPE C & D SIGNS

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 800
REVISED		

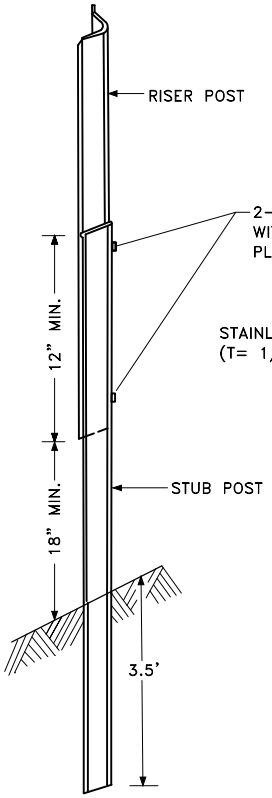


TYPICAL TYPE "D" INSTALLATION

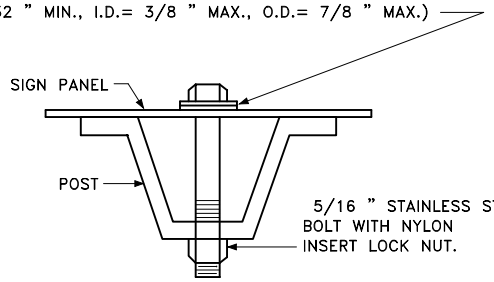


TYPICAL TYPE "C" INSTALLATIONS

TYPE "C" & "D" POST



"U POST"SPLICE



"U POST" MOUNTING
TYPE "C" SIGNS

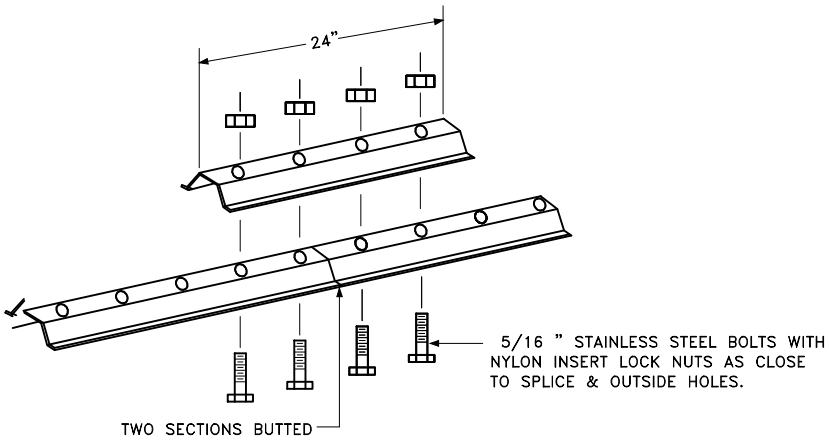
NOTES:

1. USE 3# STUB POSTS, RISER POSTS, STRINGERS, KNEE BRACES, LATERAL BRACES AND KNEE BRACE STUB POSTS. ALL SHALL CONFORM TO MN/DOT 3401.
2. FOR TYPE "D" SIGN POSTS LENGTHS AND SPACINGS, SEE SIGN DATA SHEET.
3. TYPE "D" SIGN PANELS SHALL BE BOLTED TO STRINGERS AT 24" MAXIMUM INTERVALS IN ACCORDANCE WITH TYPE "D" STRINGER AND PANEL–JOINT DETAIL (SEE STANDARD SIGNS MANUAL).
4. MOUNTING (PUNCHING CODE) FOR TYPE "C" SIGN PANELS SHALL BE AS INDICATED IN THE STANDARD SIGNS MANUAL UNLESS OTHERWISE SPECIFIED.
5. ALL RISER (VERTICAL) "U POSTS" SHALL BE SPLICED. DRIVEN STUB POSTS SHALL BE AT LEAST 7' LONG.
6. USE STAINLESS STEEL 5/16" BOLTS, WASHERS, AND NYLON INSERT LOCK NUTS AS SHOWN FOR ALL GROUND MOUNTED AND OVERHEAD MOUNTED SIGNS.
7. STAINLESS STEEL WASHER WITH SAME DIMENSIONS SHALL BE PROVIDED BETWEEN ALL NYLON WASHERS AND BOLT HEADS.
8. BRACING STUBS SHALL BE NO MORE THAN 4" ABOVE GROUND AND EMBEDDED AT LEAST 3 1/2 '.
9. A–FRAME BRACKET SHALL BE STEEL CONFORMING TO MN/DOT 3306 AND GALVANIZED IN ACCORDANCE WITH MN/DOT 3394.
10. COLLARS SHALL BE USED TO SHIM OVERLAYS AND DEMOUNTABLE LEGEND AWAY FROM PANEL WHERE INTERFERENCE WITH BOLT HEADS IS ENCOUNTERED. MN/DOT 3352.2A7.
11. 2 AND 3 POST TYPE "C" SIGNS SHALL BE REINFORCED WITH AT LEAST ONE LATERAL BRACE. INSTALLATIONS WHERE THE TOTAL PANEL HEIGHT IS 60" OR MORE SHALL HAVE TWO LATERAL BRACES LOCATED APPROXIMATELY AT THE QUARTER POINTS.
12. WHERE 2 OR MORE SINGLE POST SIGNS (TYPE "C") 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 AS SHOWN IN SKETCH.

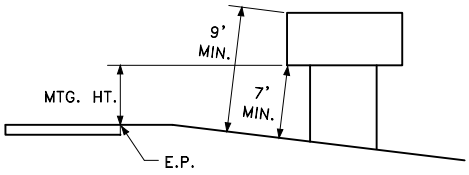
TYPE "C" AND "D" SIGN POST INSTALLATION DETAIL

NO SCALE

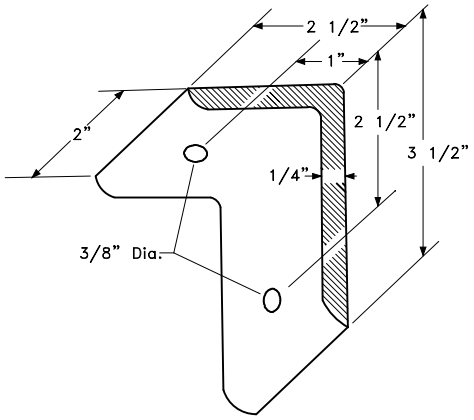
APPROVED	City of St. Francis	STANDARD PLATE NO. 801
REVISED		



LATERAL BRACE OR STRINGER SPLICE DETAIL (EXPLODED VIEW)

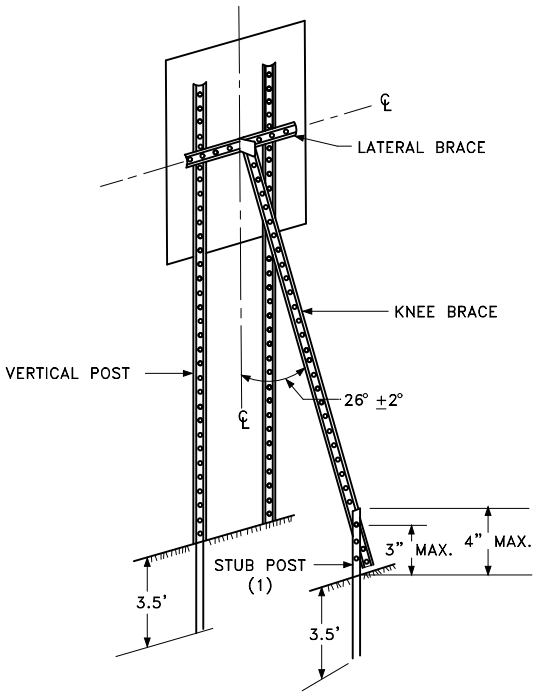


TYPICAL MOUNTING

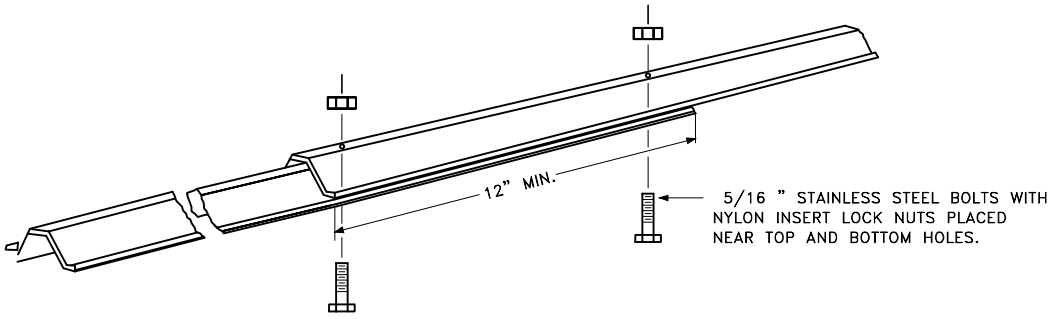


A–FRAME BRACKET

(STEEL MN/DOT 3306 GALVANIZED PER MN/DOT 3394)



TYPICAL "A–FRAME" INSTALLATION TYPE "C" SIGNS

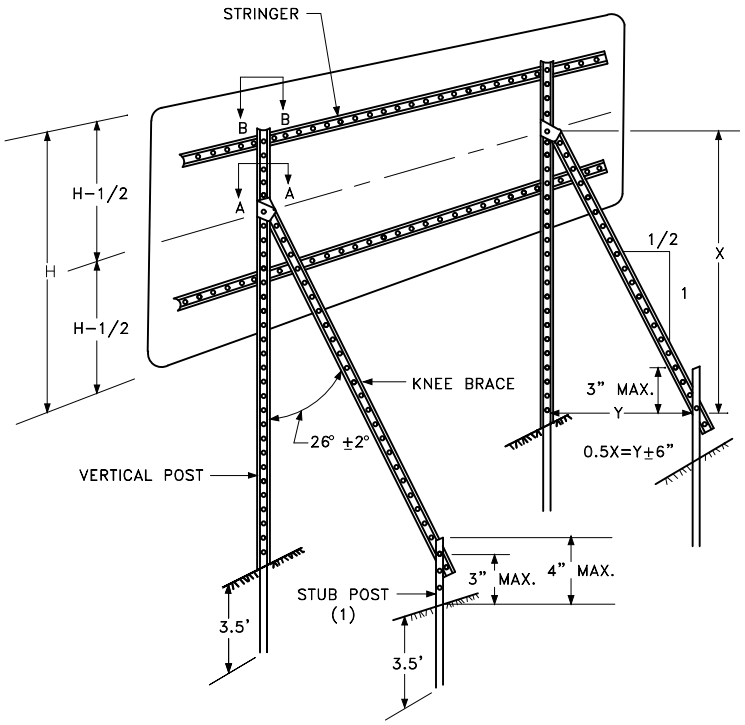


KNEE BRACE SPLICE

A–FRAME AND STRINGER BRACING DETAIL

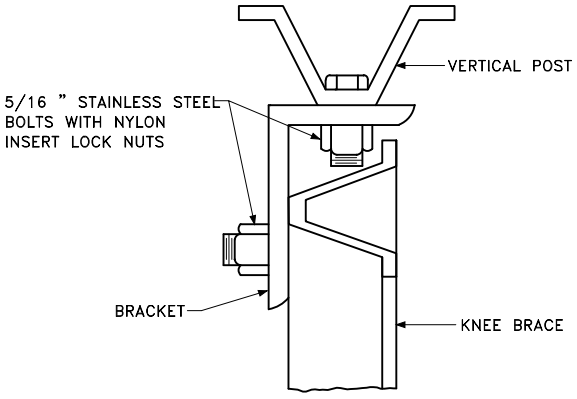
NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 802A
REVISED		

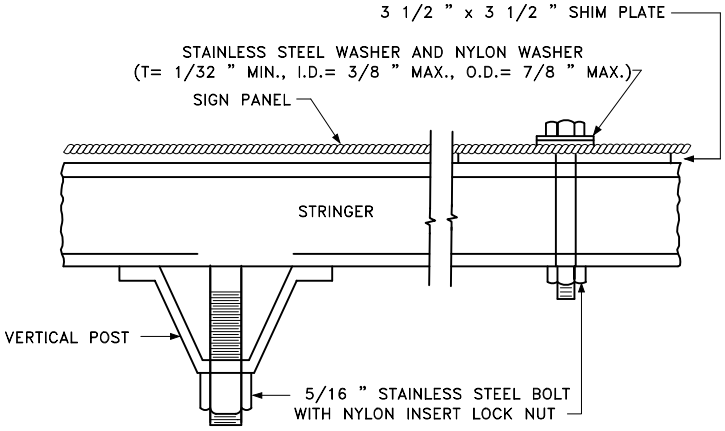


TYPICAL "A-FRAME" INSTALLATION
TYPE "D" SIGNS

(1) OFFSET STUB POST 1' TOWARD ROADWAY RELATIVE TO VERTICAL POST.



SECTION A-A

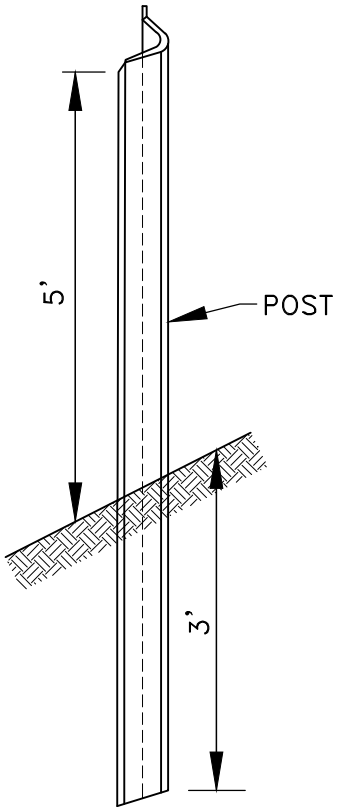


SECTION B-B

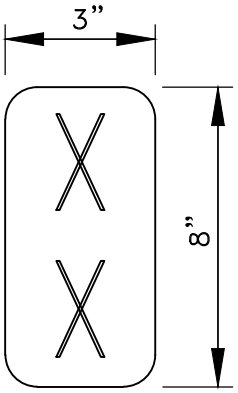
A-FRAME AND STRINGER BRACING DETAIL

NO SCALE

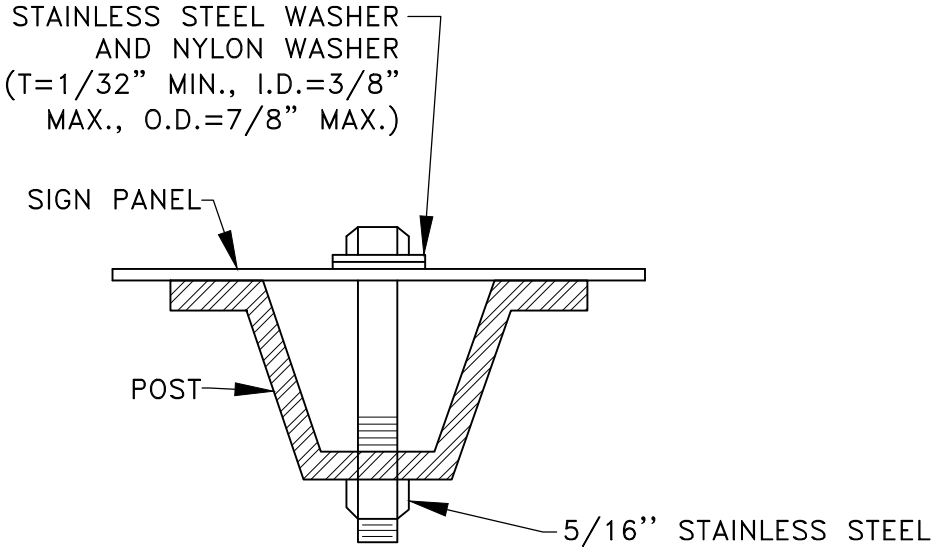
APPROVED REVISED	City of St. Francis	STANDARD PLATE NO. 802B



U POST



SIGN



"U POST" MOUNTING

NOTE:
POST SHALL CONFORM TO SPEC. 3401 AND HAVE A NOMINAL WEIGHT OF 2 LBS PER FT. AND SHALL BE PAINTED GREEN.

MARKING POSTS SHALL BE OFFSET 2' FROM VALVE BOXES TO ALLOW ROOM FOR OPERATING THE VALVE.

LEGEND
MH = SAN MANHOLE (WHITE ON GREEN)
GV = GATE VALVE (WHITE ON BLUE)
ST = STORM SEWER (WHITE ON BLACK)

MARKER POST INSTALLATION

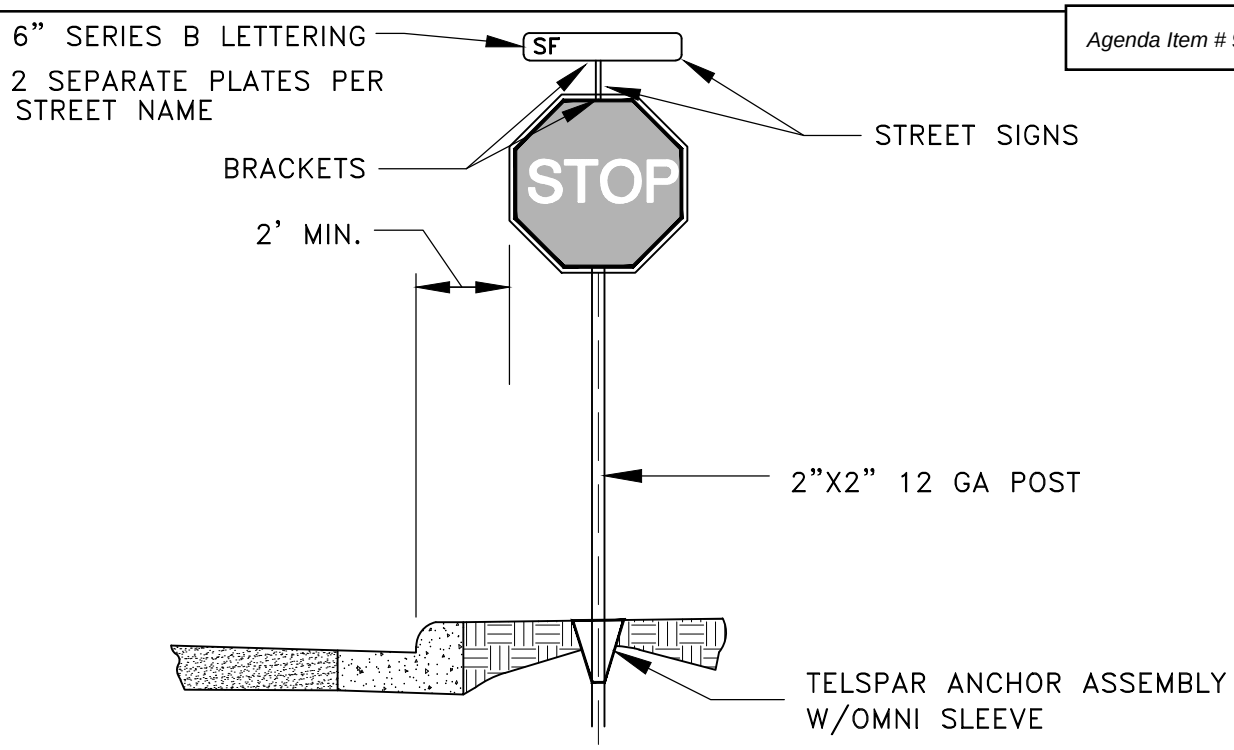
NO SCALE

APPROVED

REVISED

City of St. Francis

STANDARD PLATE NO. 803



FURNISH AND INSTALL NEW SIGNS

SIGN NUMBER	SIGN	COLOR	SIZE	COMMENTS
R1-1	STOP	WHITE ON RED	30"x 30"	
	SF STREET NAME	WHITE ON GREEN	9" PLATES	ALL INTERSECTIONS

NOTES:

POSTS SHALL BE CYLINDRICAL TUBE STEEL POSTS, THE POST SHALL BE 12' LONG, WITH 2-3/8" OD, 12 GAUGE COLD ROLLED GALVANIZE STEEL MEETING ASTM A-446 GRADE A.

SIGN BASE MATERIAL SHALL BE ALUMINUM. THICKNESS OF THE PLATE SHALL BE 0.08".

THE STREET NAME SIGNS SHALL BE NOTCHED AND MOUNTED IN AN E450 BRACKET AND PLACED ABOVE THE STOP SIGN.

STREET NAME SIGNS SHALL HAVE HIGH INTENSITY PRISMATIC RETROREFLECTIVE SHEETING (ASTM TYPE IV).

STOP SIGNS SHALL HAVE DIAMOND GRADE VIP RETROREFLECTIVE SHEETING (ASTM TYPE IX).

SIGNS AND INSTALLATION OF SIGNS SHALL BE IN ACCORDANCE WITH THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES"

STOP SIGN AND STREET NAME SIGN DETAIL

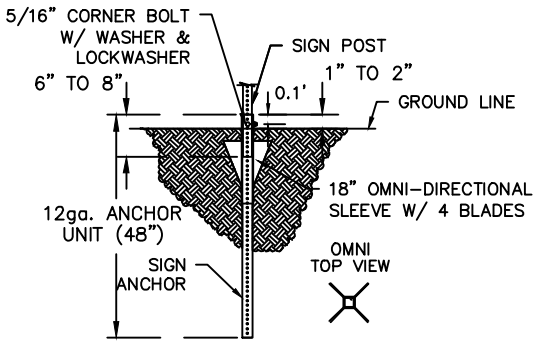
NO SCALE

APPROVED

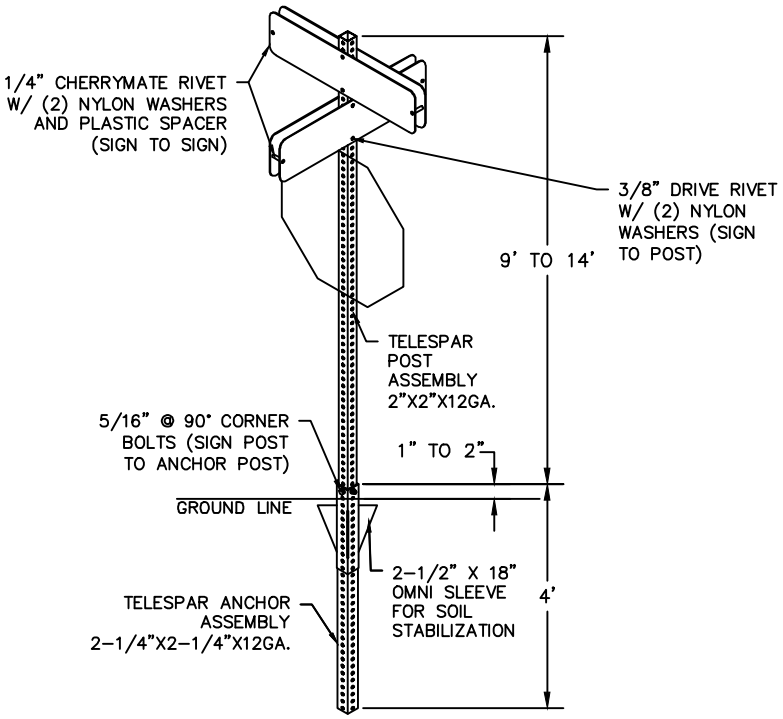
REVISED

City of St. Francis

STANDARD PLATE NO. 805



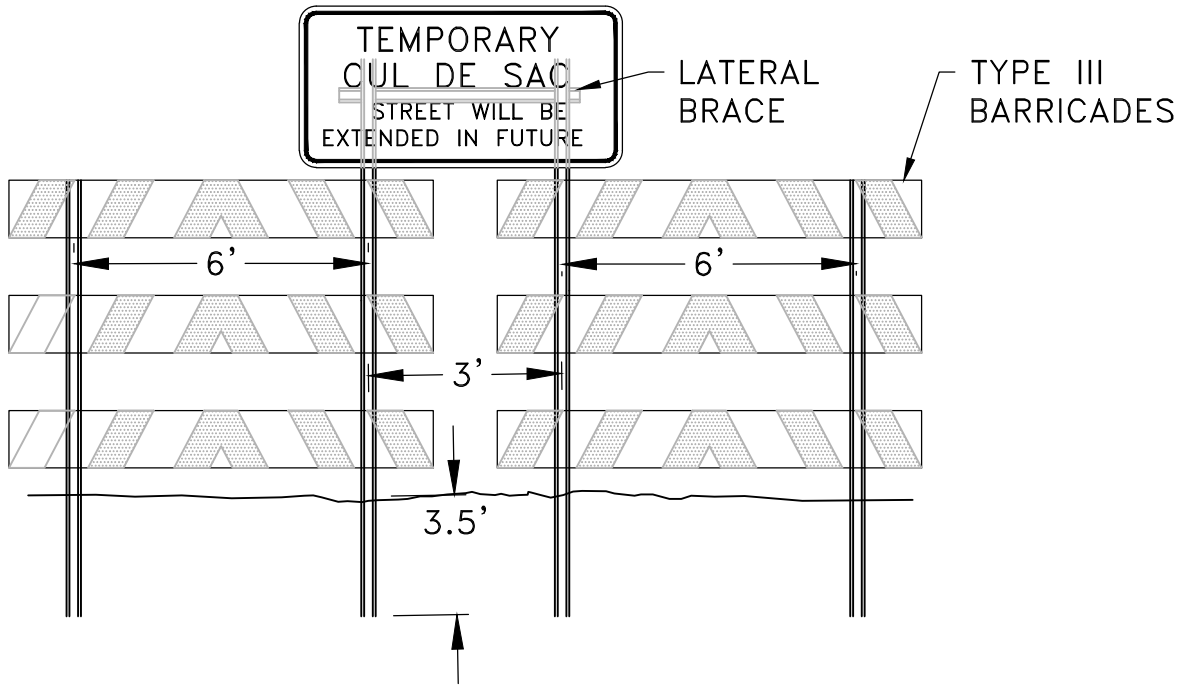
TELESPAR ANCHOR DETAIL
NOT TO SCALE



SIGN POST DETAIL
NOT TO SCALE

SIGN POST DETAIL
NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 806
REVISED		



NOTES:

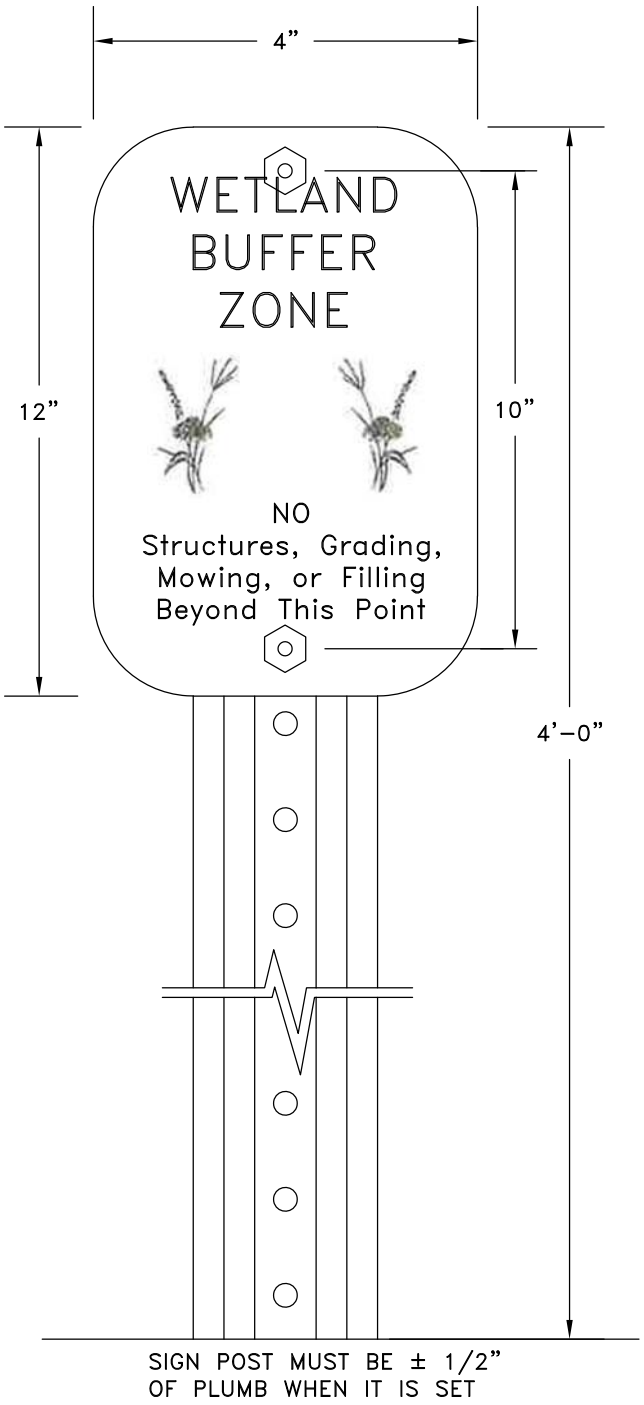
TYPE E WHITE LETTERING ON GREEN BACKGROUND

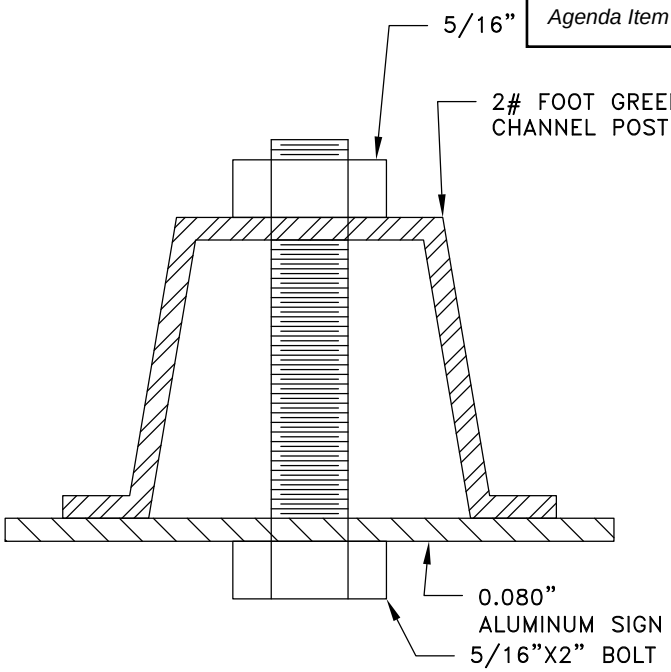
THIS SIGN SHALL BE PLACED AT THE END OF DEAD END STREET OR TEMPORARY CUL-DE-SAC.

TEMPORARY CUL-DE-SAC SIGN

NO SCALE

APPROVED REVISED	City of St. Francis	STANDARD PLATE NO. 807





TYPICAL SECTION

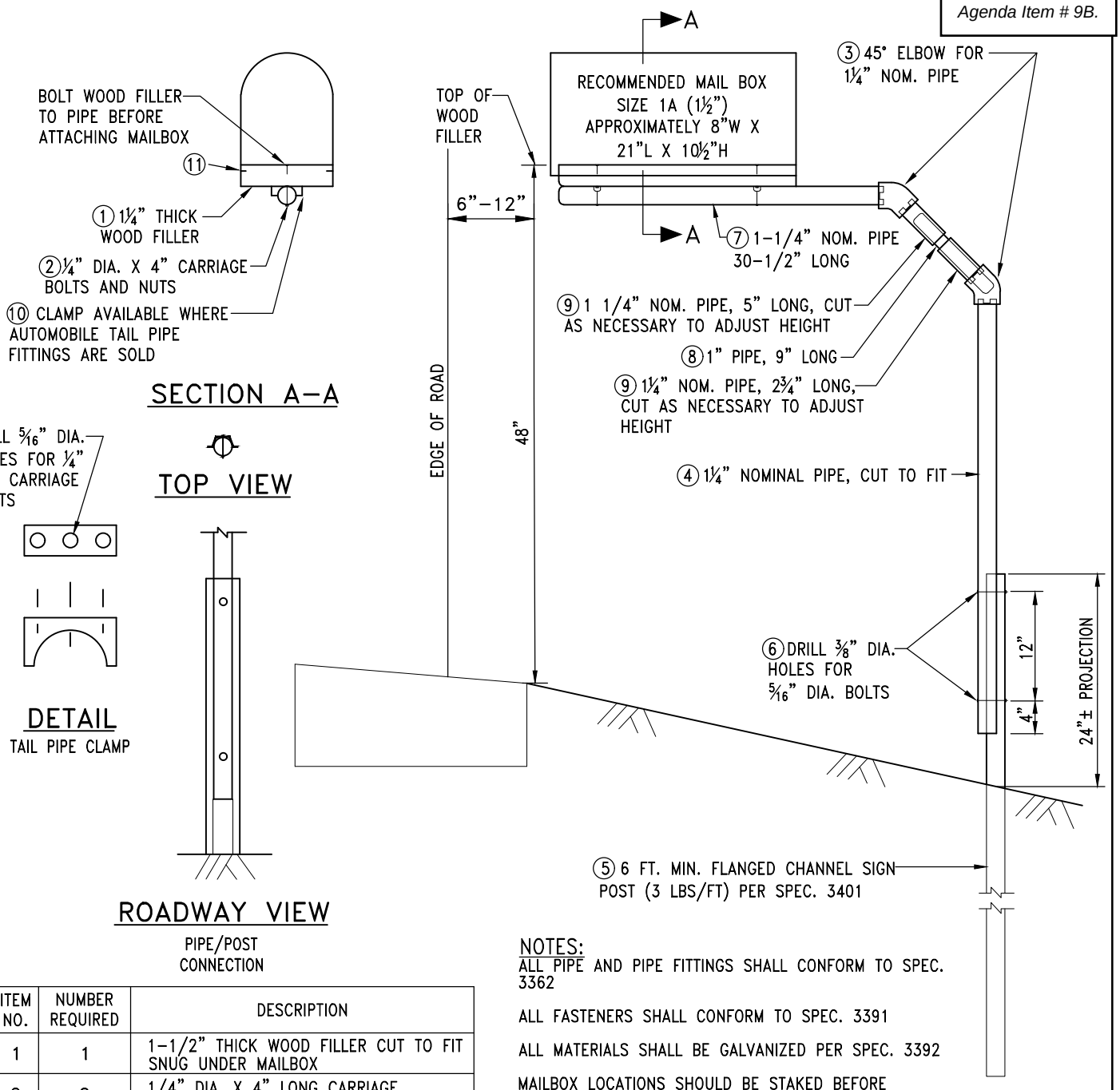
NOTES:

1. MATERIALS TO BE SUPPLIED BY THE DEVELOPER/CONTRACTOR INCLUDE THE FOLLOWING:
   - (2) 4"X12"X0.080" ALUMINUM WETLAND BUFFER SIGNS
   - (2) 5/16"X2" CAD PLATED BOLTS
   - (4) 5/16" CAD PLATED NUTS
   - (1) 7' (2#/FOOT) GREEN CHANNEL POST
2. EACH BUFFER MARKER SHALL HAVE ONE SIGN FACING PRIVATE PROPERTY.
3. SIGNS TO BE INSTALLED BY THE DEVELOPER PER THE DRAWING SHOWN AT THE LEFT.
4. AS A GENERAL RULE, WETLAND BUFFER SIGNS SHOULD BE PLACED AT EVERY OTHER LOT CORNER. HOWEVER, AT NO TIME SHOULD THERE BE MORE THAN 200' BETWEEN SIGNS IN UNFORESTED AREAS AND 150' IN FORESTED AREAS.
5. SIGN PANELS SHALL CONSIST OF GREEN BACKGROUND WITH WHITE LETTERING, TYPE IX, 3M DIAMOND GRADE VIP SETTINGS.

WETLAND BUFFER ZONE SIGN INSTALLATION

NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 808
REVISED		



ITEM NO.	NUMBER REQUIRED	DESCRIPTION
1	1	1-1/2" THICK WOOD FILLER CUT TO FIT SNUG UNDER MAILBOX
2	2	1/4" DIA. X 4" LONG CARRIAGE BOLTS AND NUTS
3	2	45° ELBOW FOR 1-1/4" NOMINAL PIPE
4	1	1-1/4" NOMINAL PIPE, CUT TO FIT
5	1	6 FT. MIN. SIGN POST (3LBS_/FT.)
6	2	5/16" DIA. BOLT, NUT & LOCKWASHER
7	1	1-1/4" NOMINAL PIPE, 30-1/2" LONG
8	1	1" PIPE, 9" LONG
9	1	1-1/4" NOMINAL PIPE, 5" LONG 1-1/4" NOMINAL PIPE, 2-3/4" LONG
10	2	1-1/2" TAIL PIPE CLAMP
11	9	NO. 10 X 1" SHEET METAL SCREWS

NOTES:

ALL PIPE AND PIPE FITTINGS SHALL CONFORM TO SPEC. 3362

ALL FASTENERS SHALL CONFORM TO SPEC. 3391

ALL MATERIALS SHALL BE GALVANIZED PER SPEC. 3392

MAILBOX LOCATIONS SHOULD BE STAKED BEFORE INSTALLATION FOR PROPER HEIGHT AND DISTANCE FROM THE ROADWAY. ONCE STAKED, THE INSTALLER MUST NOTIFY THE ENGINEER. THE ENGINEER WILL BE ALLOWED 48 HOURS TO REVIEW AND MODIFY THE STAKED LOCATIONS PRIOR TO FINAL INSTALLATION.

OTHER MN/DOT APPROVED MAILBOX SUPPORTS MAY ALSO BE USED.

A MINIMUM 30" CLEARANCE FROM THE GROUND MUST BE MAINTAINED FOR SNOW REMOVAL. CITY WILL NOT REPLACE DAMAGES CAUSED BY SNOW REMOVAL IF 30" OF CLEARANCE IS NOT PROVIDED.

MAILBOX SUPPORT

STEEL PIPE WITH FITTINGS AND STEEL FENCE POST
(SINGLE SUPPORT)
NO SCALE

APPROVED	City of St. Francis	STANDARD PLATE NO. 901
REVISED		

APPENDIX B

POLICY ON STORMWATER DRAINAGE SUBMITTAL REQUIREMENTS FOR DEVELOPERS

CITY OF ST. FRANCIS

TABLE OF CONTENTS

POLICY ON STORMWATER DRAINAGE SUBMITTAL REQUIREMENTS FOR DEVELOPERS

CITY OF ST. FRANCIS

1.0 Purpose and Intent

This policy is intended to provide Developer's Engineers with a standardized format for submittal of drainage plans and calculations to the City for review. A standardized format will provide the following:

- Reduce preparation time for submittals by providing direct guidelines for Developer's Engineers to follow

- Reduce review time required by the City's Engineer by insuring a complete and comprehensive drainage plan and calculations are submitted

- Insure that the City will receive the best possible protection of its resources, which could be adversely affected by inadequate stormwater management planning.

2.0 Incorporation by Reference

Protecting Water Quality in Urban Areas (Best Management Practices for Minnesota) prepared by the Minnesota Pollution Control Agency, Division of Water Quality, latest edition, shall be incorporated by reference into this policy.

The Minnesota Stormwater Manual as published online and available here: Minnesota Stormwater Manual (state.mn.us) shall be incorporated by reference.

Recommendations set forth in the above referenced manual shall be implemented by the Developer's Engineer. All recommendations set forth within the above referenced manual shall be termed "required" when applicable unless otherwise amended by this policy.

3.0 State and Federal Requirements

State and Federal Ordinances, Codes, Regulations, and Requirements shall be adhered to by the Developer.

4.0 Calculations and Considerations

A. General Hydrology

Hydrologic analysis of storm water runoff for the planning and design of flows in storm sewers, ditches, streams and channels to lakes, detention basins, and wetlands shall be made using generally accepted hydrograph methods.

Determination of total runoff volume should follow the USDA-SCS curve number method which incorporates land use and hydrologic soil groups. Specific step-by-step process can be found in the Soil Conservation Service (SCS) publication National Engineering Handbook: Chapter 4, SCS Hydrology (1972), and Hydrology Guide for Minnesota (1992). Peak runoff rates should be determined through the use of the SCS method incorporating "time of concentration" for both pre and post development conditions.

Then the storm water should be routed through the drainage area, that is, mathematically the peaks and volumes are followed as they move in a wave progressively downstream.

"Design Storms" or storm volumes for hydrologic analyses shall be based upon Hershfield, D.M., 1961, Rainfall Frequency Atlas of the United States for Durations of 30 minutes to 24 hours and Return Periods from 1 to 100 years, Technical Publication Number 40 (TP-40) along with the supplementary documents entitled: Oberts, G. L., 1984, Surface Water Management: Precipitation Frequency Analysis for the Twin Cities Metropolitan Area, Metropolitan Council, Publication Number 10-84-007 and Fredrick, R.H., 1977, Five-to-Six-Minute Precipitation Frequency for the Eastern united States, NOAA Technical Memorandum NWS HYDRO-35, Office of Hydrology, Silver Spring, Maryland.

The rational method may be used to determine peak runoff rates for primary systems. Construction of a hydrograph should be undertaken which characterizes the movement of surface water as a function of time and precipitation. Rainfall intensity shall be determined by using the IDF curves in the Mn/DOT Drainage Manual dated August 30, 2000.

Minimum time of concentration shall be 10 minutes for drainage areas with tributary areas, 7 minutes without tributary areas. When a portion of the drainage area is highly impervious, the drainage area shall be evaluated both with and without tributary area to verify that just the highly impervious area does not result in greater peak discharge than the area evaluated as a whole.

B. Rainfall

Usually the standard 24-hour SCS rainfall distribution will be used to calculate the peak discharge rates and levels. The following rainfall values shall be used in calculations for the City of St. Francis:

Event	Rainfall (inches)

1 year, 24 hour	2.44
2 year, 24 hour	2.85
10 year, 24 hour	4.22
25 year, 24 hour	5.21
50 year, 24 hour	6.04
100 year, 24 hour	6.94

C. Curve Numbers

Table 1 lists the minimum allowable Curve Numbers (CN) which shall be used for design. Hydrologic soil groups shall be determined based upon the Soil Survey for Anoka County, Minnesota as published by the United States Department of Agriculture Soil Conservation Service in Cooperation with Minnesota Agricultural Experiment Station.

D. Flood Protection

Consistent with state and federal regulations, the City of St. Francis requires that the level of flood protection along all ditches, detention basins, lakes, streams and wetlands be established based upon the 1 percent (100-year frequency) flood. Land use within floodplains shall be regulated in accordance with state floodplain zoning regulations.

The following freeboard values are required for the City of St. Francis:

• Landlocked Basins (no outlet)	3 feet	(Established high water, see 4.E.8.)
• Non-landlocked basins	1.5 feet	(100-year frequency)

E. On-Site Detention Basins

It is the policy of the City of St. Francis to require developments to control storm water quantity and quality through a management approach of detention basins. Detention basins, whether on-site or regional in nature, shall be designed to incorporate the following:

1. A permanent pool (“dead storage”) volume below the normal elevation which shall be greater than or equal to the runoff from a 2.5-inch rainstorm over the entire contributing drainage area assuming full development. This modified NURP criteria includes a 25 percent increase in basin storage to permit routine sediment accumulation over a 20-year design period, assuming the drainage area is protected with proper erosion and sedimentation control practices. The runoff volume shall consider the entire area contributing to the pond, however, the minimum permanent pool volume must be greater than or equal to the volume produced from

0.5 inches of runoff from all impervious area in the contributing watershed.

2. A permanent pool average depth (basin volume/basin area) which shall be greater than 4 feet with a maximum depth of less than 10 feet.

3. An emergency spillway (emergency outlet) adequate to control the one percent frequency/duration rainfall event (usually 100-year, 24-hour).

4. Basin side slopes above the normal water level should be no steeper than 4:1, and preferably flatter. A basin shelf with a minimum width of 10 feet and a slope of 10:1 starting at the normal water level.

5. To prevent short-circuiting, the distance between major inlets and the normal outlet shall be maximized. The ratio of maximum length to maximum width of the permanent pool should be at least 3:1.

6. To protect downstream channels and structures, the following flood control criteria are required for basin design:

    a. A flood pool ("live storage") volume above the normal elevation shall be adequate so that the peak discharge rates from the 2-year and 100-year frequency, critical duration storms (usually the 24-hour) are no greater than predevelopment basin watershed conditions.

    b. Storage volumes and discharge rates have been established for the 100-year event for certain portions of the city. In these areas the established storage volumes and discharge rates shall be used for post development design.

    c. Dead storage volume may not be utilized as live storage.

7. Skimming structures shall be utilized for each basin. The skimming structure shall be in accordance with the City Standard Plates. Skimming structures shall be shown on the plans.

8. Where discharge from the basin is not possible, the permanent basin must be sized for two 100 year events back-to-back. In this situation the free board above the established high water level shall be a minimum of three (3) feet. The high water level shall be established as follows:

    a. Assume the water surface is at the normal water surface elevation of the basin.

b. Above the assumed water surface elevation store the volume of runoff equal to two 100-year, 24-hour storm events over the entire drainage area to the landlocked basin.

c. The established high water level is the elevation the water would rise to from the above steps a and b.

9. Discharge must be made to a receiving stream, ditch, or another pond or an approved discharge route as shown in the Storm Water Management Plan.

F. Infiltration / Filtration Basins

1. All infiltration/filtration basins shall be designed and constructed in accordance with the Minnesota Pollution Control Agency's standards and City of St. Francis ordinance requirements.

2. Pre-treatment shall be provided prior to stormwater entering the infiltration/filtration basins.

a. For publicly maintained infiltration/filtration basins, the pre-treatment shall consist of a sediment forebay designed in accordance with the MN Stormwater manual recommendations.

3. On-site soil testing (i.e. soil borings and/or double ring infiltrometer tests) shall be preformed within each infiltration/filtration basin.

G. Storm Sewer

1. Storm sewer sizing shall be based upon the 10 year storm event. Inlet capacities and roadway spread at each inlet shall be determined. The maximum allowable roadway spread at any inlet shall be one-half of the traveled lane.

Storm sewer inlets shall be spaced to insure that not more than ½ of the traveled lane is inundated during the 10 year storm event. Manning's equation shall be utilized to determine the flow in the street at each catchbasin for verification of actual spread. A manning's n of 0.016 shall be utilized for asphalt pavement. Additionally, grate inlet capacities shall be verified at the maximum allowable depth of flow to verify that the proposed grates will pass the 10 year flows. When appropriate, by-pass flows shall be considered in calculations.

2. Storm sewer systems shall also meet the following requirements:

a. Maintain a minimum velocity of 3 fps for 10-year storm event.

b. Maintain a minimum cover of 2 feet from top of pipe to top of casting or flow line elevation.

c. Maintain a minimum of 3 feet of final cover over corrugated high density polyethylene (HDPE) pipe. See engineering guidelines to determine when HDPE is allowed.

d. Maintain a minimum of 1.5 feet of final cover over RCP in areas not used for vehicle traffic.

e. Storm sewers inverts, which outlet to detention basins, shall be placed at the normal water elevation of the basin. Storm sewers may be submerged a maximum of 1/2 the pipe diameter below the basin normal water elevation.

5.0 General Requirements - Grading, Drainage, and Erosion Control Plan

Grading, Drainage, and Erosion Control Plans shall be provided by the Developer in accordance with this manual. Several items critical to the review of the drainage system must be adequately depicted on the plan by the Developer's Engineer. The following key elements must be depicted on the plan:

A. Existing and proposed contours at a minimum of 2-foot intervals. A 1-foot contour interval or proposed spot elevations shall be used where conditions dictate. The determination of contour interval shall be made based upon clarity and readability of the plans.

B. Basin locations as depicted by the proposed contours. Normal level and 2 year, 10 year and 100 year flood water levels shall be depicted on the plan for each basin. Detention basins are required at each ditch and storm sewer outfall point from the proposed plat. Perimeter berm elevation and width shall be clearly labeled on plan sheets.

Permanent detention basins may be utilized as construction detention basins, provided they are cleaned after permanent erosion control measures are established. Design features of the detention ponds shall be as described in the BMP Manual.

C. Locations of silt fence, bale checks, erosion control blanket, rock construction entrances, storm drain inlet protection, outlet projection, rip rap, temporary seeding, permanent seeding, sod, mulch, or other erosion control features proposed to be implemented for the project.

D. Storm sewer facilities, when utilized, shall be adequately depicted on the drawings. As a minimum, the following must be shown on the plan:

1. Storm sewer pipe length, grade, type of material, and size between each catch basin and manhole.

2. Catchbasin and manhole structural data including size or diameter, and depth. A typical section depicting each different type of catchbasin or manhole used shall be shown on the drawing. Type of casting utilized shall be referenced for each catchbasin or manhole. Elevations for the top of inlet and each invert shall be referenced on the drawing.

3. A typical curb section for urban design streets shall be shown on the drawing.

4. If ditch sections are used, a typical section shall be shown on the drawing depicting bottom width and side slopes of the ditch.

5. Details of skimming structures utilized.

E. Individual lot grading shall insure positive drainage. Lot grading shall clearly depict a minimum design slope of 2%. Slopes of 1% to 2% may be allowed on a case by case basis with approval from the City Engineer. Under no circumstances will slopes less than 1% be allowed.

6.0 Storm Drainage System Submittal Requirements

A. The stormwater drainage report shall be comprised of the following sections to provide the City Engineer with adequate base information for which to review the report. The following data must be included in the report:

1. Title Page. The title page shall list the project name, project location, date prepared, and preparer's name, title, and company.

2. Signature Page. The report shall be signed by a licensed professional engineer.

3. Table of Contents. The table of contents must provide a description of the major categories of the report and also list each hydrograph and reservoir report presented in the report.

4. Stormwater Summary. The summary must provide descriptions of items critical to the review of the entire report. Assumptions and results of the calculations shall be included in the summary. As a minimum, the following items must be discussed in the summary:

   a. Pre–development site conditions (Existing)
      i. Total site area
      ii. Delineation of sub-drainage areas, as appropriate.
      iii. For each drainage area, or sub–drainage area, provide the following information:
         1. Area in acres

2. Curve number (with justification)
3. Time of Concentration (with justification)
4. Runoff rate and runoff volume

b. Post Development Site Conditions (Proposed)
   i. Total site area
   ii. Delineation of sub-drainage areas, as appropriate.
   iii. For each drainage area, or sub–drainage area, provide the following information:
      1. Area in acres
      2. Curve number (with justification)
      3. Time of Concentration (with justification)
      4. Runoff rate and runoff volume

b. Comparison of pre-development to post-development runoff rates and volumes.

c. Comparison of infiltration volume required to infiltration volume provided.

d. Discussion of temporary and permanent erosion control measures utilized.

e. A discussion of the storm sewer system, if applicable, to include a summary of flows to each catchbasin and the depth of water over each catchbasin during the ten year event.

5. Drainage maps depicting pre-development and post-development conditions. The maps may be 22"x34" plans, but shall also be provided on 11"x17" reductions. The plans shall delineate drainage area and sub-drainage area boundaries. All areas shall be labeled and referenced to those presented in the report.

6. Computer printouts of all hydrograph and reservoir files shall be included at the back of the report for reference.

7.0 Glossary

Critical Storm

Critical Storm means that rainfall event whose distribution and duration results in a runoff volume and rate establishing the appropriate level of protection.

Freeboard

Is the vertical difference between the lowest floor of proposed buildings and the critical 100-year storm event elevation or established high water level.

Level of Protection

The amount of secondary storm water runoff capacity required to avoid flood damage and provide for public safety.

Level of Service

The amount of primary storm water runoff capacity required to avoid unusual hardship or significant interference with normal public activities (transportation, sanitary, or utilities).

Normal Level

For basins, that water elevation maintained by a natural or man-made outlet.

NURP

Nationwide Urban Runoff Program (USEPA, 1983).

100-Year Storms

Rainstorms of varying duration (e.g. 2-, 6-, 24- or 48-hour) and intensities expected to recur on the average of once every one hundred years (1% frequency probability).

On-Site Detention

A method of temporarily storing storm water runoff at a development site in the form of wet basins.

Primary Capacity

The volume and/or rate of storm water runoff defined as that level of service provided by the primary system.

Primary System

The primary system conveys runoff from the more frequent events such as the 2 to 10-year events. In general, the system is composed of swales, ditches, gutters, and storm sewers.

Secondary Capacity

The volume and/or rate of storm water runoff in excess of the primary capacity and defined as that level of protection provided by the secondary system.

Secondary System

The system is composed of all the pathways that runoff takes when the capacity of the primary system is exceeded and in general is composed of streets, swales, ditches, stormsewers, detention basins, creeks, streams and rivers.

Storm Water Runoff

The flow on the surface of the ground, resulting from precipitation in the form of rainfall or snowmelt.

Table 1
City of St. Francis Minimum Runoff Curve Numbers

Cover Description	Curve numbers for hydrologic soil group			
Cover type and hydrologic condition	**A**	**B**	**C**	**D**
Fully developed urban areas (vegetation established)				
Open space (lawns, parks, golf courses, cemeteries, etc.				
Grass Cover > 75%	39	61	74	80
Grass Cover < 75%	49	65	77	82
Impervious areas:				
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)	98	98	98	98
Streets and roads:				
Paved; curbs and storm sewers (excluding right-of-way)	98	98	98	98
Paved; open ditches (including right-of-way)	83	89	92	93
Gravel (including right-of-way)	76	85	89	91
Dirt (including right-of-way)	72	82	87	89
Water Surface:	100	100	100	100
Urban Districts:				
Commercial and business	NA[1]	92	94	95
Industrial	NA[1]	88	91	93
Residential districts by average lot size:				
1/8 acre of less (town houses)	NA[1]	85	90	92
1/4 acre	NA[1]	75	83	87
1/3 acre	NA[1]	72	81	86
1/2 acre	NA[1]	70	80	85
1 acre	59	68	79	84
2 acres and greater	55	65	77	82
Developing Urban Areas				
Newly graded areas (pervious areas only, no vegetation)	77	86	91	94
Undeveloped areas				
Agricultural land (all current uses)	55	65	77	82
Pasture, grassland, or range – continuous forage for grazing	49	65	77	82
Meadow – continuous grass, protected from grazing and generally mowed for hay	30	58	71	78
Brush – brush-weed-grass mixture with brush the major element	35	56	70	77
Woods – grass combination (orchard or tree farm)	43	65	76	82
Woods	36	60	73	79

[1]Use of Type A soil is not allowed for this hydrologic condition

CITY COUNCIL AGENDA REPORT

TO: St. Francis City Council

FROM: Beth Richmond, Planner

SUBJECT: Code Revisions – Parking, Roadways, and Stormwater – 1st Reading

DATE: May 1, 2023

OVERVIEW:

Staff has been working to update the City's Private Development Standards and to complete an audit with MPCA on the City's stormwater practices. In revising these specifications, Staff has made a number of changes which necessitate related revisions to the City's Zoning and Subdivision Codes. The proposed Code amendments relate to rural parking lot design, private streets, street design, and stormwater infiltration. Each requested revision is explained in more detail in the attached Planning Commission packet.

PLANNING COMMISSION RECOMMENDATION

The Planning Commission reviewed the proposed Zoning Code amendments at their meeting on April 19, 2023 and held a public hearing. No public comment was received.

Commissioners were informed of the proposed amendments to the Subdivision Code, but did not take action as Subdivision Code amendments do not require Planning Commission review or recommendation. During discussion, Commissioners clarified that the amendment to increase cul-de-sac length will help to reduce requests for flexibility from this code provision in the future.

Following discussion, Commissioners unanimously recommended approval of the Zoning Code amendments as presented by Staff.

ACTION TO BE CONSIDERED:

Given the Planning Commission's recommendation for approval, draft approval documents have been prepared for your consideration.

Suggested Motions:

1. Move to approve the 1st reading of Ordinance 313 approving amendments to Division 7 Development Standards of the Zoning Code as presented by Staff.
2. Move to approve the 1st reading of Ordinance 314 approving amendments to Division 8 Stormwater of the Zoning Code as presented by Staff.
3. Move to approve the 1st reading of Ordinance 315 approving amendments to Section 11-43-02 Streets of the Subdivision Code as presented by Staff.

ATTACHMENTS

- Draft Ordinances – 1st Readings
  - Ordinance 313– Zoning Development Standards
  - Ordinance 314 – Zoning Stormwater
  - Ordinance 315– Subdivision Streets
- Planning Commission Memo for April 19, 2023

ORDINANCE NO. 313

CITY OF ST. FRANCIS
ANOKA COUNTY

AN ORDINANCE MODIFYING DIVISION 7 DEVELOPMENT STANDARDS IN THE ZONING CODE – 1ST READING

THE CITY COUNCIL OF THE CITY OF ST. FRANCIS, ANOKA COUNTY, MINNESOTA, ORDAINS:

Changes in the following sections are denoted with an underline for new text or a strikethrough for ~~deleted language~~.

Section 1. Section 10-72-04 Performance Standards of the St. Francis Code of Ordinances is hereby amended to read as follows:

10-72-04. - Performance standards.

All off-street parking facilities shall comply with the following dimensional standards:

Section 2. Section 10-72-08 Design and Maintenance of Off-Street Parking of the St. Francis Code of Ordinances is hereby amended to read as follows:

10-72-08. – Design and maintenance of off-street parking.

H. Location. All accessory off-street parking facilities required herein shall be located as follows:

1. Spaces accessory to one- and two-unit dwellings shall be on the same lot as the principal use served unless guest parking is provided elsewhere.
2. There shall be no off-street parking space within five (5) feet of any property line except as provided below:

a. B-1, B-2, and BPK Districts. Zero lot line parking area setbacks shall be allowed within the B-1, B-2, and BPK Districts subject to the following conditions:

i. A five (5) foot parking area setback shall be maintained along street rights-of-way (not including alleys). Such setback area shall be sodded or landscaped with approved ground cover, shrubs or trees.

ii. The parking area shall not abut a residential zoning district or use.

iii. If applicable, a maintenance and joint use agreement shall be executed and recorded against the titles of the affected properties.

iv. Encroachment into established utility easements shall be allowed only via permit and an encroachment agreement with the City.

b. Shared Access and Joint Parking. Zero lot line setbacks shall be allowed in cases of shared access and joint parking subject to the following conditions:

i. The access and/or parking area layout is approved by the City Engineer.

ii. A maintenance and joint use agreement shall be executed and recorded against the titles of the affected properties.

iii. If applicable, the conditions of Section 10-72-05 of this Ordinance related to joint parking are satisfied.

3. When parking stalls abut a sidewalk, the minimum sidewalk width shall be six (6) feet.

4. Parking stalls shall not be located where they obstruct doorways, driveways, or pedestrian walkways.

5. All disability accessible stalls shall be located in close proximity to entrance areas and shall not be hindered by inappropriately located curb cuts, catch basins, etc.

I. Use of Parking Area. Required off-street parking spaces in all districts shall not be used for open storage, or sale of goods, or for the storage of vehicles which are inoperable, for lease, rent or sale or the stockpiling of snow.

J. Rural Parking Lots. Parking lots located outside of the Urban Service Area which serve non-residential uses may allow for different surfacing and design requirements than those found in this Section with approval of an Interim Use Permit. Considerations for the IUP may include but are not limited to: dust management, stormwater runoff, proximity of site to sensitive environmental areas and residential districts, size of parking lot, and anticipated traffic.

K. Parking and Storage of Recreational Vehicles. The parking and storage of recreational vehicles shall be regulated in accordance with Section 7-4-5 of the City Code and Section 10-68-18 of this Ordinance.

Section 3. This Ordinance shall take effect and be enforced from and after its passage and publication according to law.

Approved and adopted by the City Council of the City of St. Francis this 1st day of May, 2023.

SEAL

CITY OF ST. FRANCIS

By: _____
Steven D. Feldman, Mayor

_____
Attest: Jennifer Wida, City Clerk

Published in the Anoka County Union Herald _____.

DRAFTED BY:
Hoisington Koegler Group, Inc.
800 Washington Ave. N., Suite 103
Minneapolis, MN 55401

CITY OF ST. FRANCIS
ST. FRANCIS, MN
ANOKA COUNTY

ORDINANCE 314

AN ORDINANCE AMENDING CHAPTER 10, DIVISION 8, SECTION 10-82-04. STORMWATER POLLUTION PREVENTION FOR LARGE SITES – 1ST READING

THE CITY COUNCIL OF THE CITY OF ST. FRANCIS, ANOKA COUNTY, MINNESOTA, ORDAINS:

Changes in the following sections are denoted with and underline for new text or ~~strikethrough~~ for ~~deleted language~~.

Section 1. Code Amended. That Chapter 10, Section 10-82-04 shall hereby be amended to read as follows:

~~3. Infiltration prohibited. Infiltration shall be prohibited if one or more of the following circumstances are present:~~

~~a. The site is required to obtain a NPDES/SDS Industrial Stormwater Permit and the permit prohibits infiltration;~~

~~b. Where vehicle fueling and maintenance occur;~~

~~c. Less than three (3) feet of separation is present from the bottom of the infiltration practice to the elevation of the seasonally saturated soils or top of bedrock;~~

~~d. Where high levels of contaminants in the soil or groundwater will be mobilized by infiltrating stormwater;~~

~~e. e. Where the soil infiltration rates are more than 8.3 inches per hour unless soils are amended to slow the infiltration rate below 8.3 inches per hour;~~

~~f. f. In soils of predominately Hydrologic Soil Group D (clay) soils.~~

~~4. Infiltration restricted. Higher engineering review shall be required when the infiltration device will be constructed in areas:~~

~~a. Within a Drinking Water Supply Management Area (DWSMA) as defined in Minn R. 4720.5100, subp. 13;~~

~~b. Other areas as determined by the City Engineer.~~

3. Infiltration systems must be prohibited when the system would be constructed in areas:

a. that receive discharges from vehicle fueling and maintenance areas, regardless of the amount of new and fully reconstructed impervious surface;

b. where high levels of contaminants in soil or groundwater may be mobilized by the infiltrating stormwater. To make this determination, the owners and/or operators of construction activity must complete the MPCA's site screening assessment checklist, which is available in the Minnesota Stormwater Manual, or conduct their own assessment. The assessment must be retained with the site plans;

c. where soil infiltration rates are more than 8.3 inches per hour unless soils are amended to slow the infiltration rate below 8.3 inches per hour;

d. with less than three (3) feet of separation distance from the bottom of the infiltration system to the elevation of the seasonally saturated soils or the top of bedrock;

e. of predominately Hydrologic Soil Group D (clay) soils;

f. in an Emergency Response Area (ERA) within a Drinking Water Supply Management Area (DWSMA) as defined in Minn. R. 4720.5100, Subp. 13, classified as high or very high vulnerability as defined by the Minnesota Department of Health;

g. in an ERA within a DWSMA classified as moderate vulnerability unless the permittee performs or approves a higher level of engineering review sufficient to provide a functioning treatment system and to prevent adverse impacts to groundwater;

h. outside of an ERA within a DWSMA classified as high or very high vulnerability unless the permittee performs or approves a higher level of engineering review sufficient to provide a functioning treatment system and to prevent adverse impacts to groundwater;

i. within 1,000 feet up-gradient or 100 feet down gradient of active karst features; or

j. that receive stormwater runoff from these types of entities regulated under NPDES for industrial stormwater: automobile salvage yards; scrap recycling and waste recycling facilities; hazardous waste treatment, storage, or disposal facilities; or air transportation facilities that conduct deicing activities.

~~5.~~4. For projects where site constraints limit the ability to provide the required control practices within the project boundary; the project shall provide for downstream improvements for that portion that cannot be treated within the project boundaries. Such projects may include:

a. Linear projects where reasonable effort has been made to obtain sufficient right-of-way to install required control practices and said efforts have been unsuccessful;

b. Sites where infiltration is prohibited;

c. Other locations as determined by the City.

~~6.~~5. Sequencing. Projects that cannot fully meet the stormwater requirements of this Part must demonstrate the site constraints through a sequencing analysis subject to review and approval of the City Engineer. Prior to consideration of off-site mitigation, the applicant must demonstrate on-site treatment to the maximum extent practicable given the site constraints.

~~7.~~6. Projects that have made reasonable effort but have been unable to fully meet volume, total suspended solids and total phosphorus requirements within the project limits may, upon authorization by the City, utilize the following methods to meet that portion not met onsite:

a. Provide treatment that yields the same benefits in an offsite location to the same receiving water that receives runoff from the project site. If this is not feasible then;

b. Provide treatment that yields the same benefits in an offsite location within the same Minnesota Department of Natural Resources catchment area as the project site. If this is not feasible then;

c. Provide treatment that yields the same benefits in an offsite location within an adjacent Minnesota Department of Natural Resources catchment area up-stream of the project site. If this is not feasible then;

d. Provide treatment that yields the same benefits at a site approved by the City.

e. Offsite mitigation authorized by the City shall be completed within 24-months of the beginning of construction on the permitted site.

~~8.~~7. Applicants shall provide documentation showing compliance with the rate and quality requirements of this Part. Acceptable documentation shall be:

a. For Rate and Volume. Calculations shall be by a methodology listed in the Minnesota Pollution Control Agency's publication, "The Minnesota Stormwater Manual" or other method approved by the City.

b. For total suspended solids and total phosphorus: Calculations shall be done using the Minimal Impact Design Standards (MIDS) Calculator available on the MPCA website, P8 or other method approved by the City.

c. Prepared and certified by a Professional Engineer.

Section 2. Effective Date. This Ordinance shall take effect thirty days after publication.

PASSED AND ADOPTED BY THE CITY COUNCIL OF THE CITY OF ST. FRANCIS THIS 1ST DAY OF MAY, 2023.

APPROVED:

By: _____
Steven D. Feldman, Mayor

ATTEST:

_____
Jennifer Wida, City Clerk

(seal)

ORDINANCE NO. 315

CITY OF ST. FRANCIS
ANOKA COUNTY

AN ORDINANCE MODIFYING SECTION 11-43-02 STREETS IN THE SUBDIVISION CODE – 1ST READING

THE CITY COUNCIL OF THE CITY OF ST. FRANCIS, ANOKA COUNTY, MINNESOTA, ORDAINS:

Changes in the following sections are denoted with an underline for new text or a strikethrough for ~~deleted language~~.

Section 1. Section 11-43-02 Streets of the St. Francis Code of Ordinances is hereby amended to read as follows:

11-43-02. – Streets.

A. *Street Connections.*

1. Except for cul-de-sacs, streets shall connect with streets already dedicated in adjoining subdivisions, or provide for future connections to adjoining unsubdivided tracts, or shall be a reasonable projection of streets in the nearest subdivided tracts. The arrangement of thoroughfares and collector streets shall be considered in their relation to the reasonable circulation of traffic, topographic conditions, runoff of stormwater, public convenience and safety, and in their appropriate relation to the proposed uses of the area to be served.
2. The arrangement of streets in a new subdivision shall make provisions for the proper projection of streets into adjoining areas by carrying the new streets to the boundaries of the new subdivision at appropriate locations approved by the City Engineer.
3. Temporary Cul-de-Sacs. In those instances where a street is terminated pending future extension in conjunction with future subdivision and more than 150 feet between the dead-end and the nearest intersection, a temporary turn around facility shall be provided at the closed end, in conformance with cul-de-sac and applicable Fire Code requirements. The temporary cul-de-sac shall be placed inside a temporary roadway easement if it is located outside street right-of-way. At such time as such a street is extended, the acreage covered by the turn-around outside the boundaries of the extended street shall revert in ownership to the property owner fronting on the temporary turn-around. The temporary cul-de-sac shall be surfaced in bituminous and signed as a future through street to alert the public that the road is planned to continue into the next development upon future subdivision. Financial security shall be required for removal or restoration as determined by the City Engineer.

4. Platting of Small Tracts. In the platting of small tracts of land fronting on a limited access highway where there is no convenient access to existing entrances and where access from such plat would be closer than one-half (½) mile from an existing access point, a temporary entrance permit for a period not exceeding two (2) years may be granted. Provision shall be made in such plats for the connection of roads to neighboring land. As the neighboring land is platted and developed, and access becomes possible at a preferred location, such temporary entrance permits shall become void at the discretion of the City.

5. Access to Arterial and Collector Streets. Access of local streets onto arterial and collector streets shall be in accordance with the City's Private Development Standards.

B. *Design Requirements.*

1. *Widths.* Right-of-way widths and pavement widths shall be as follows:

Classification	Right-of-Way Width	Pavement Width
Major Collector	100 feet min.	Determined by the City Engineer
Minor Collector	80 feet min.	40 feet
Local Street - Urban	60 feet min.	32 feet
Local Street – Rural	66 feet min.	24 feet
Service Road	50 feet min.	28 feet
Cul-de-sac Street	60 feet min.	32 feet
Cul-de-sac Radius	60 feet min.	50 feet
Private Street – Cul-de-sac	50 feet min.	24 feet
Private Street – Thru	50 feet min.	28 feet

2. *Street Intersections.* Insofar as practical, streets shall intersect at right angles, and in no case shall the angle formed by the intersection of two (2) streets be less than 60 degrees. Intersections having more than four corners shall be prohibited. Adequate land for future intersections and interchange construction needs shall be dedicated.

3. *Deflections.* When connecting street lines deflect from each other, or when a single street deflects at one point by more than 10 degrees, they shall be connected by a horizontal curve. For collector and higher-order streets, the curve radius shall be based on standard engineering methods suitable for the design speed. A minimum curve radius of 300 feet shall be provided for all local through streets (with a design speed of 35 mph or less) unless precluded by natural site features such as wetlands, rivers, lakes, bluffs, etc. If precluded by natural site features, the City may allow a horizontal curve with a 100 foot radius on local streets provided that appropriate signage is erected.

4. *Street Intersection Offsets.* Street intersection jogs shall have a centerline off-set of 150 feet or more when applied to minor streets and service streets. In all other cases they shall be avoided.

5. *Tangents.* A tangent of at least 100 feet shall be introduced between points of reverse curves of arterial and collector streets.

6. *Cul-de-Sacs.* Cul-de-sacs shall be designed to cover as short a distance as possible. The maximum length of a street terminating in a cul-de sac shall be 750 feet for developments in the Urban Service Area and 1,250 feet for developments in the Rural Service Area. The maximum length of a dead end street that is intended to serve adjacent unsubdivided property that is suitable for development shall be 1,000 feet for developments in the Urban Service Area and 1,500 feet for developments in the Rural Service Area. The distance of the street shall be measured along the centerline of the street from the intersection of origin to the end of the right-of-way. A cul-de-sac meeting City Code requirements shall be required at the end of all dead end streets. Dead end streets in the Rural Service Area may be increased in length if the development complies with the following performance standards:
   a. The maximum density on the dead end street shall not exceed the maximum allowed by State Fire Code.
   b. All streets within the development shall be bituminous.
   c. A future street plan, noting the continuation of the dead end street to exiting street(s), shall be provided. All streets noted in the future street plan must be reasonable in their design and economically feasible. The distance from the end of the street to the nearest existing street shall also be less than 1,500 feet.
   d. Secondary access and/or internal looping of the proposed streets shall be provided if site conditions permit.
7. *Centerline Gradients.* All centerline gradients shall be at least five-tenths (0.5) percent and shall not exceed eight (8) percent unless approved by the City Engineer.
8. *Vertical Curves.* Changes in grade shall be connected by vertical curves and shall meet the requirements for the design speed of the roadway.
9. *Base and Surfacing.* All streets shall be improved with a concrete or bituminous surface. Pavement sections shall be in accordance with City standard detail plates. Except in the case of model homes, as may be approved by the City, no building permit shall be issued for any lot or parcel in a subdivision prior to the installation of the base course of bituminous. The wear course of bituminous shall be placed following the construction season or, if so designated by the City Council, up to two (2) years from the date of final plat approval. Exceptions to this provision may be granted by the City Council at their discretion as part of a development contract. This requirement may, for plats outside of the Urban Service Area, be modified or held in abeyance, or gravel-based, oiled or dust palliative treated streets may be substituted if recommended by both the Planning and Zoning Commission and the City Engineer, and approved by a four-fifths (⅘) majority of the Council. All roads to be constructed will be constructed per specifications by the City Engineer.
10. *Concrete Curb and Gutter.* All streets within the Urban Service Area shall utilize concrete curb with integral gutter and shall be of the type in accordance with the City's Private Development Standards.
11. *Grading.* The full width of the right-of-way of all streets and alleys dedicated in the plat shall be graded to the lines and cross sections as shown on the grading plan submitted to and approved by the City Engineer. Exceptions to the width of grading may be granted where topography or tree cover warrant.

C. *Marginal Access Streets.* Marginal access streets shall be so aligned that their use by through traffic is discouraged.

D. *Service Streets.* Where a subdivision abuts or contains an existing or planned major thoroughfare or a railroad right-of-way, the City Council may require a street approximately parallel to and on each side of the right-of-way for adequate protection of residential properties and to afford separation of through and local traffic. The service streets shall be located at a distance from the major thoroughfare or railroad right-of-way suitable for the appropriate use of the intervening land, as for park purposes in residential districts, or for commercial or industrial purposes in appropriate districts. The distances shall also be determined with due regard for the requirements of approach grades and future grade separations.

E. *Half Streets.* Half streets shall be prohibited, except where essential to the reasonable development of the subdivision in conformity with the other requirements of this Ordinance; and except where the City Council finds it practical to require dedication of the other half when adjoining property is subdivided. In such cases, the developer shall provide an escrow in an amount determined necessary to construct the full street. Wherever there is a half street adjacent to a tract to be subdivided, the other half of the street shall be platted within the tract prior to the granting of access.

F. *Private Streets.* Private streets intended to service non-residential and multi-unit developments may be allowed within the Urban Service Area subject to City Council approval and in accordance with the following standards:

1. Private streets shall only be allowed in compliance with the City's Comprehensive Plan and only for such roads which have no public interest for traffic circulation.

2. The number and location of private streets may be controlled and limited by the City Council in the interests of public safety and efficient traffic flow.

3. Private streets are the responsibility of the applicant to construct according to the design standards listed in this Section.

4. The city shall not maintain private roads or roadway signs. The applicant shall ensure in writing the maintenance and repair of all private streets and associated signage by a homeowner's association or some other similar entity approved by the City.

5. Utilities under private streets

    a. Where publicly-owned utilities are located under a private street, the City shall be responsible for any street repairs necessitated by repairs or maintenance of the public utility. Conversely, if full replacement of the public utility is required, the entity responsible for maintenance and ownership of the private street shall be solely responsible for the related street replacement.

    b. Privately-owned utilities under private streets shall be owned and maintained by the entity responsible for ownership of the street. Any street repairs necessitated by the maintenance of the privately owned utility shall not be the responsibility of the city.

6. The applicant for any subdivision including private streets shall notify future property owners through deed restrictions and/or covenants which streets in a development are private streets.

7. The city will not accept the dedication of any private street until it is brought into conformance with City public street standards at the expense of property owners.

G. *Reserve Strips.* Reserve strips controlling access to streets shall be prohibited except under conditions approved by the City Council.

H. *Re-subdivision of Large Lots and Parcels.* When a tract is subdivided into larger than normal building lots or parcels, such lots or parcels shall be so arranged as to permit the logical location and openings of future streets and appropriate re-subdivision, with provision for adequate utility connections for such re-subdivision.

I. *Subdivisions Abutting Major Rights-of-Way.* Wherever the proposed subdivision contains or is adjacent to the right-of-way of a U.S. or State highway, County Road, or local collector street, provision may be made for a service street approximately parallel and adjacent to the boundary of such right-of-way; provided that due consideration is given to proper circulation design, setbacks from an intersection on the major rights-of-way, or for a street at a distance suitable for the appropriate use of land between such street and right-of-way. Such distance shall be determined with due consideration of the minimum distance required for approach connections to future grade separations, and for lot depths.

J. *Right-of-Way Dedication.*

1. Where a subdivision abuts or contains an existing street of inadequate width, sufficient additional right-of-way width and street reconstruction shall be provided within the subdivision to meet the standards of this Ordinance.

2. Additional right-of-way and roadway widths may be required by the Council to promote public safety and convenience when special conditions require it.

3. All proposed streets shown on the plat shall be in conformity to City, County and State plans and standards and be offered for dedication as public streets unless otherwise determined by the City Council.

K. *Geotechnical Investigation.* To determine sub-grade soils classification and bearing capacity of the soils in the proposed development, a geotechnical investigation report shall be prepared under the supervision of a licensed soils engineer associated with a qualified soils testing service and be provided to the City Engineer. The report shall contain the design recommendation for street section in accordance with the City's Private Development Standards. In proposed streets, geotechnical investigation shall be performed at intervals not to exceed 500 lineal feet. The soil borings completed during the investigation shall be at least 10 feet in depth below the proposed finished grade and five (5) feet below the proposed elevations of utilities. Ground water levels shall be reported at each boring. Elevations shall be in mean sea level datum. Locations of borings shall be measured in the field and accurately shown on the plans.

L. *Additional Street Elements.*

1. *Boulevards.* All boulevards shall be sodded. In the Rural Service Area the boulevards may either be sodded or prepared with adequate topsoil and seeded, as determined by the City Engineer.
2. *Driveways.* All driveways shall be constructed in accordance with Part 10-72-00. Where driveways shall be permitted to access onto thoroughfare or collector streets, provisions shall be made for an on-site turn around area which would provide access to the thoroughfare or collector street in a forward direction.
3. *Lighting.* Street lights conforming to City specifications shall be installed at the locations approved by the City Engineer. Easements may be required along property lines from utility easements on rear lot lines to rights-of-way so as to provide for a street light interval not to exceed 350 feet.
4. *Sidewalks.* Concrete sidewalks are required on one (1) side of residential streets and may be required on both sides of the streets with the outside edge located one (1) foot from the property line, and on pedestrian ways as directed by the City Council. The Council may also require a bituminous trail to be installed in lieu of the sidewalk when appropriate. All sidewalks and trails shall be built to the specifications (including width) of the City Engineer as found in the City's Private Development Standards. The City Council may waive this requirement in rural subdivisions or in areas where there may be limited need or feasibility. Sidewalks shall be installed prior to the installation of the bituminous wear course. The developer shall notify all lot purchasers of sidewalk construction plans.
5. *Signs.* All signs shall be installed by the developer in accordance with the Minnesota Manual on Uniform Traffic Control Devices and the City's Private Development Standards.
6. *Street Trees.* In all subdivisions, street and yard trees shall be planted in accordance with applicable landscaping and screening requirements of the Zoning Ordinance, right-of-way ordinances and City's Private Development Standards.

Section 2. This Ordinance shall take effect and be enforced from and after its passage and publication according to law.

Approved and adopted by the City Council of the City of St. Francis this 1st day of May, 2023.

SEAL

CITY OF ST. FRANCIS

By: _____
Steven D. Feldman, Mayor

_____
Attest: Jennifer Wida, City Clerk

Published in the Anoka County Union Herald _____.

DRAFTED BY:
Hoisington Koegler Group, Inc.
800 Washington Ave. N., Suite 103
Minneapolis, MN 55401

City of St. Francis

PLANNING COMMISSION AGENDA REPORT

TO: St. Francis Planning Commission

FROM: Beth Richmond, Planner

SUBJECT: Code Revisions – Parking, Roadways, and Stormwater

DATE: 4-19-23

OVERVIEW:

Staff has been working to update the City's Private Development Standards. In revising these specifications, Staff has made a number of changes which necessitate related revisions to the City's Zoning and Subdivision Codes. The proposed Code amendments relate to rural parking lot design, local streets in the Rural Service Area, private streets, and the minimum requirements for the curvature of streets.

Revisions to Section 10-83-02 Stormwater are also proposed. The City recently worked with the MPCA to complete an audit on the City's stormwater practices. Several minor code revisions are proposed in response to the findings of this audit.

The proposed revisions include changes to the Development Standards and Stormwater divisions of the Zoning Code and the Streets section of the Subdivision Code. Each requested revision is explained in more detail below. Proposed Code additions are underlined and in red. Proposed Code deletions are ~~struck-through~~ and in red.

CODE REVISIONS

Division 7 Development Standards

Rural Parking Lots

New text is proposed to be added to the Code which specifies that parking lots located outside of the Urban Service Area may be constructed with different surfacing and design requirements than those listed in Section 10-72-08 Design and Maintenance of Off-Street Parking with the approval of an Interim Use Permit. This amendment is proposed with recognition that parking lots in rural areas may have different needs than those in urban areas of the City. The existing requirements for parking lot surfacing and design include paving with concrete, bituminous, or pavers, the installation of curb and gutter, and parking lot striping.

The draft language reads as follows:

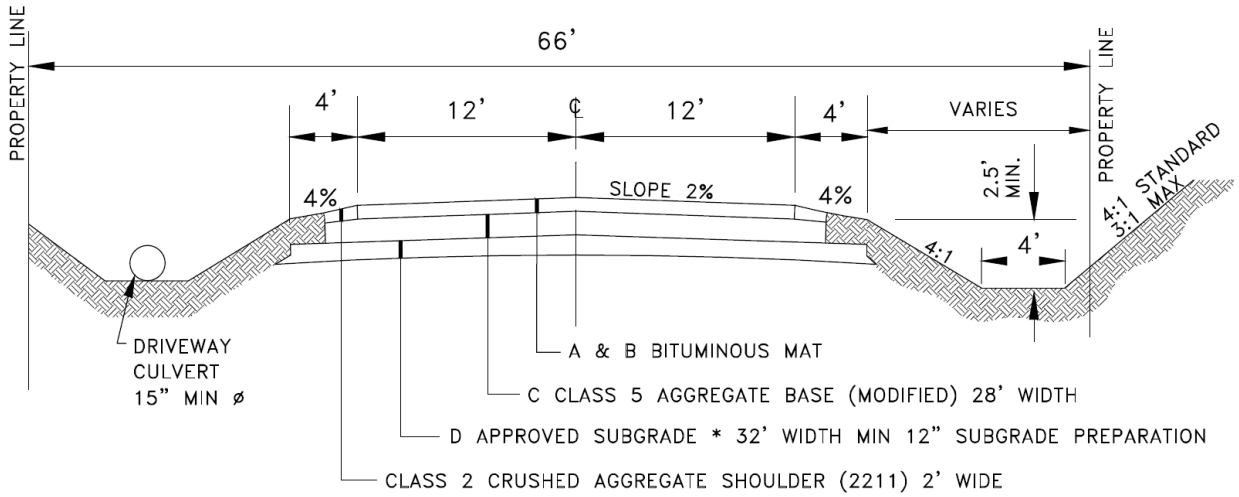
10-72-08 Design and Maintenance of Off-Street Parking

J. Rural Parking Lots. Parking lots located outside of the Urban Service Area which serve non-residential uses may allow for different surfacing and design requirements than those found in this Section with approval of an Interim Use Permit. Considerations for the IUP may include but are not limited to: dust management, stormwater runoff, conditions related to proximity of the

site to sensitive environmental areas and residential districts, size of parking lot, and anticipated traffic.

Local Streets in Rural Service Area

Recognizing that the Rural Service Area may have different needs and expectations when it comes to streets than the urban areas of the City, new standards for local roads in the Rural Service Area are proposed. These standards include a narrower pavement width of 24 feet and additional land within the right-of-way on both sides of the paved roadway to be used for drainage ditches. Curb and gutter would not be required for these streets.



Private Streets

Staff often receives inquiries about private streets from developers and whether or not they are allowed in the City. Currently, private streets are allowed only as part of Planned Unit Developments (PUDs). Staff feels that there may be circumstances, such as in a townhome development, where private streets may be appropriate without the need to require a PUD. Staff is proposing to remove the language pertaining to private streets in Section 10-72-04 Performance Standards and add language to the Subdivision Code clarifying the situations in which private streets are considered appropriate and the City's expectations for the design and maintenance of private streets. Mechanisms to enforce adequate maintenance and management of private streets such as development agreements and easements shall be approved at the time of final plat approval and recorded with the final plat. The revisions to Section 10-72-04 are listed below.

A majority of the proposed private street language is located in Section 11-43-02 Streets of the Subdivision Code. The Planning Commission is not required to make recommendations on amendments to the Subdivision Code. Therefore, this language is attached to this memo as information only.

10-72-04 Performance Standards.

All off-street parking facilities shall comply with the following dimensional standards:

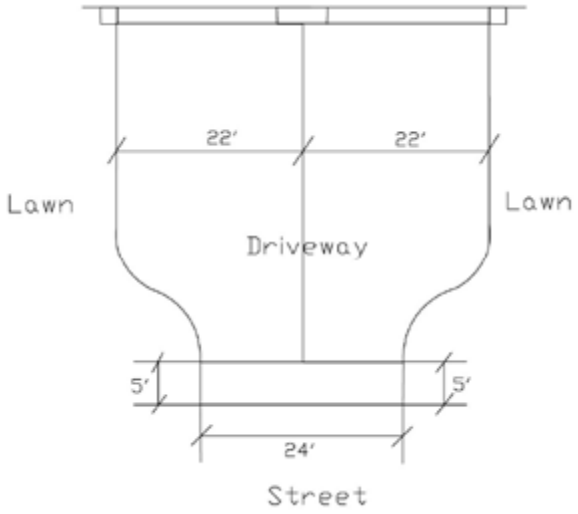
1. **Table 10-72-1 Drive Aisles/Parking Lots/Stall Dimensions**:

Angle	Minimum Stall Dimensions	Minimum Parking Lot Drive Aisle Width
90 Degree	9 × 19	24 feet (two-way traffic)
60 Degree	9 × 19	18 feet (one-way traffic)
Parallel	8 × 22	24 feet (two-way traffic)

2. *Drive and Private Street Requirements.*

    1. Two-way traffic: The minimum drive width for two-way traffic shall be twenty-four (24) feet.
    2. One-way traffic: The minimum drive width for one-way traffic shall be twenty (20) feet minimum if necessary for fire truck access.
    3. Driveways that service commercial and industrial uses may extend to the side property line with approval by the adjacent land owner.
    4. No driveway shall obstruct drainage utility access, or impair public safety. When necessary, the lot owner shall install a culvert of adequate size and type, as determined by the City Engineer.

Figure 10-72-1 Driveway Standards



Road Curvature

Staff is proposing updated language to clarify the design requirements for curvature within a roadway. Current language regulates roadway curves by specifying a minimum sight distance for each street type. This is an uncommon strategy to regulate road curvature. More commonly, roadway curves are regulated by establishing a minimum curve radius. The proposed language below includes requirements for curve radii, with flexibility built in for larger roadways and areas with natural constraints.

11-43-02 Streets.

B. Design Requirements

3. *Deflections.* When connecting street lines deflect from each other, or when a single street deflects at one point by more than 10 degrees, they shall be connected by a horizontal curve. For collector and higher-order streets, the curve radius shall be based on standard engineering methods suitable for the design speed. A minimum curve radius of 300 feet shall be provided for all local through streets (with a design speed of 35 mph or less) unless precluded by natural site features such as wetlands, rivers, lakes, bluffs, etc. If precluded by natural site features, the City may allow a horizontal curve with a 100 foot radius on local streets provided that appropriate signage is erected.

Cul-de-sac Length

Staff is proposing to update the City's standards for maximum cul-de-sac length. The existing regulations allow for a maximum cul-de-sac length of 500 feet for developments in the Urban Service Area and 750 feet for developments in the Rural Service Area. This can be increased to 750 feet and 1,500 feet, respectively, if the cul-de-sac is intended to be extended in the future to serve adjacent, unsubdivided properties that are suitable for development. Limiting maximum cul-de-sac length helps to allow for more efficient use of public resources when it comes to snow plowing and general street maintenance.

Staff has identified that an increase to the maximum length is needed to be more compatible with adjacent communities and existing parcel sizes. These updates will reduce the number of requests that Staff receives to deviate from the City's Code and standards. Many of the parcels in St. Francis are approximately 1,320 feet in length based on the original land survey process in MN. Increasing the maximum length will better account for one of these parcels developing at a time. The proposed lengths also will better align with surrounding communities as shown below.

Community	**Maximum Length**
Oak Grove	1,320 feet
Nowthen	1,000 feet
Ham Lake	1,100 feet
East Bethel	500 feet
Ramsey	600 feet
Elk River	700 feet

The following updated language related to cul-de-sac streets is proposed:

11-43-02 Streets.

A. Design Requirements

6. *Cul-de-Sacs.* Cul-de-sacs shall be designed to cover as short a distance as possible. The maximum length of a street terminating in a cul-de sac shall be 750 feet for developments in the Urban Service Area and 1,250 feet for developments in the Rural Service Area. The

maximum length of a dead end street that is intended to serve adjacent unsubdivided property that is suitable for development shall be 1,000 feet for developments in the Urban Service Area and 1,500 feet for developments in the Rural Service Area. The distance of the street shall be measured along the centerline of the street from the intersection of origin to the end of the right-of-way. A cul-de-sac meeting City Code requirements shall be required at the end of all dead end streets. Dead end streets in the Rural Service Area may be increased in length if the development complies with the following performance standards:

a. The maximum density on the dead end street shall not exceed the maximum allowed by State Fire Code.
b. All streets within the development shall be bituminous.
c. A future street plan, noting the continuation of the dead end street to exiting street(s), shall be provided. All streets noted in the future street plan must be reasonable in their design and economically feasible. The distance from the end of the street to the nearest existing street shall also be less than 1,500 feet.
d. Secondary access and/or internal looping of the proposed streets shall be provided if site conditions permit.

Division 8 Stormwater

Stormwater

A number of minor revisions have been made to Section 10-82-04 Stormwater Pollution Prevention for Large Sites. These revisions clarify when infiltration systems would be prohibited and are a direct response to the requirements identified by the recent MPCA audit. The proposed revisions to this Section are attached.

ACTION TO BE CONSIDERED:

Staff is requesting that the Planning Commission hold a public hearing and review the proposed text amendments to the Zoning Code. Staff recommends that the Planning Commission act to recommend approval of the changes to the City Council.

Suggested Motion:

1. Move to recommend approval of the proposed amendments to Sections 10-72-04, 10-72-08, and 10-82-04 of the Zoning Code as presented by Staff.

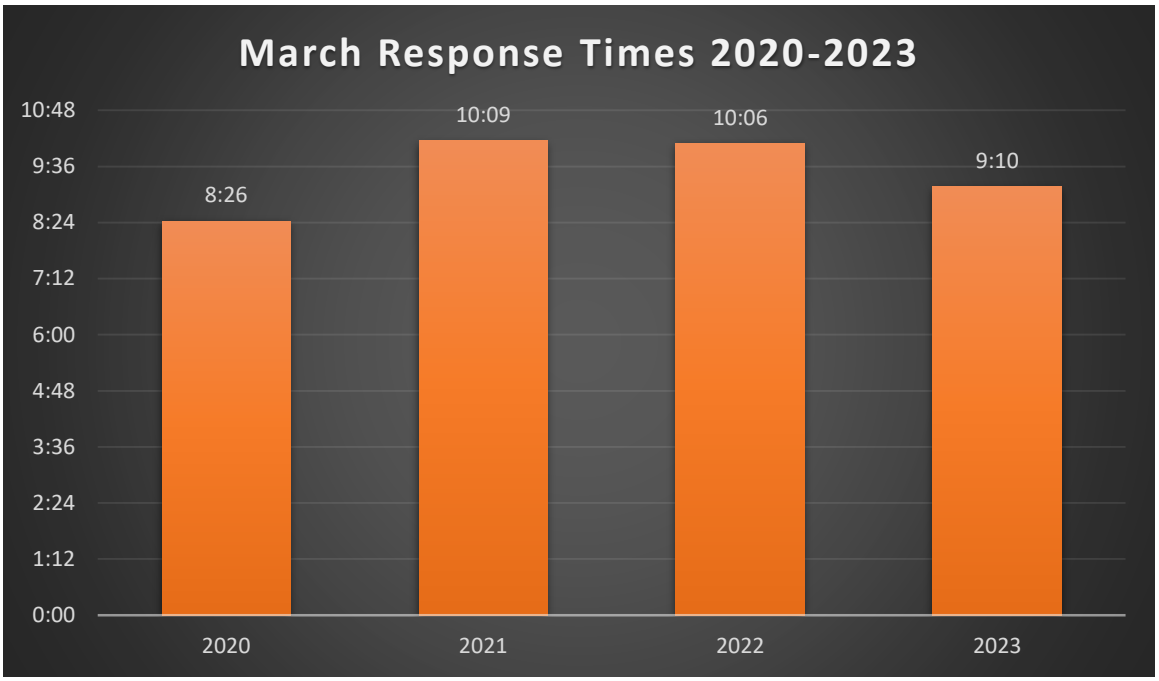
ATTACHMENTS

- Revisions to Sections 10-72-04 and 10-72-08 of the Zoning Code and Section 11-43-02 of the Subdivision Code
- Revisions to Section 10-82-04 Stormwater Pollution Prevention for Large Sites of the Zoning Code

MONTHLY COMPARISON REPORT 2020-2023

March

ST. FRANCIS
FIRE & RESCUE


March Response Times 2020-2023
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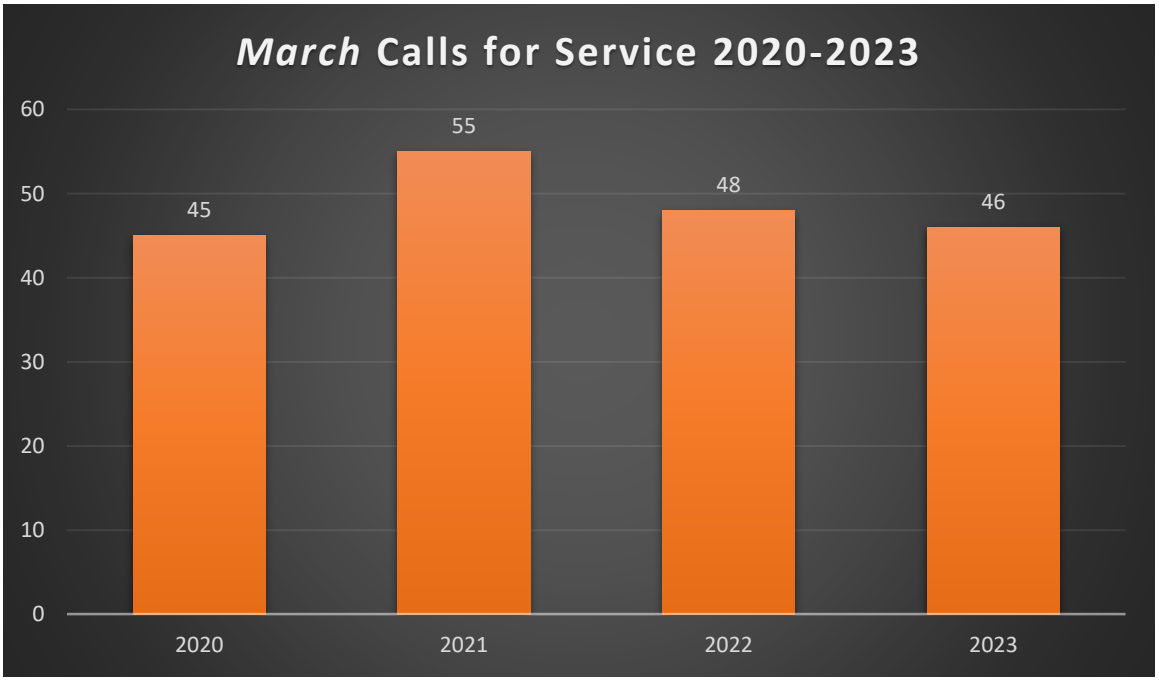
8:24
7:12
6:00
4:48
3:36
2:24
1:12
0:00
8:26
10:09
10:06
9:10
2020
2021
2022
2023


March Calls for Service 2020-2023
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50
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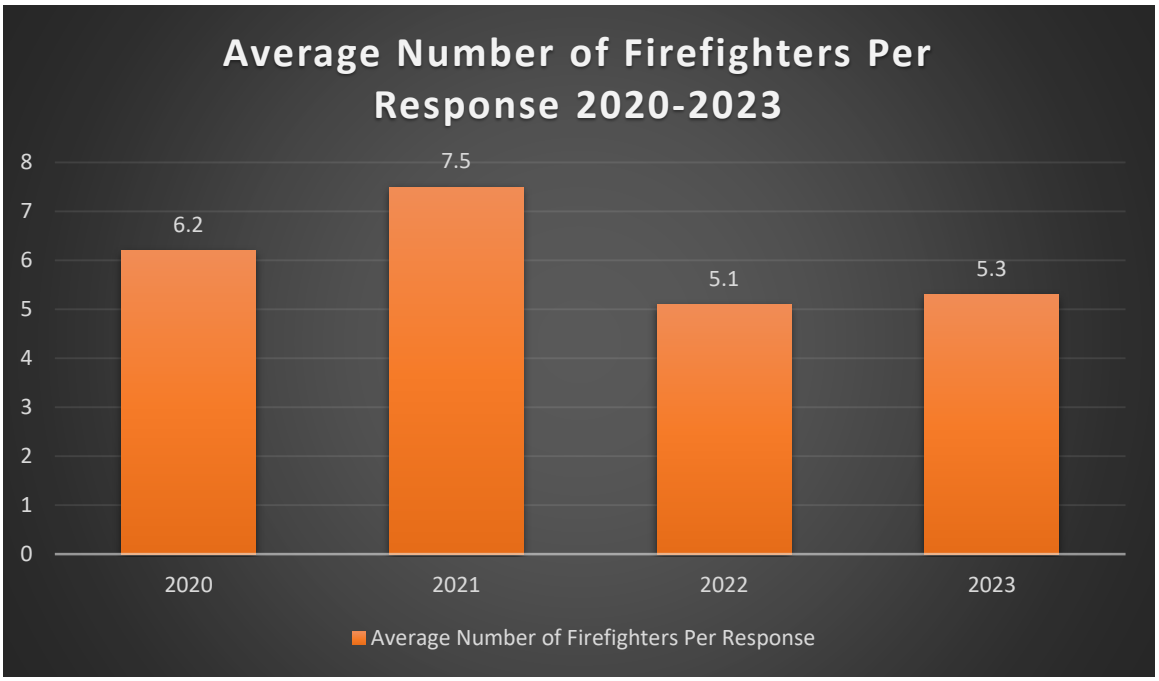
30
20
10
0
45
55
48
46
2020
2021
2022
2023


Average Number of Firefighters Per Response 2020-2023
8
7
6
5
4
3
2
1
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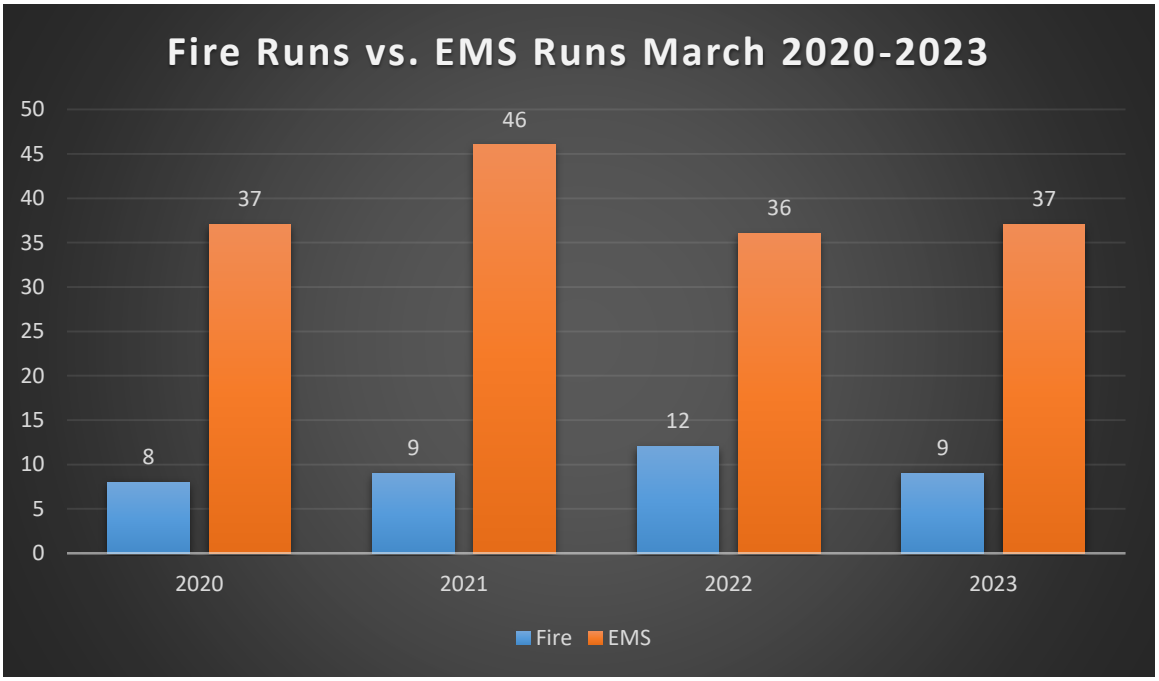
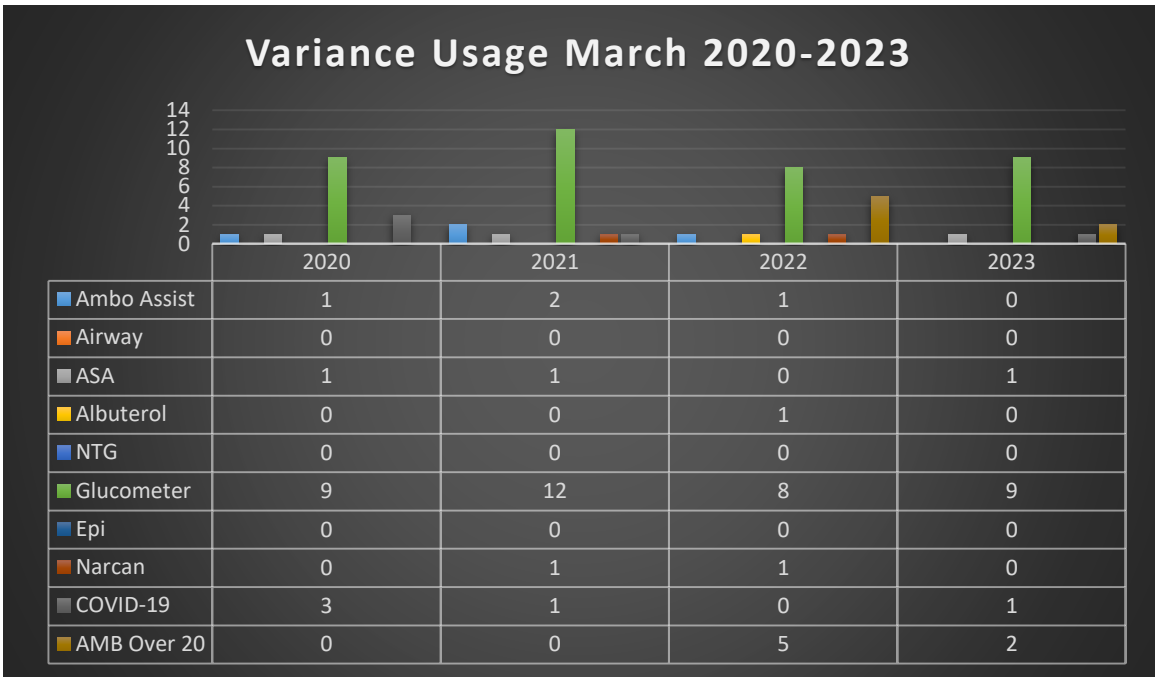
6.2
7.5
5.1
5.3
2020
2021
2022
2023
Average Number of Firefighters Per Response


Fire Runs vs. EMS Runs March 2020-2023
50
45
40
35
30
25
20
15
10
5
0
8
37
9
46
12
36
9
37
2020
2021
2022
2023
Fire
EMS



	2020	2021	2022	2023
Ambo Assist	1	2	1	0
Airway	0	0	0	0
ASA	1	1	0	1
Albuterol	0	0	1	0
NTG	0	0	0	0
Glucometer	9	12	8	9
Epi	0	0	0	0
Narcan	0	1	1	0
COVID-19	3	1	0	1
AMB Over 20	0	0	5	2