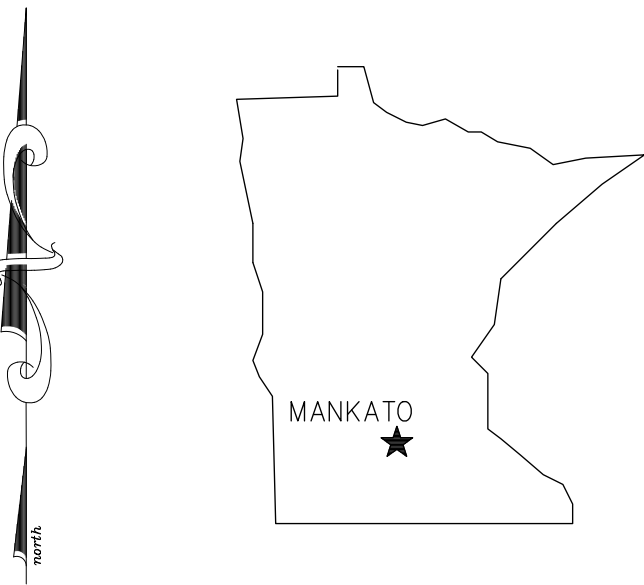
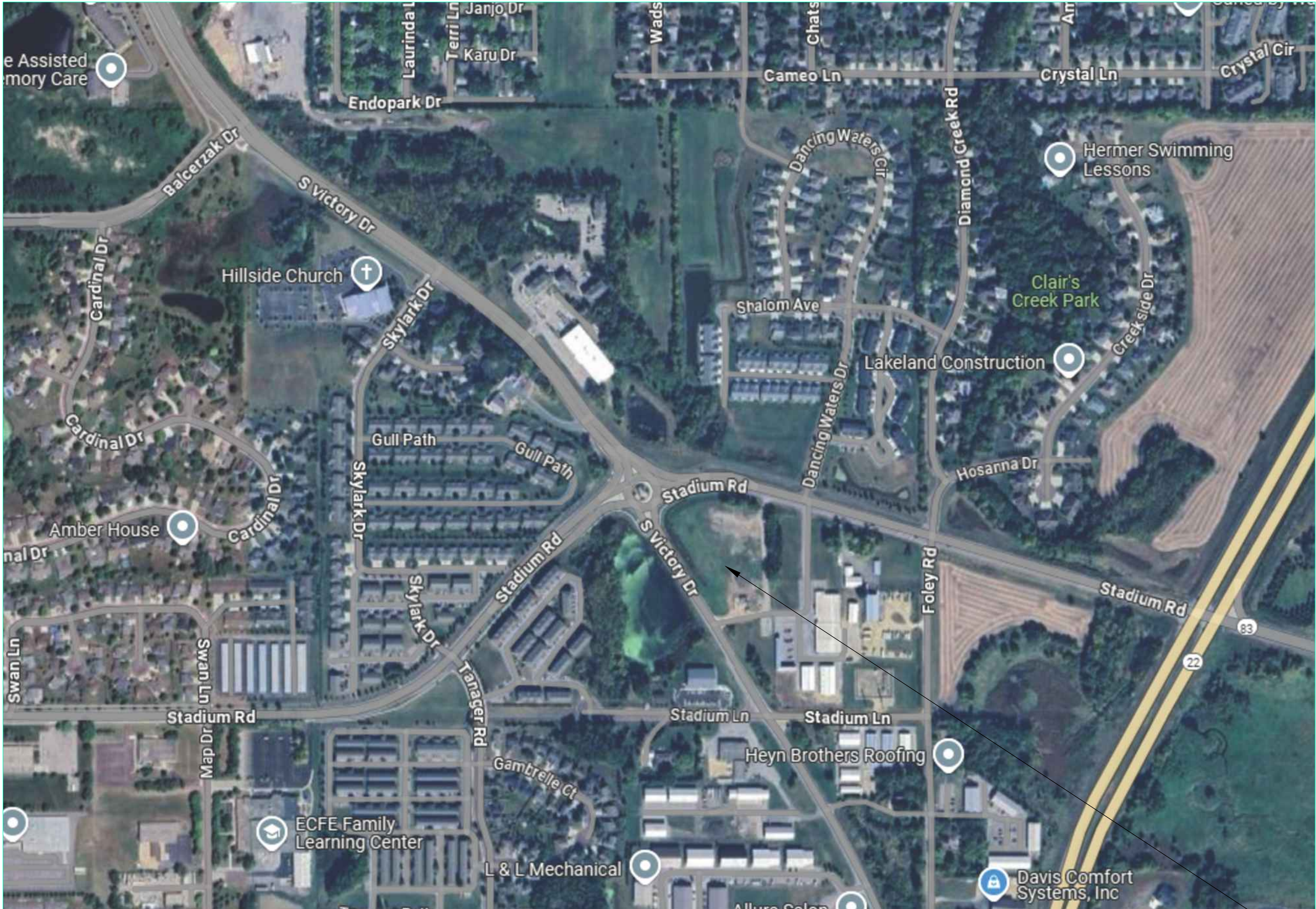


MANKATO APARTMENTS
MANKATO, MN



PROJECT LOCATION

INDEX TO SHEETS

- C1: TITLE SHEET
- C2: EXISTING CONDITIONS
- C3: HARDSCAPE PLAN
- C4: UTILITY PLAN
- C5: GRADING PLAN
- C6: LANDSCAPE PLAN
- C7: DETAILS
- C8: SWPPP NARRATIVE
- C9–C10: SPECIFICATIONS

THIS PLAN CONTAINS 10 SHEETS

LEGEND

- | | | | |
|----------|-----------------------------------|-----------|--|
| ○ | = 5/8"Ø X 16" iron stake monument | ⊕ | = Sign |
| ● | =Iron stake monument-Found | ⊕ | = Sign-Handicap |
| — W — | = Water Main | ⊕ | = Light Pole |
| — S — | = Sanitary Sewer | ⊕ | = Power Pole |
| — ST — | = Storm Sewer | ⊕ | = Guy Anchor |
| — G — | = Gas Main | ⊕ | = Fire hydrant |
| — UT — | = Underground Telephone | ⊕ | = Water Main Valve |
| — OT — | = Overhead Telephone | ⊕ | = Fire Sprinkler |
| — FO — | = Fiber-Optics | ⊕ | = Cleanout |
| — UE — | = Underground Electric | ⊕ | = Culvert |
| — OE — | = Overhead Electric | ⊕ | = Gas Main Valve |
| — X — | = Chain Link Fence | ⊕ | = Catch Basin |
| — ○ — | = Control Access | ⊕ | = Manholes |
| ⊕ | = Gate Post | 1271.23 | = Spot Elevation |
| ⊕ | = Bollards | RM1270.89 | = Rim Elevation |
| ⊕ | = Electric Meter | FL1262.34 | = Line Elevation |
| ⊕ | = Gas Meter | | =Concrete Surface |
| ⊕ | = Fiber-Optics Box | | =Bituminous Surface |
| ⊕ | = Telephone Pedestal | | =Gravel Surface |
| ⊕ | = Light Tower | | =Proposed Pavement Elevation |
| ⊕ | = Silt Fence | | =Proposed Top/Bottom of Retaining Wall Elevation |
| ⊕ | = Furnish & Install | | |
| — 1272 — | = Existing Elevation Contour Line | | |
| — 1272 — | = Proposed Elevation Contour Line | | |

APPLICABLE CONSTRUCTION PERMITS

ALL CONSTRUCTION WITHIN ROAD RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PERMIT AS ISSUED BY THE ROAD AUTHORITY.

GENERAL NOTES

DEVELOPER, CONTRACTOR AND ALL SUBCONTRACTORS SHALL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES GOVERNED BY STATE AND LOCAL JURISDICTION. SITE IRRIGATING, LIGHTING, LANDSCAPING, SIGNING ARE NOT A PART OF THIS PLAN. PROVIDE EROSION CONTROL PER NPDES PERMIT REQUIREMENTS AND AS SHOWN. PROVIDE HANDICAP CURB RAMPS & SIGNAGE. COMPLY WITH ALL AMERICAN DISABILITY ACT REQUIREMENTS. ALL CONCRETE OR ASPHALTIC PAVEMENT CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF MN/DOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION. A ROCK CONSTRUCTION ENTRANCE IS REQUIRED AT ALL ENTRANCES FROM BITUMINOUS PAVEMENT. ACCESS FOR LOCAL RESIDENTS/BUSINESSES SHALL ALWAYS BE MAINTAINED. PROVIDE PAVEMENT STRIPING AS SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FOR CONSTRUCTION. SEE BOUNDARY SURVEY BY OTHERS FOR SITE BOUNDARIES. ANY ALTERATIONS OR REVISIONS TO THE SITE DEVELOPMENT PLAN AS SHOWN SHALL NOT BE THE RESPONSIBILITY OF JONES, HAUGH & SMITH INC. AND SHALL RELEASE JONES, HAUGH & SMITH INC. OF ANY LIABILITY FOR ANY DAMAGES CAUSED THEREFROM UNLESS WRITTEN AUTHORIZATION OR PLAN REVISION HAS BE APPROVED BY JONES, HAUGH & SMITH INC. PRIOR.

BENCHMARK 1

Top head of spike in power pole at southeast corner of property.
Elevation = 1001.49

BASIS OF BEARING SYSTEM

All bearings are based upon the MnDot Blue Earth County Coordinate System Nad 83 (96) Harn Adjustment Grid

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Erion J. Johnson
Reg. No. 42744
Date: 9/20/25

JONES
HAUGH
SMITH
Engineers & Surveyors
515 South Washington Ave. Albert Lea, MN 56007
507-373-4876

MANKATO
APARTMENTS

Project:

Revision:

No: 25-188 Date: 9/20/2025

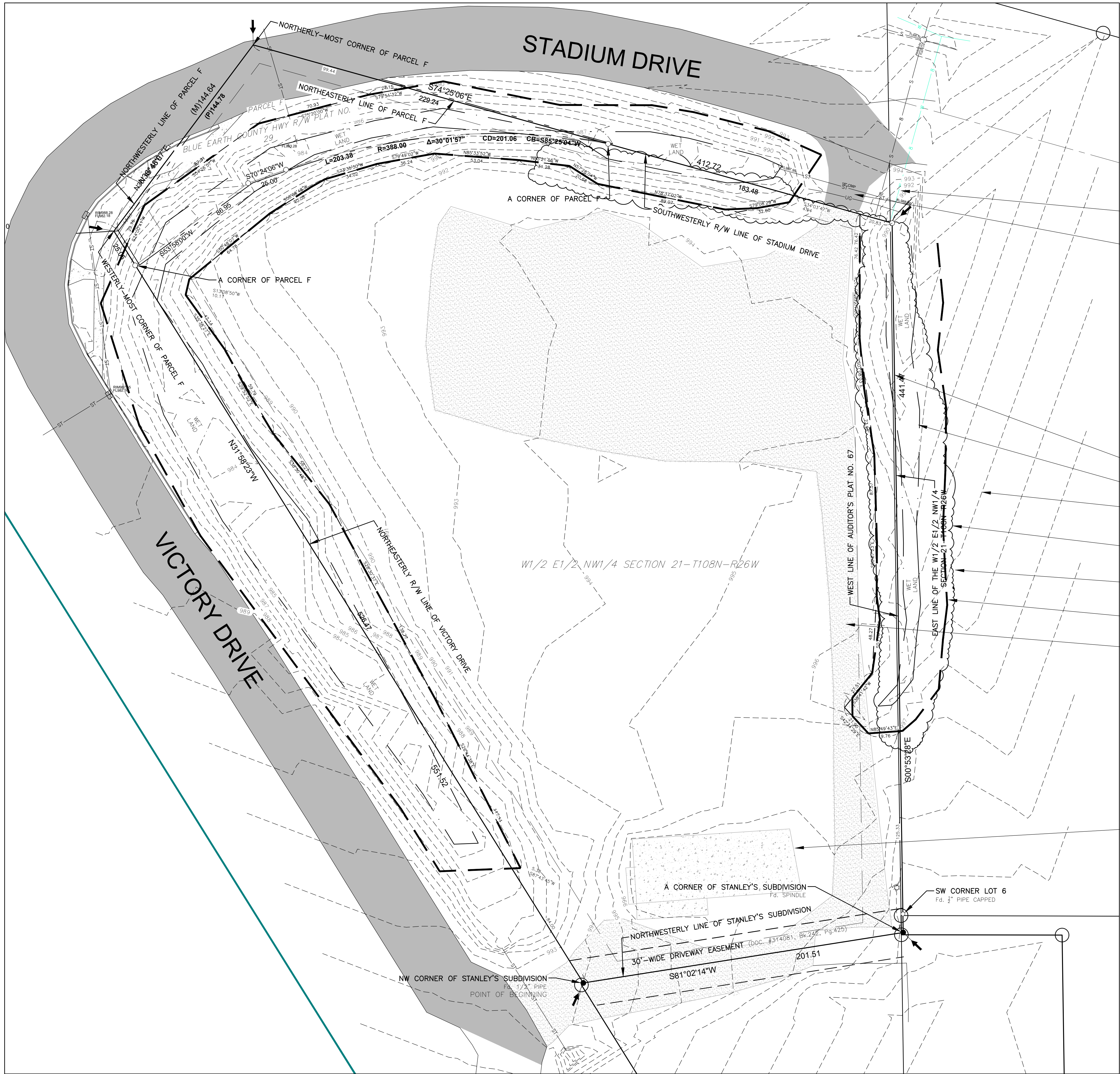
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Project Manager:

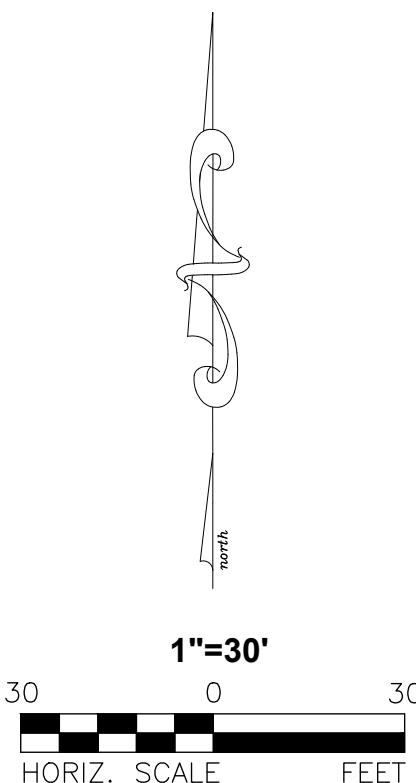
Project Status: CD

Sheet Title:
TITLE SHEET

Sheet No.:
C1



- EXISTING SEWER/WATER SERVICES-FIELD VERIFY LOCATION
- REMOVE EXISTING DRIVEWAY APPROACH-GRADE TO MATCH EXISTING DITCH SLOPES
SEE GRADING PLAN-REMOVE EXISTING DRIVEWAY CULVERT
- PROPERTY LINE TYP.
- WETLAND DELINEATION LINE TYP.
- EXISTING ELEVATION CONTOUR TYP.
- EDGE OF TREES TYP.
- EXISTING GROUND SPOT ELEVATION TYP.
- 16.5' WETLAND BUFFER LINE TYP.
- REMOVE OR SALVAGE EXISTING GRAVEL SURFACING
- REMOVE EXISTING CONCRETE SLABS & WALKS AS REQUIRED FOR CONSTRUCTION TYP.



Consultant:

JONES HAUGH SMITH
Engineers & Surveyors
515 South Washington Ave. Albert Lea, MN 56007
Reg. No. 42744 Date: 9/20/25

Project:

MANKATO APARTMENTS

Revision:

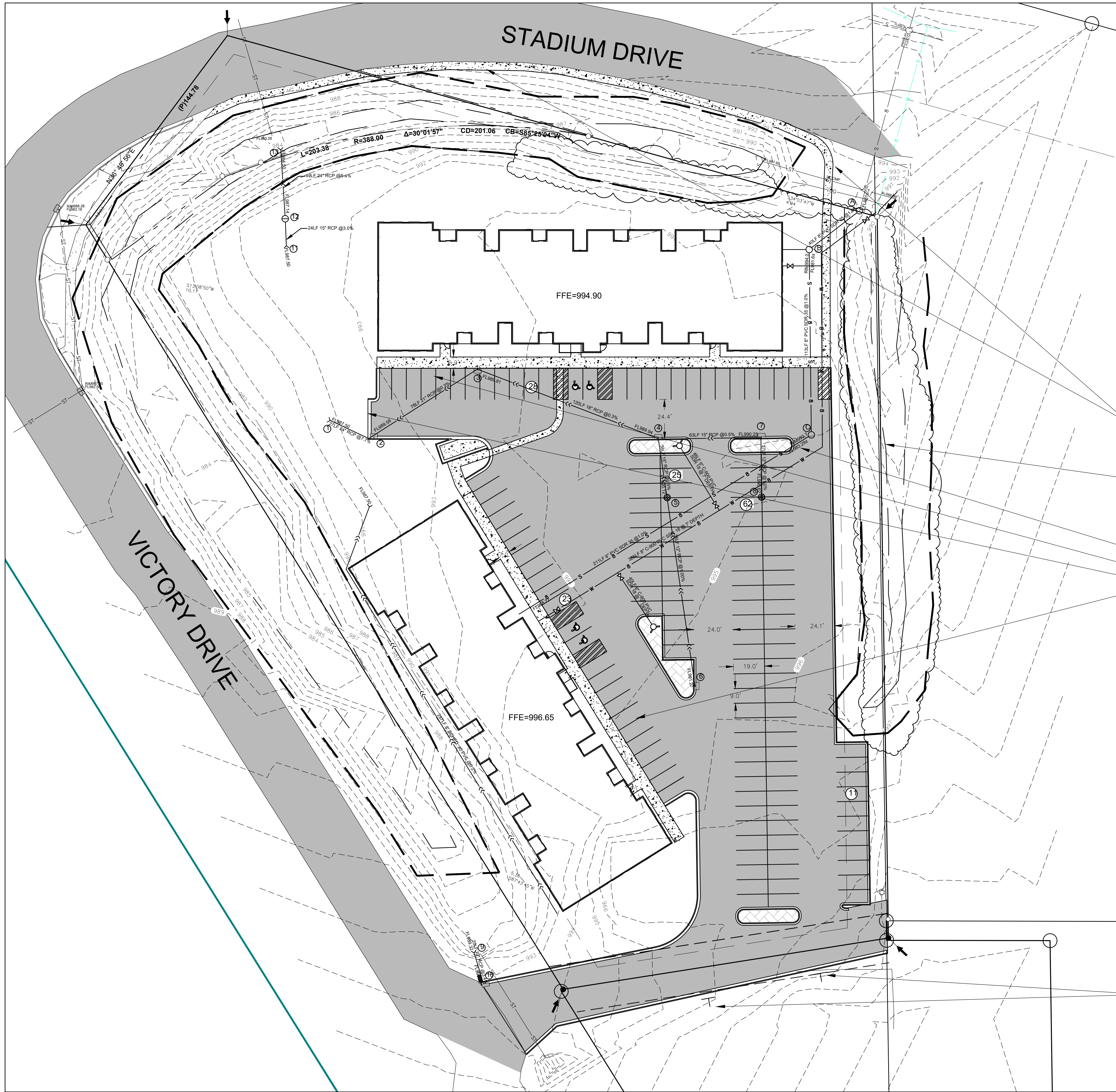
No: 25-188	Date: 9/20/2025
Drawn: bj	Checked:
Project Manager:	
Project Status: CD	

Sheet Title:

EXISTING CONDITIONS

Sheet No.:

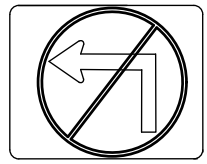
C2

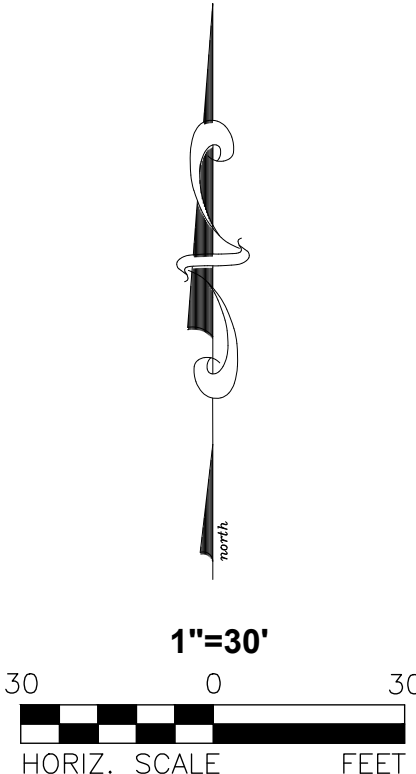


F&I NEW 5' WIDE X 4" THICK CONCRETE WALK FROM PARKING LOT TO EXISTING SIDEWALK AT EXISTING ROUNDABOUT. INSTALL AT 2% SLOPE AWAY FROM STADIUM DRIVE BITUMINOUS. F&I THICKENED EDGE WALK ON DOWNSTREAM SIDE OF WALK AS NEEDED TO AVOID DISTURBING WETLAND/EASEMENT F&I WOOD RAIL FENCE WHEREVER SLOPE IS 4:1 OR GREATER ALONG SIDEWALK-SEE DETAIL

NEW CONCRETE B618 CURB & GUTTER TYP.

- F&I LATEX PAVEMENT STRIPING/MESSAGES TYP.
- F&I CONCRETE PAVEMENT SECTION WITHIN TRASH ENCLOSURE TYP.
- F&I CURB CUT FOR POND MAINTENANCE ACCESS
- F&I THICKENED EDGE WALK ALONG BUILDING EXCEPT AT ADA STALLS TYP. SEE THICKENED EDGE WALK DETAIL AND RAISED PAVEMENT DETAIL


F&I (2) R3-2 NO LEFT TURN SIGNS
PER MUTCD MANUAL



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

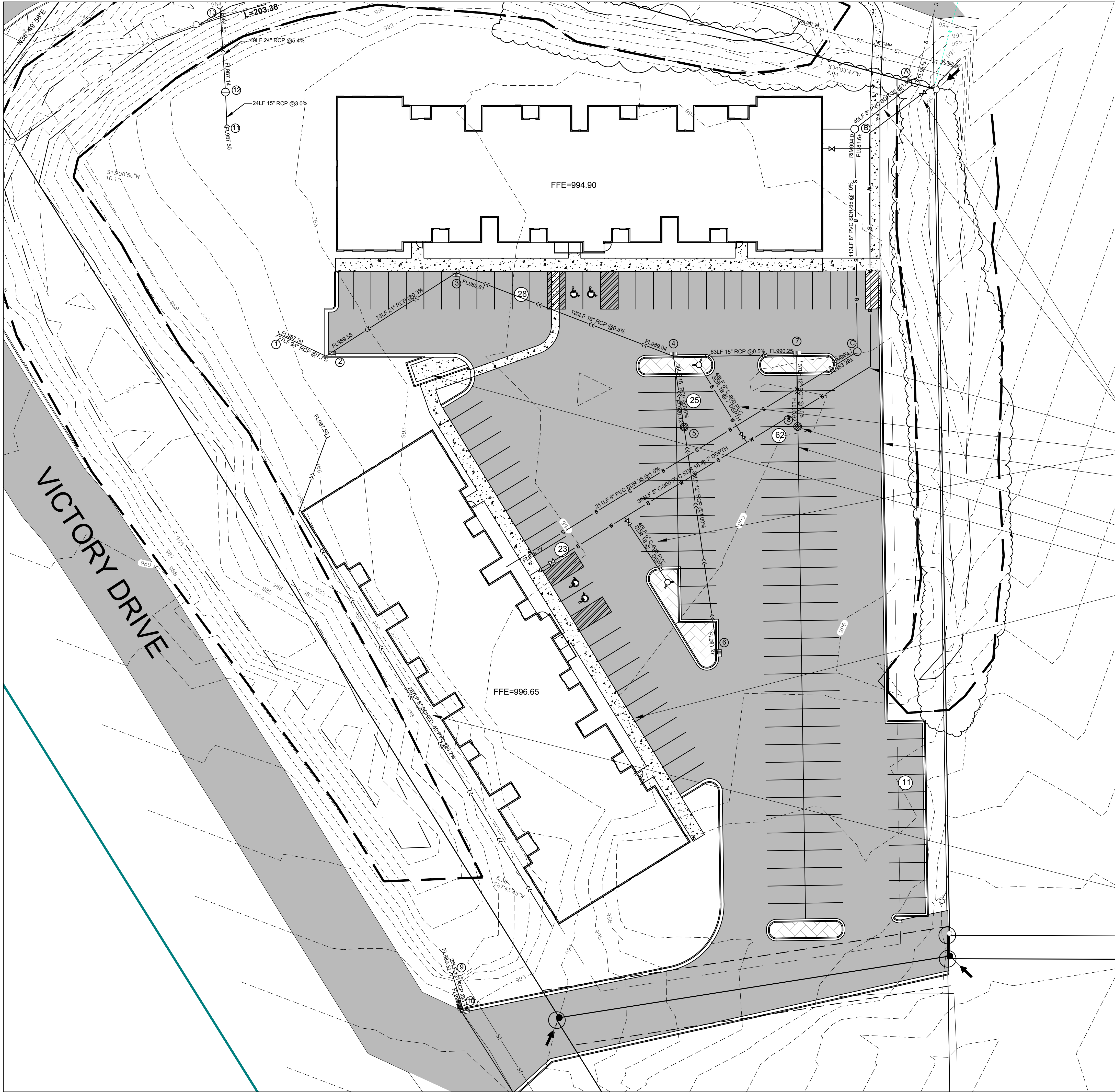
Brion J. Johnson
Reg. No. 42744
Date: 9/20/25

JONES HAUGH SMITH
Engineers & Surveyors
515 South Washington Ave. Albert Lea, MN 56007
507-373-4876

Project: **MANKATO APARTMENTS**

Revision:

No.:	Date:
Drawn: bjj	Checked:
Project Manager:	
Project Status: CD	
Sheet Title: HARDSCAPE PLAN	
Sheet No.: C3	



STORM SEWER STRUCTURE SCHEDULE						
NO.	RIM EL.	INVERT EL.	HEIGHT	CASTING	DESIGN	REMARKS
1	—	987.50	—	—	—	F&I 24" RC APRON & TRASH GUARD, 10 CY CL. III RIPRAP
2	993.00	998.58	5.58	R3067	48-4022	
3	993.80	989.81	3.99	R3067	48-4022	
4	993.00	989.94	3.06	R3067	48-4022	
5	993.75	990.12	3.63	R2532	G	
6	995.00	991.27	3.73	R3067	2X3	
7	993.00	990.25	2.75	R3067	2X3	
8	993.75	990.62	3.13	R2532	G	
9	—	989.32	—	—	—	F&I 12" RC APRON & TRASH GUARD, 5 CY CL. III RIPRAP
10	993.30	989.32	3.98	R3067	2X3	
11	—	987.50	—	—	—	F&I 18" RC APRON & TRASH GUARD
12	991.00	987.50	3.50	—	—	SEE OUTLET STRUCTURE DETAIL
13	—	984.50	—	—	—	F&I 12" RC APRON & TRASH GUARD, 10 CY CL. III RIPRAP

F&I CL. III RIPRAP AS NOTED WITHIN 24 HOURS OF OUTLET INSTALLATION

SANITARY SEWER STRUCTURE SCHEDULE						
NO.	RIM EL.	INVERT EL.	HEIGHT	CASTING	DESIGN	REMARKS
A	992.50	981±	11.50	1772	4007C	FIELD VERIFY EXISTING PIPE INVERT
B	994.00	981.6	12.4	1772	4007C	
C	993.75	983.29	10.46	1772	4007C	

CONNECT TO EXISTING WATERMAIN-F&I 8X8 TEE, 45° BEND, (2) 8" GATE VALVES
CONNECT TO EXISTING SANITARY-F&I MANHOLES AS SHOWN-SEE STRUCTURE SCHEDULE
F&I 8" 45° BEND

F&I (2) 8X8 TEES, 6" GATE VALVES, HYDRANT LEGS AND 6" HYDRANTS
CONNECT TO EXISTING SANITARY-F&I MANHOLES AS SHOWN-SEE STRUCTURE SCHEDULE

NEW CONCRETE B618 CURB & GUTTER TYP.

F&I STORM SEWER PIPING AND STRUCTURE TYP.-SEE STRUCTURE SCHEDULE FOR MORE INFO.

F&I LATEX PAVEMENT STRIPING/MESSAGES TYP.

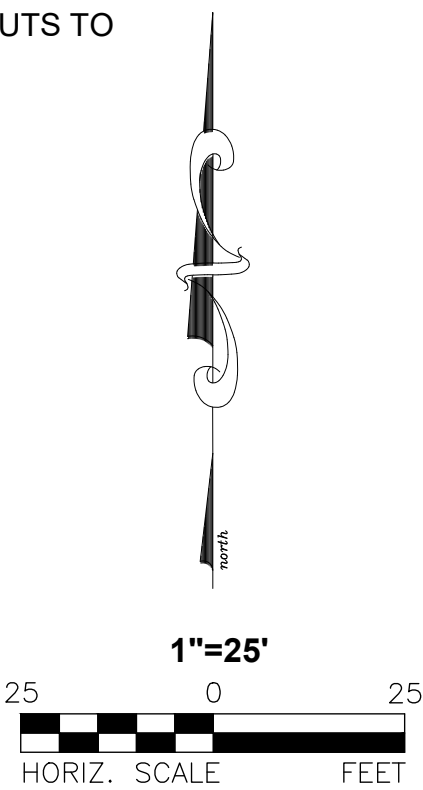
F&I CONCRETE PAVEMENT SECTION WITHIN TRASH ENCLOSURE TYP.

F&I THICKENED EDGE WALK ALONG BUILDING EXCEPT AT ADA STALLS TYP.
SEE THICKENED EDGE WALK DETAIL AND RAISED PAVEMENT DETAIL

WET BASIN SUMMARY
NET INCREASE IN IMPERVIOUSE SURFACE=1.25 ACRES
1.1" WQV VOLUME REQUIRED: 0.115 AC.-FT.
WQV VOLUME PROVIDED: 0.185 AC.-FT.
WQV ELEVATION=988.50
DISCHARGE RATE AT WQV: 2.28 CFS
BASIN 100 YR. HWL=990.42
TOP OF BERM=993.00
EOF=992.00

DISCHARGE RATES (CFS):		
	PRE-DEVELOPMENT	POST-DEVELOPMENT
2 YEAR	5.10	2.85
10 YEAR	9.41	8.02
100 YEAR	23.21	15.71

F&I 287LF 8" SCHED. 40 PVC @0.2%, CONNECT ROOF DRAIN DOWNSPOUTS TO
TO PVC AND OUTLET INTO PROPOSED POND.



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Brion J. Johnson
Reg. No. 42744
Date: 9/20/25

Consultant:

JONES HAUGH SMITH
Engineers & Surveyors
515 South Washington Ave. Albert Lea, MN 55737-4876

**MANKATO
APARTMENTS**

Project:

Revision:

No.:
Date: 9/20/2025

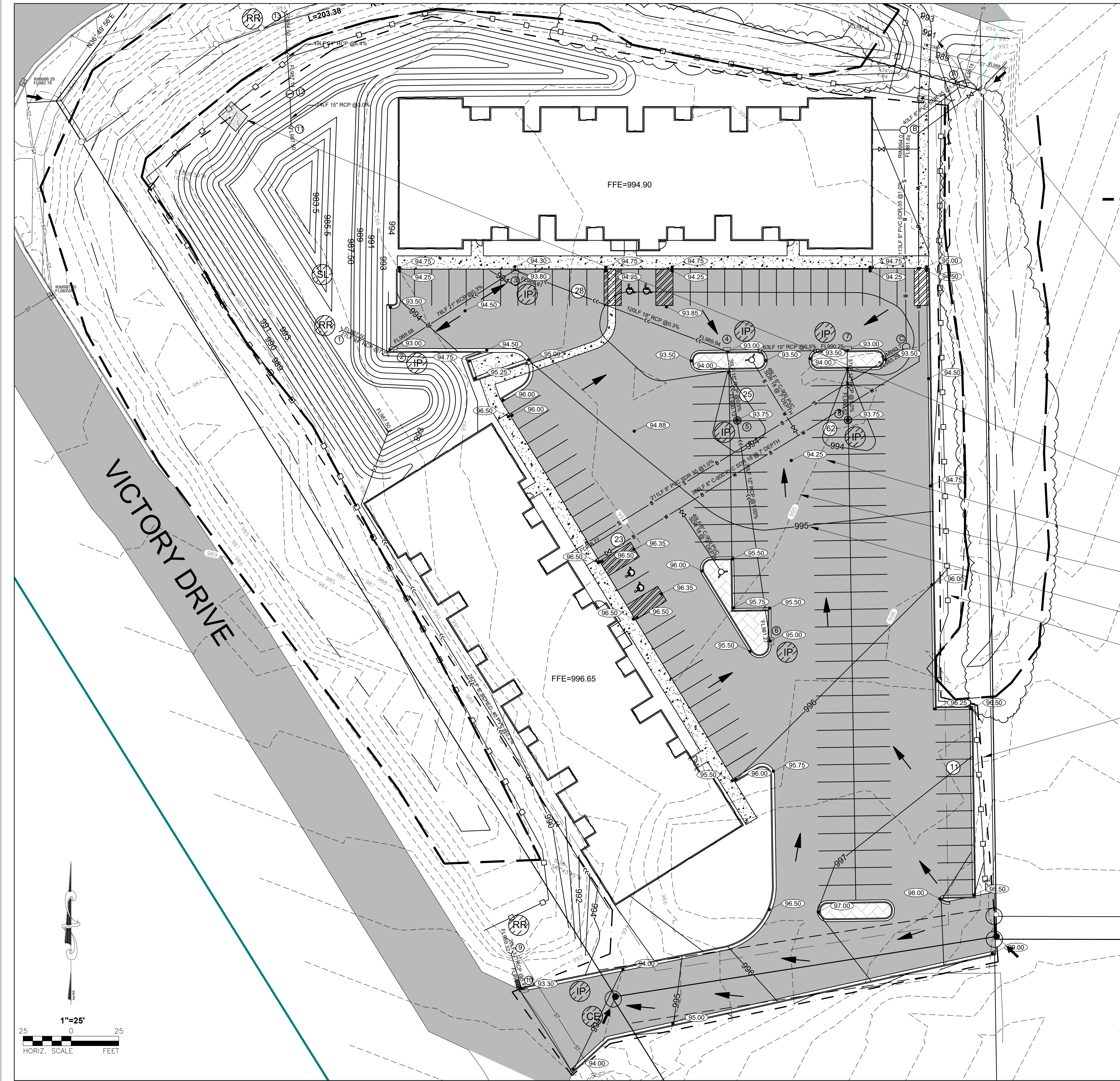
Drawn: **bjj**
Checked:

Project Manager:

Project Status: **CD**

Sheet Title:
UTILITY PLAN

Sheet No.:
C4



SWPPP LEGEND

- = ROCK CONSTRUCTION ENTRANCE
- = INLET PROTECTION-TYP. AT ALL DOWNGRADE INLETS
- = SILT FENCE-FOR PERIMETER CONTROL
- = WOOD CHIP BIO-ROLL/SILT SOCK
- = HYDRO-SEED TYPE LAWN OVER 6" MIN. BLACK DIRT TOPSOIL (TYP. TO ALL NON-PAVED DISTURBED AREAS WITHIN SITE)
- = DESIGNATED CONCRETE WASHOUT AREA
- = CL. III RIPRAP ENERGY DISSIPATION-PLACE WITHIN 24 HOURS
- = RUNOFF FLOW DIRECTION
- = DRAINAGE AREA BOUNDARY
- = DESIGNATED POLLUTANT GENERATING AREA
- = DESIGNATED STEEP SLOPE AREA (4:1 OR GREATER) F&I CATEGORY 3 BLANKET ON ALL 4:1 OR STEEPER SLOPES

ONSITE SOILS=SILTY CLAY, KLOSSNER MUCK PER NRCS SOIL SURVEY

QUANTITY

- 1 EA
- 9 EA
- 1400 LF
- 1 ACRE
- 1 EA
- 25 CY
- 1 EA
- 1300 SY

REMOVE EXISTING ACCESS ROAD & CULVERT-GRADE TO MATCH EXISTING ROAD SLOPES

F&I EMERGENCY OVERFLOW (EOF) AT THIS LOCATION AT ELEV. 1192.00 -INSTALL 10'X12'X12" THICK RIPRAP OVERFLOW WITH CL. III RIPRAP OVER GEO-FABRIC

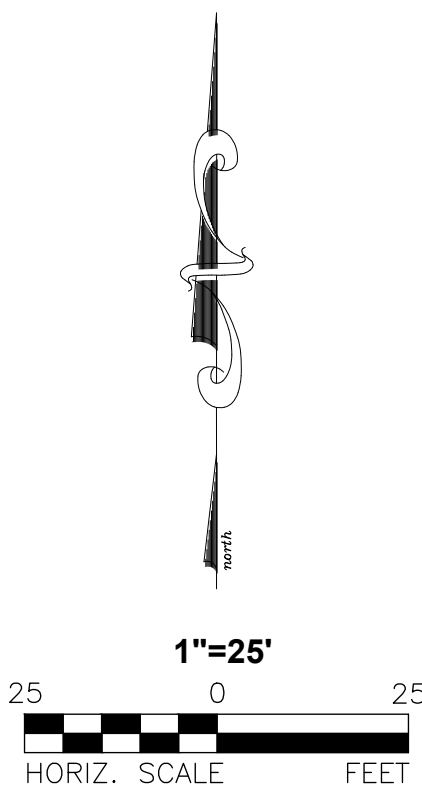
PROPOSED PAVEMENT/GUTTER ELEVATION (NGVD LESS 900) TYP.

EXISTING ELEVATION CONTOUR TYP.

PROPOSED ELEVATION CONTOUR TYP.

PROPOSED SILT FENCE TYP.

EXISTING/PROPOSED WATERSHED BOUNDARY TYP.



Consultant:

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Date: 9/20/25
Reg. No. 42744
Brian J. Johnson

Project:

MANKATO APARTMENTS

Revision:

No.:	Date:
Drawn: bjj	Checked:
Project Manager:	
Project Status: CD	
Sheet Title:	
GRADING PLAN	
Sheet No.:	
C5	

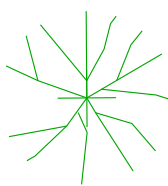
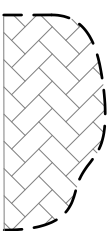
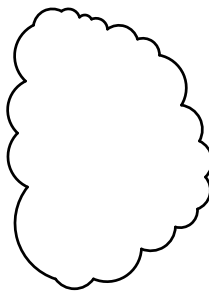


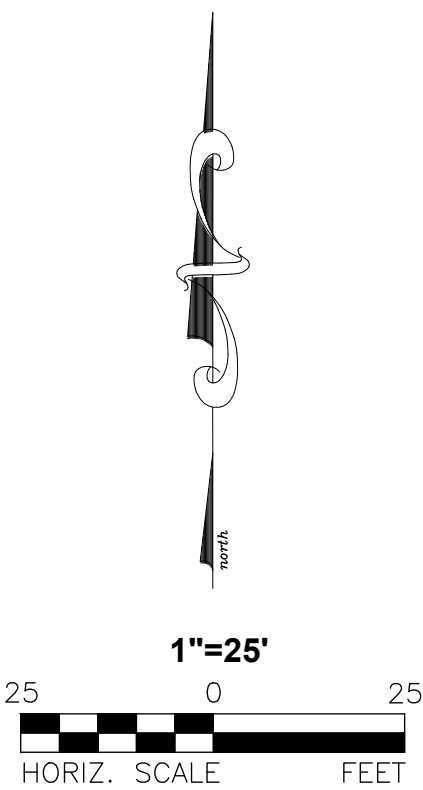
LANDSCAPING NOTES

Sec. 10-1740 PERIMETER OFF STREET PARKING LOT
(1) SHADE TREE/ 50 LF OF FRONTAGE
(1) EVERGREEN TREE/ 25 LF OF FRONTAGE
80% OPAQUE ALONG ALL PARKING FRONTING STREET
PLANTING BEDS SHALL BE MULCHED WITH BARK CHIPS,
ROCK MULCH, FEATHER ROCKS OR SIMILAR MATERIAL.

PERIMETER LANDSCAPING & TRANSITIONAL YARDS SHALL
CONSIST OF A COMBINATION OF GROUND COVER, SHADE
TREES OR EVERGREEN TREES, SHRUBS AND APPROPRIATE
SCREENING DEVICES SUCH AS DECORATIVE WALLS, FENCES OR
BERMS.

LANDSCAPING LEGEND

-  =DENOTES EVERGREEN TREE
-  =DENOTES SHRUB
-  =DENOTES ARBOVITAE HEDGE (4' MIN. - 8' MAX)
(80% OPAQUE ALONG ALL PARKING FRONTING PREMIER DR.)
-  =DENOTES SHADE TREE
-  =DENOTES PLANTING BED W/ MULCH
-  =DENOTES EXISTING TREELINE



Consultant:

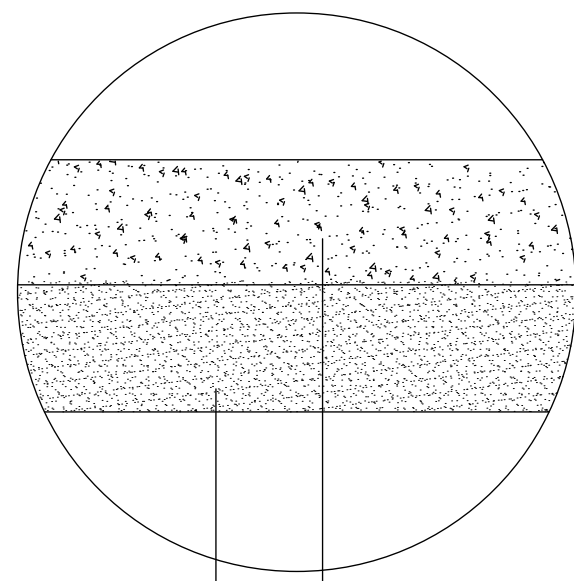
JONES HAUGH SMITH
Engineers & Surveyors
515 South Washington Ave. Albert Lea, MN 56007-3734
Reg. No. 42744 Date: 9/20/25

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Project: **MANKATO APARTMENTS**

Revision:

No.:	Date: 9/20/2025
Drawn: bjj	Checked:
Project Manager:	
Project Status: CD	
Sheet Title: LANDSCAPE PLAN	
Sheet No.: C6	



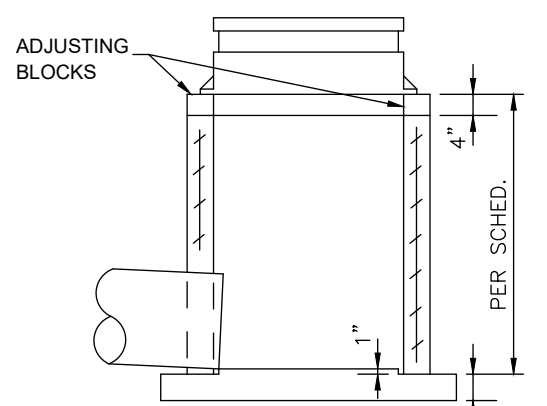
ALL JOINTS SHALL BE SEALED USING AN APPROVED MN/DOT HOT POUR ELASTIC SEALANT (3723) (INCIDENTAL)

7" CONCRETE PAVEMENT (MN/DOT 2301)

3" AGGREGATE BASE CLASS V (MN/DOT 2211)

ALL CONCRETE SHALL BE PORTLAND CEMENT CONCRETE PAVEMENT WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, A 4" MAXIMUM SLUMP AND 5% - 7% ENTRAINED AIR.

CONCRETE PAVEMENT SECTION



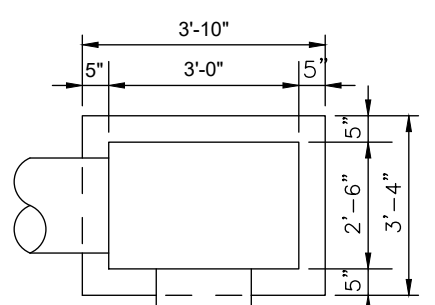
SECTIONAL VIEW
CATCH BASIN & BASE SLAB

NOTES:

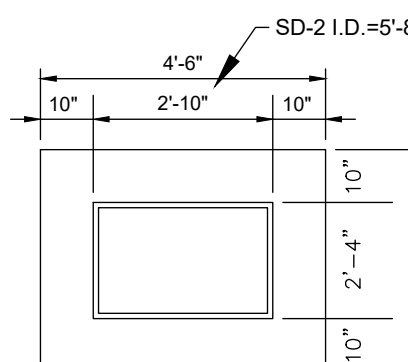
1. TO BE USED WITH NEENAH R3067 FRAMED COVER WITH 3" RAD. CURB BOX OR APPROVED EQUAL.
2. PIPE CUT-OUTS TO BE LOCATED WHERE REQUIRED.
3. ALTERNATE CAST-IN-PLACE BASE CAN BE USED.
4. MINIMUM REINFORCING SHALL BE WIRE FABRIC HAVING AN AREA OF NOT LESS THAN 0.12 SQ. IN. PER FOOT IN BOTH DIRECTIONS.

FOR USE WITH R3067 CASTING

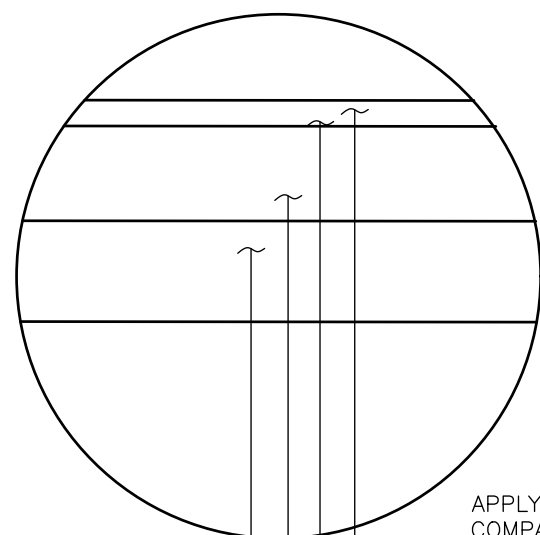
CATCH BASIN 2X3



CATCH BASIN PLAN



BASE SLAB PLAN

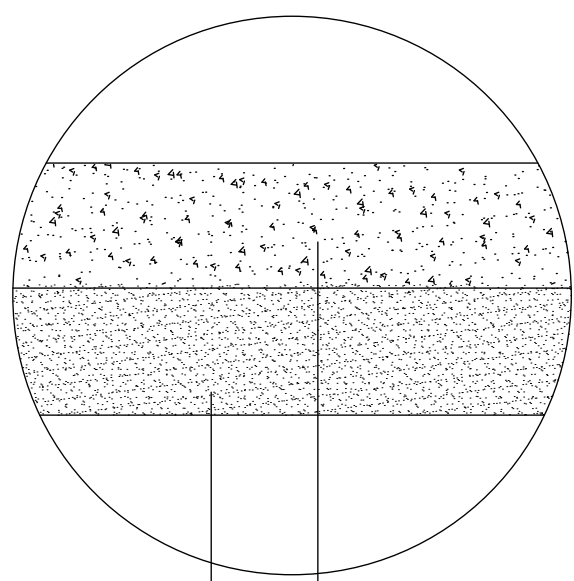


APPLY BITUMINOUS TACK COAT BETWEEN LIFTS
COMPACT ALL GRANULAR MATERIAL TO 100% OF PROCTOR DENSITY.
2.0" TYPE SPWEA240B WEAR COURSE
2.0" TYPE SPNWB230B BASE COURSE
12" CLASS V AGGREGATE BASE (2211)

SCARIFY THE UPPER 12" OF SUBGRADE IN "CUT" AREAS

ALL GRAVEL BASE SHALL EXTEND A MINIMUM OF 1' BEHIND ALL CURB

PARKING LOT PAVEMENT SECTION



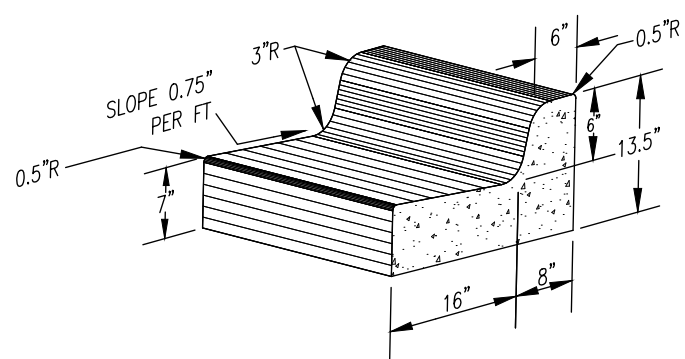
ALL JOINTS SHALL BE SEALED USING AN APPROVED MN/DOT HOT POUR ELASTIC SEALANT (3723) (INCIDENTAL)

4" CONCRETE PAVEMENT (MN/DOT 2301)

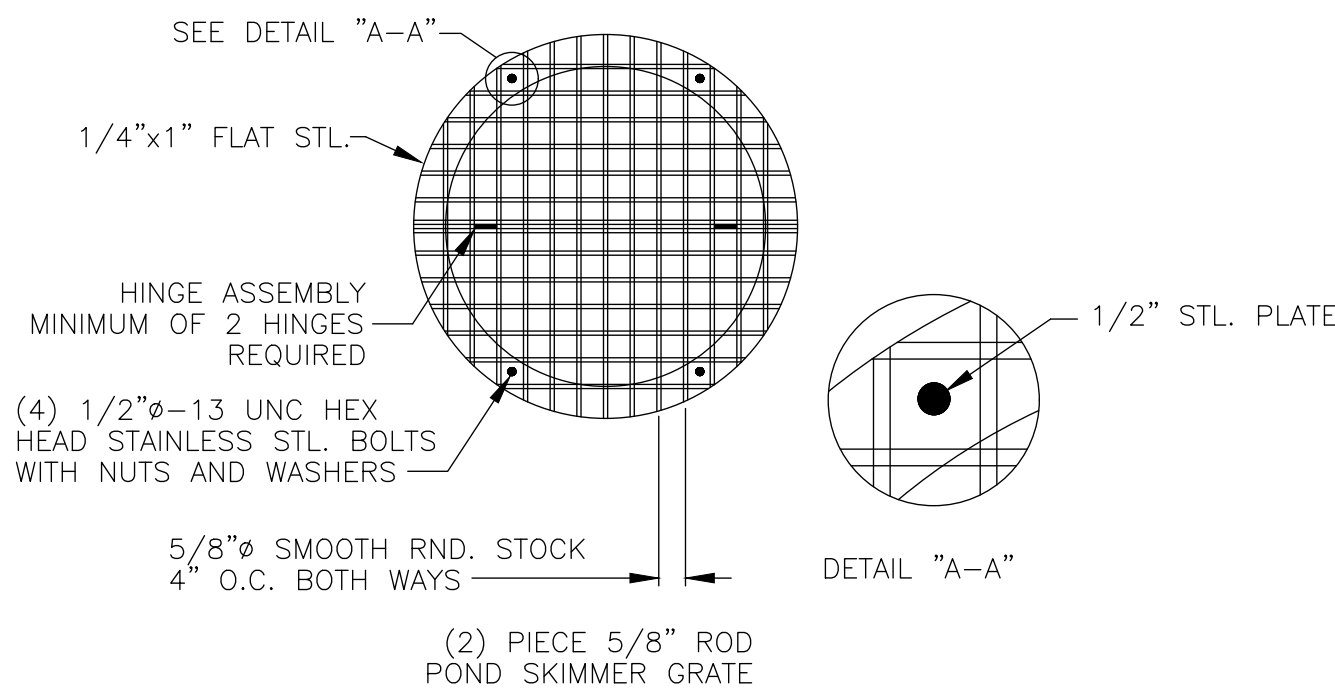
3" AGGREGATE BASE CLASS V (MN/DOT 2211)

ALL CONCRETE SHALL BE PORTLAND CEMENT CONCRETE PAVEMENT WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, A 4" MAXIMUM SLUMP AND 5% - 7% ENTRAINED AIR.

CONCRETE SIDEWALK SECTION



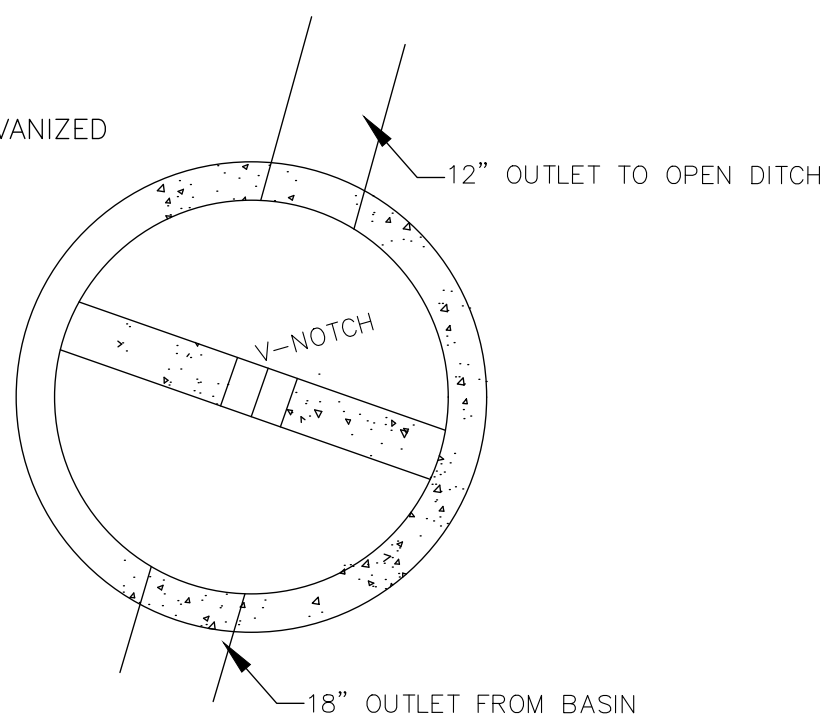
CONCRETE CURB & GUTTER DESIGN B618



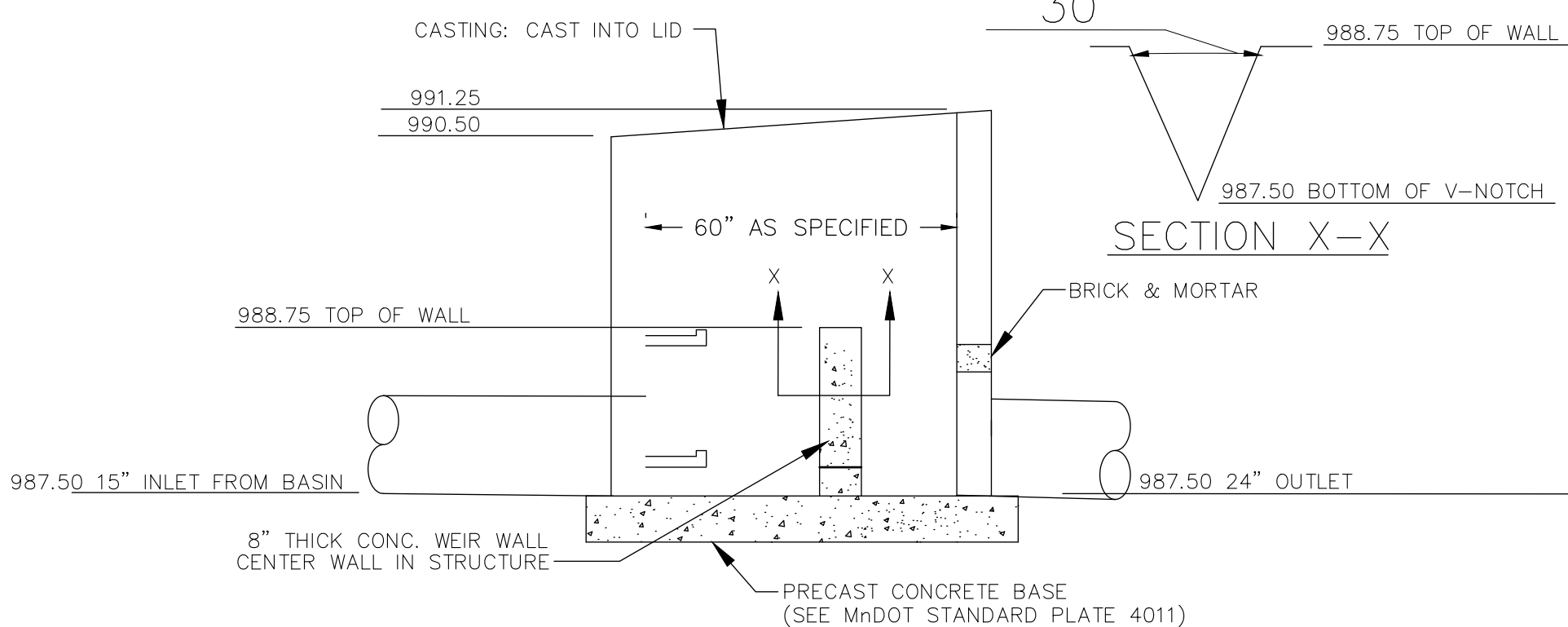
GRATE NOTES:

- 1) GRATE TO BE MADE IN TWO (2) PIECES
- 2) ALL METAL SHALL BE HOT-DIPPED GALVANIZED

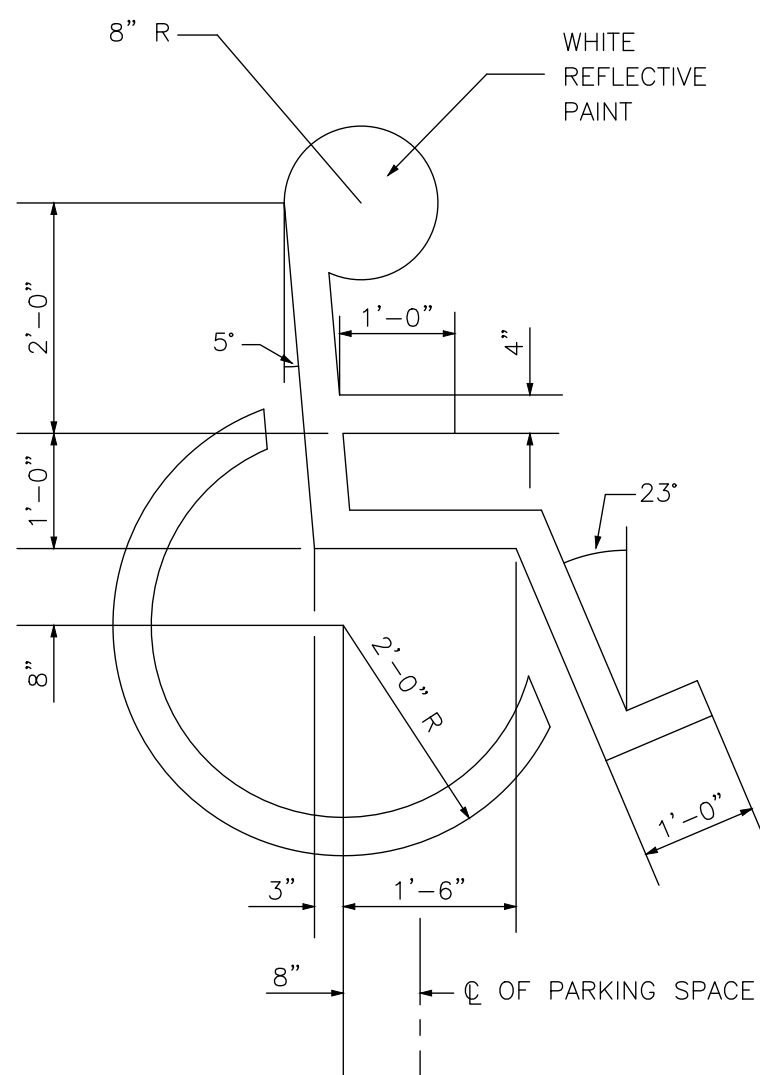
STRUCTURE 12 GRATE PLAN



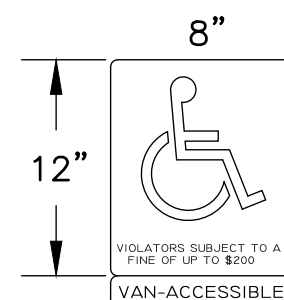
V-NOTCH WEIR OUTLET STRUCTURE PLAN



V-NOTCH WEIR OUTLET STRUCTURE 12 SECTION



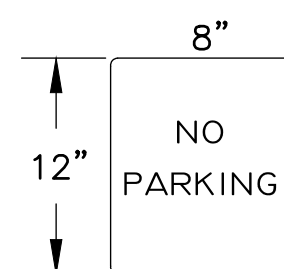
INTERNATIONAL HANDICAP SYMBOL



STEEL POST MOUNTED (PERMANENT)

INSTALL AT ALL HANDICAP STALLS
60"-66" ABOVE FINISH GRADE
CENTERED AT THE HEAD OF THE STALL

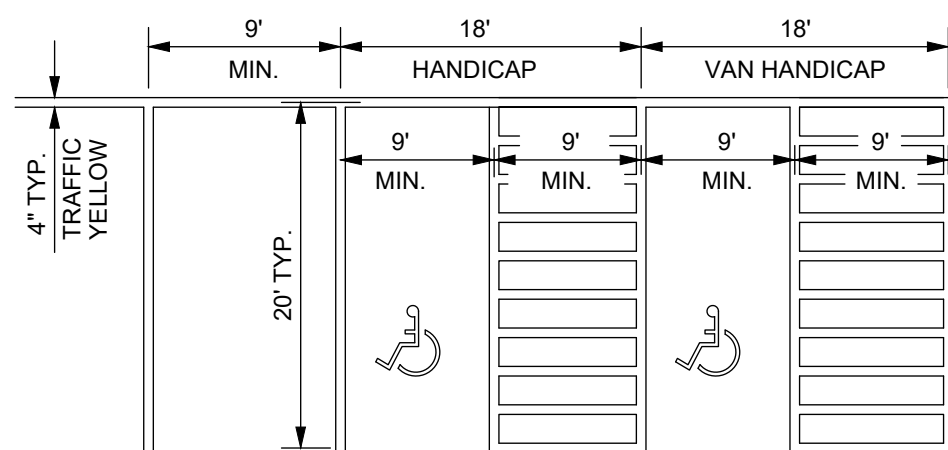
SIGN PANEL DETAIL



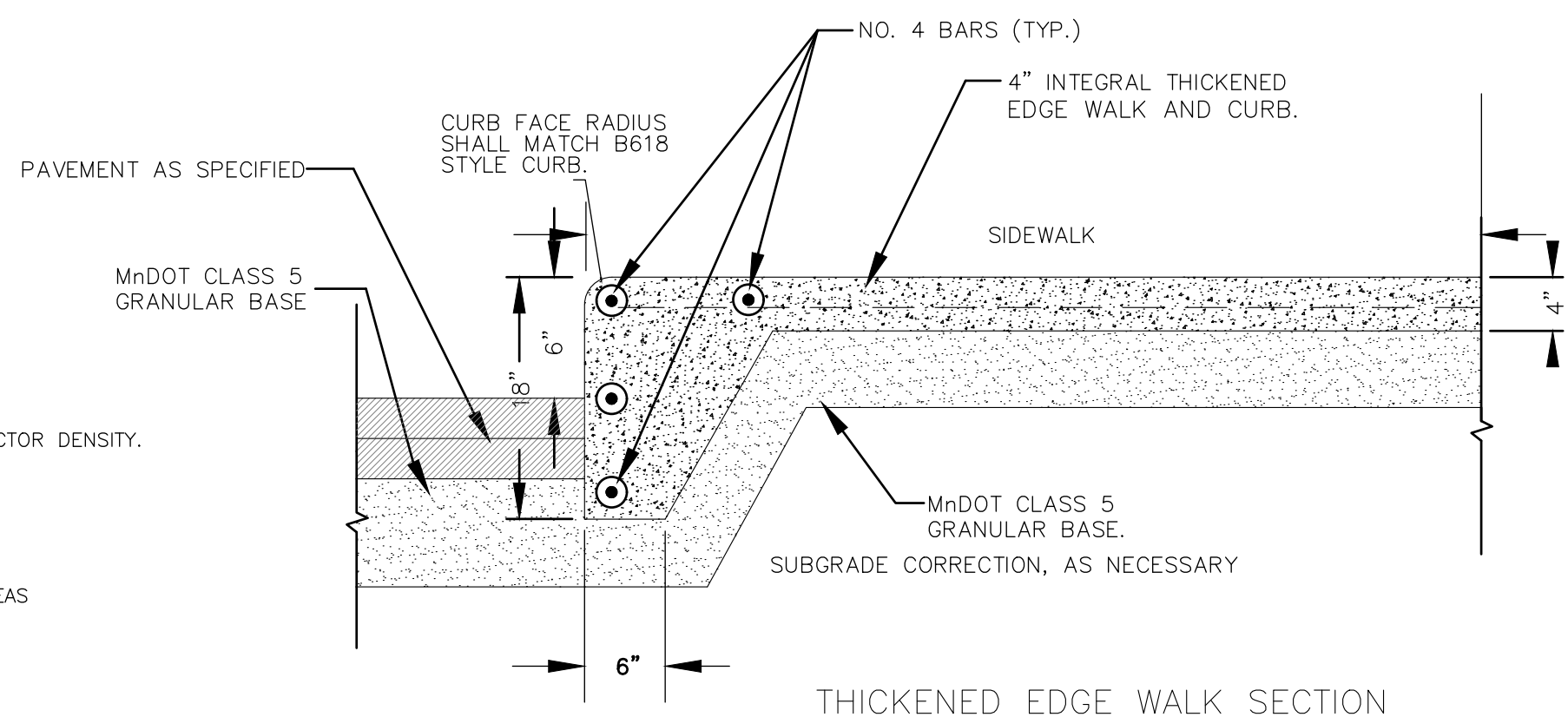
STEEL POST MOUNTED (PERMANENT)

INSTALL AT ALL HANDICAP ACCESS
AISLES-60"-66" ABOVE FINISH GRADE
CENTERED AT THE HEAD OF THE STALL

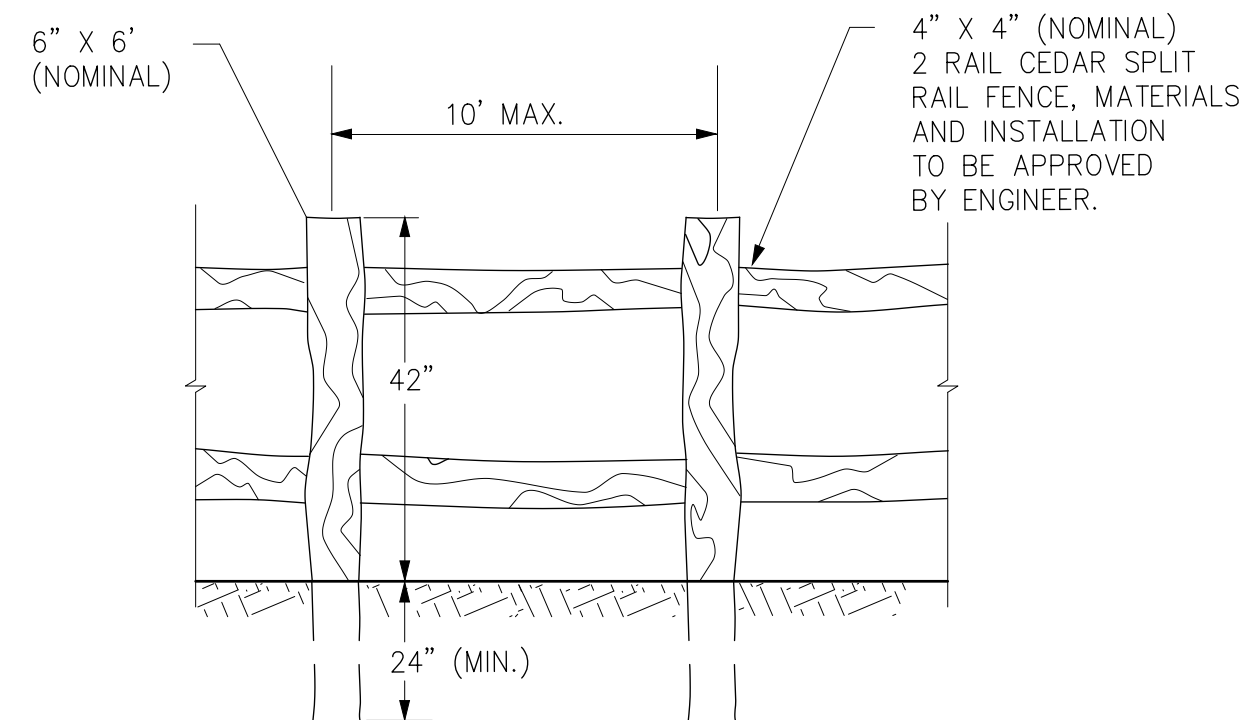
SIGN PANEL DETAIL



90° STALL

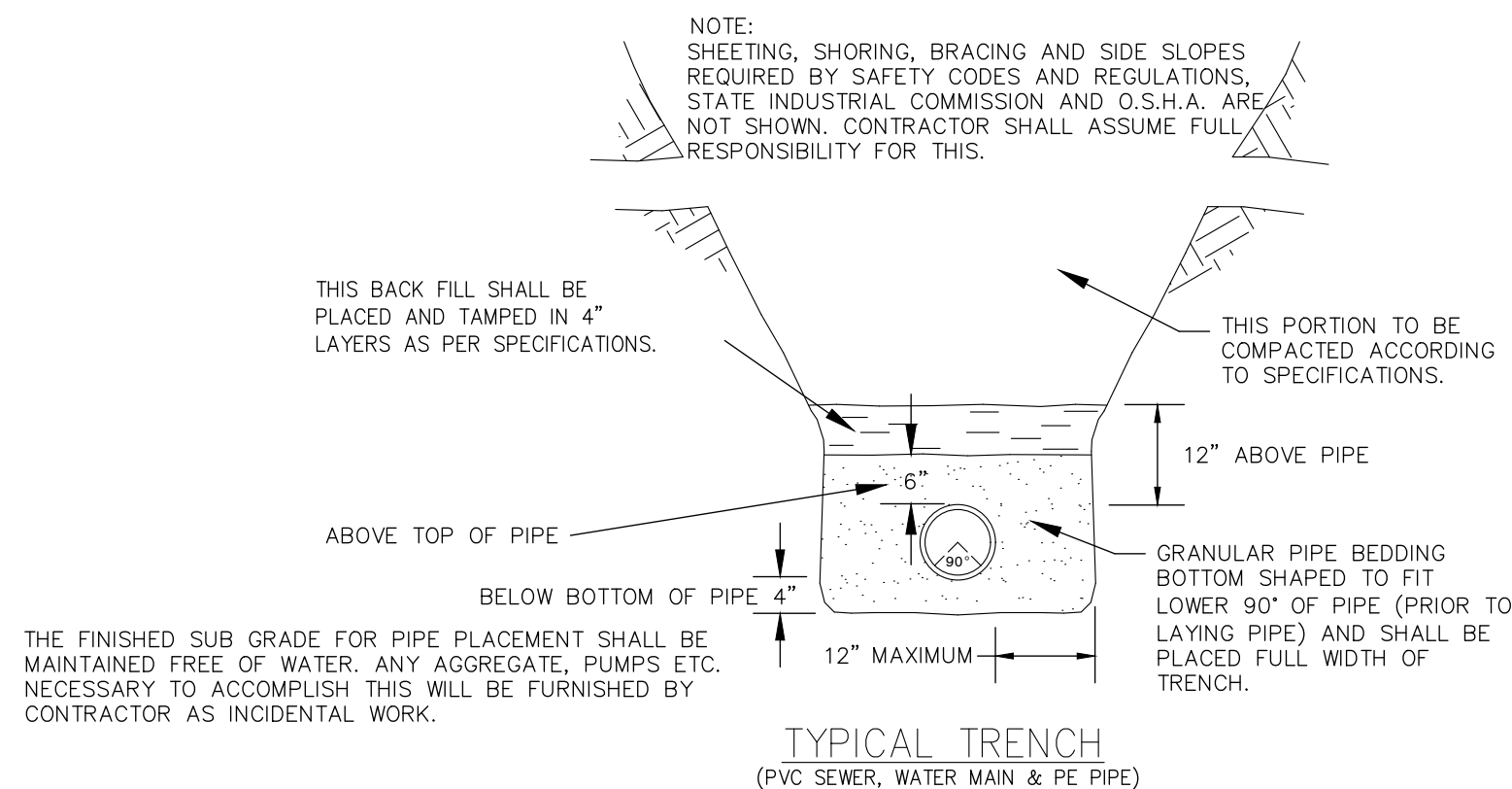


THICKENED EDGE WALK SECTION

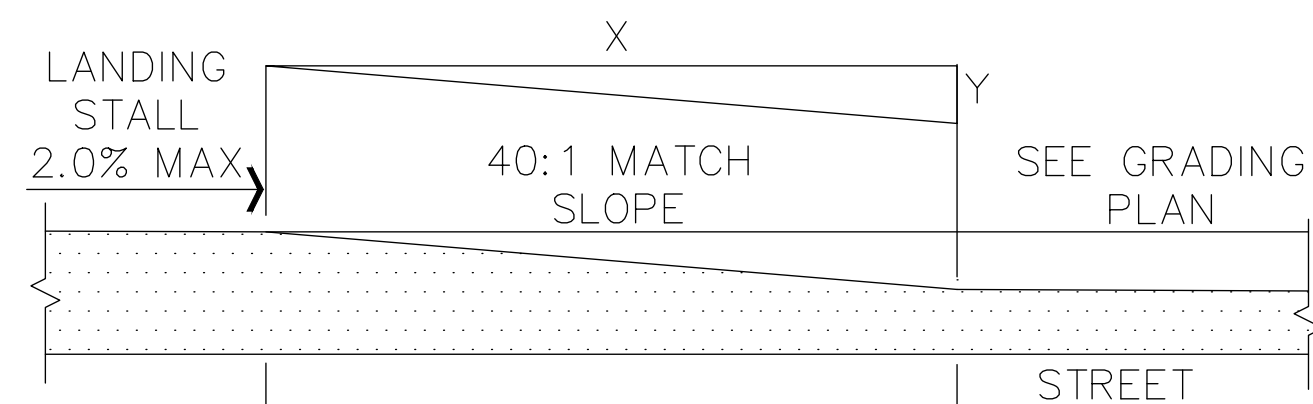


SPLIT RAIL WOOD FENCE REQUIRED ALONGSIDE SIDEWALK INSTALLED WITH ADJACENT 4:1 SLOPES

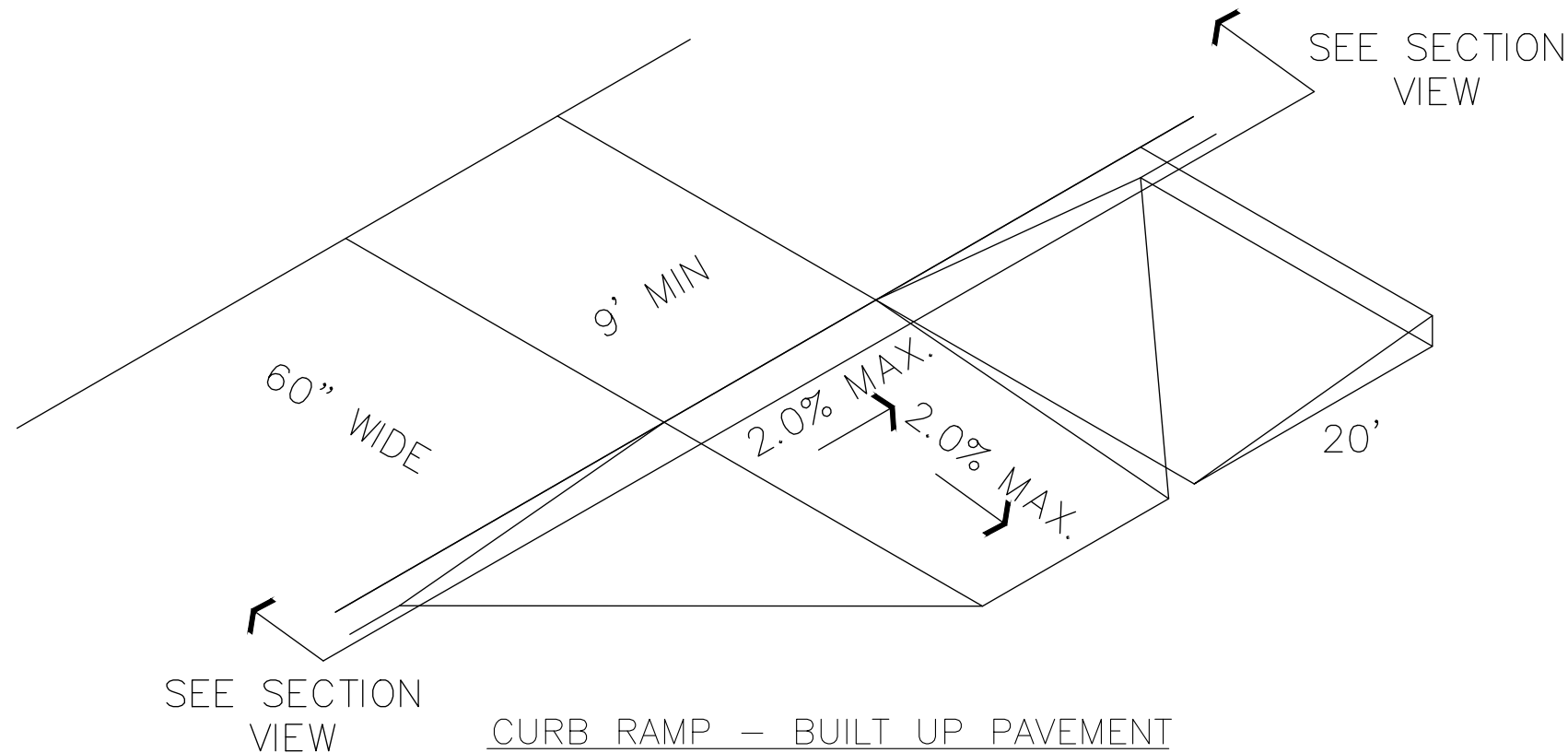
SPLIT RAIL WOOD FENCE



TYPICAL TRENCH (PVC SEWER, WATER MAIN & PE PIPE)



CROSS SECTION



CURB RAMP - BUILT UP PAVEMENT

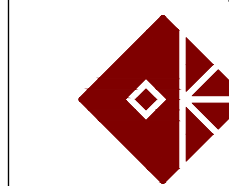
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Date: 9/20/25

Reg. No. 42744

507-373-4876

JONES
HAUGH
SMITH



Consultant:

MANKATO
APARTMENTS

Project:

Revision:

No.: Date: 9/20/2025

Drawn: bjg Checked:

Project Manager:

Project Status: CD

Sheet Title:

DETAILS

Sheet No.:

C7

SWPPP NARRATIVE

CONSTRUCTION ACTIVITY INFORMATION

PROJECT NAME: MANKATO APARTMENTS
FACILITY IMPROVEMENT PROJECT

PROJECT LOCATION: MANKATO, MN

PROJECT SIZE: PARCEL SIZE: 2.0 DISTURBED ACRES

PROJECT TYPE: RESIDENTIAL BUILDING CONSTRUCTION

MAJOR SOIL TYPE: SILTY LOAM, KLOSSNER MUCK

CUMULATIVE IMPERVIOUS SURFACE:
EXISTING - 1.26 ACRES
POST CONSTRUCTION - 2.5 ACRES

DIRECT DISCHARGE FROM IMPERVIOUS SURFACE: 0.2 ACRES

RECEIVING WATERS:
CITY STORM SEWER

DATES OF CONSTRUCTION: 2025

OWNER: GROWTH HOLDINGS LLC

UNDERGROUND UTILITY/GRADING CONTRACTOR:

TO BE DETERMINED

PARTY RESPONSIBLE FOR LONG TERM O&M:

OWNER: GROWTH HOLDINGS LLC

GENERAL SITE INFORMATION

IMMEDIATELY FOLLOWING GRADING OF SLOPES OF 3:1 OR GREATER, SLOPES MUST BE STABILIZED WITH WOOD FIBER BLANKET (OR OTHER METHOD APPROVED BY THE ENGINEER) OVER APPROVED SEED MIXTURE AND A MINIMUM OF 4" OF TOPSOIL.

ALL EROSION CONTROL MEASURES SHALL REMAIN IN PLACE AND BE MAINTAINED IN GOOD CONDITION UNTIL THE SITE HAS BEEN RE-VEGETATED, AT WHICH TIME THE CONTRACTOR MAY REMOVE NECESSARY SILT FENCING TO CONSTRUCT ROADWAYS WHILE MAINTAINING ADEQUATE EROSION CONTROL IN ADJACENT AREAS. SUFFICIENT TOPSOIL SHALL BE STOCKPILED OR IMPORTED TO ALLOW FOR THE REPLACEMENT OF A MINIMUM OF 4" OF TOPSOIL FOR DISTURBED AREAS TO BE RE-VEGETATED.

CONTRACTOR SHALL SCHEDULE SITE GRADING, UTILITY INSTALLATION, AND ROADWAY CONSTRUCTION SO THAT THE GENERAL SITE CAN BE MULCHED AND RE-SEEDDED SOON AFTER DISTURBANCE. DISTURBED AREAS SHALL BE SEEDDED AND MULCHED OR SOODED WITHIN 7 DAYS

INSPECT SILT FENCES AND BALE CHECKS AFTER EACH RAIN EVENT AND DAILY DURING A PROLONGED RAINFALL. IMMEDIATELY REPAIR FAILED OR FAILING MEASURES.

REMOVE SEDIMENT DEPOSITS FROM SILT FENCE AND BALE CHECKS WHEN SEDIMENT REACHES APPROXIMATELY 1/3 THE HEIGHT OF THE BARRIER.

BARRIERS WILL BE REPLACED WHEN THEY DECOMPOSE OR BECOME INEFFECTIVE BEFORE THE BARRIERS ARE NO LONGER NECESSARY. ANY SEDIMENT REMAINING IN PLACE AFTER THE BARRIERS ARE NO LONGER NECESSARY WILL BE DRESSED TO CONFORM TO EXISTING GRADE, AND PREPARED AND SEEDDED WITH THE APPROPRIATE SEED MIX, AS DIRECTED BY THE ENGINEER.

IN THOSE AREAS WHERE WOOD FIBER BLANKET OR OTHER SLOPE STABILIZATION METHODS HAVE FAILED, THE SLOPE SHALL BE RE-ESTABLISHED, SEED AND TOPSOIL REPLACED, AND ADDITIONAL SLOPE TREATMENT INSTALLED.

BARRIERS WILL BE REMOVED WHEN FINAL STABILIZATION OF THE SLOPES HAS BEEN COMPLETED AS DETERMINED BY THE ENGINEER.

NO STORMWATER MITIGATION MEASURES WERE REQUIRED AS A PART OF ENVIRONMENTAL, ARCHAEOLOGICAL OR OTHER REQUIRED LOCAL, STATE, OR FEDERAL REVIEW OF THIS PROJECT.

THIS PROJECT IS NOT LOCATED IN A KARST AREA NECESSITATING MEASURES TO PROTECT DRINKING WATER SUPPLY.

THIS PROJECT DOES DISCHARGE WATER TO AN IMPAIRED WATER.

PROVIDE SILT FENCE AROUND ALL SOIL STOCKPILES

SWPPP IMPLEMENTATION CHAIN OF RESPONSIBILITY

EACH CONTRACTOR ON-SITE WILL DESIGNATE AN EMPLOYEE AS ITS PROJECT SWPPP OFFICER. A LIST OF THESE OFFICERS WITH CONTACT INFORMATION WILL BE AVAILABLE ON-SITE. IT WILL BE SOLELY THE SWPPP OFFICERS' RESPONSIBILITY TO ENSURE THAT ALL ON-SITE ACTIVITIES PERFORMED BY ITS COMPANY COMPLY WITH THE SWPPP. THE GENERAL CONTRACTOR'S SWPPP OFFICER WILL HAVE AUTHORITY OVER ALL SUB-CONTRACTOR'S SWPPP OFFICERS FOR WORK PERTAINING TO COMPLIANCE.

SHOULD A SWPPP OFFICER FAIL TO ENSURE COMPLIANCE, THAT OFFICER'S FOREMAN OR DIRECT SUPERVISOR WILL ASSUME ALL RESPONSIBILITY.

SHOULD A SUB-CONTRACTOR FAIL TO COMPLY WITH THE SWPPP, THE GENERAL CONTRACTOR WILL ASSUME ALL RESPONSIBILITY FOR COMPLIANCE.

SHOULD THE GENERAL CONTRACTOR FAIL TO COMPLY WITH THE SWPPP, THE OWNER WILL ASSUME ALL RESPONSIBILITY FOR COMPLIANCE.

EROSION PREVENTION PRACTICES

CONTRACTOR SHALL PHASE CONSTRUCTION, MAINTAIN VEGETATIVE BUFFER STRIPS, AND PROVIDE HORIZONTAL SLOPE STAKING IN ORDER TO MINIMIZE EROSION

SILT FENCE SHALL BE INSTALLED BEFORE WORK BEGINS. SILT FENCE LIMITS SHALL COINCIDE WITH DOWNGRADE GRADING LIMITS UNLESS OTHERWISE NOTED.

THIS PROJECT DOES NOT HAVE EXPOSED POSITIVE SLOPES WITHIN 200' OF SURFACE WATER.

THE WETTED PERIMETER OF DRAINAGE SWALES WILL BE STABILIZED WITH WOOD FIBER BLANKETS AND/OR DITCH CHECKS WITHIN 200' OF THE SITE BOUNDARY LINE OR WETTED PERIMETER OF DITCHES WITHIN 24 HOURS.

TEMPORARY OR PERMANENT DITCHES THAT ARE BEING USED AS A SEDIMENT CONTAINMENT SYSTEM DURING CONSTRUCTION MUST BE STABILIZED WITHIN 24 HOURS AFTER NON-USE

PIPE OUTLETS MUST HAVE ENERGY DISSIPATION IN PLACE WITHIN 24 HOURS OF INSTALLATION. MULCH, HYDROMULCH, TACKIFIER, POLYACRYLAMIDE EROSION PREVENT PRACTICES CANNOT BE USED WITHIN THE NORMAL WETTED PERIMETER OF OF DRAINAGE DITCHES OR SWALE SECTIONS WITH A CONTINUOUS SLOPE GREATER THAN 2%.

SEDIMENT CONTROL PRACTICES

CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN: SEDIMENT CONTROLS FOR TEMPORARY AND PERMANENT DRAINAGE BASINS AND DRAINAGE DITCHES THAT ARE A PART OF THIS DESIGN

CHECK DAMS AND/OR WOOD FIBER BLANKETS TO ENSURE SHEET FLOW AND PREVENT RILLS FOR SLOPE LENGTHS GREATER THAN 75' WITH A SLOPE OF 3:1 OR GREATER

SILT FENCE AT ALL DOWN GRADIENT PERIMETERS INSTALLED PRIOR TO ALL LAND DISTURBING ACTIVITIES

INLET PROTECTION AT ALL DRAIN INLETS

SILT FENCING AROUND TEMPORARY SOIL STOCKPILES

ROCK CONSTRUCTION SITE ENTRANCES

STREET SWEEPING OF TRACKED SEDIMENT ONTO PAVED SURFACES

SEDIMENT CONTROL PRACTICES MUST BE IN PLACE AT ALL DOWN GRADIENT PERIMETERS AND UPGRADIENT OF ANY BUFFER ZONES. SEDIMENT CONTROL PRACTICES ARE ESTABLISHED AT THE BASE OF STOCKPILES ON DOWN GRADIENT PERIMETER. STOCKPILES ARE LOCATED OUTSIDE OF NATURAL BUFFERS OR SURFACE WATER, INCLUDING STORM WATER CONVEYANCES UNLESS THERE IS A BYPASS

THIS PROJECT DOES NOT INCLUDE DEWATERING OR BASIN DRAINING. PERMANENT SEDIMENT BASINS WILL BE USED AS TEMPORARY BASINS DURING CONSTRUCTION

ADDITIONAL BMP'S FOR SPECIAL WATERS

THIS PROJECT DOES NOT DISCHARGE TO SPECIAL WATERS OR HAVE SIGNIFICANT IMPACTS TO WETLANDS

INSPECTIONS AND MAINTAINANCE

CONTRACTOR SHALL INSPECT AND MAINTAIN MEASURES AT MINIMUM ONCE EVERY (7) DAYS DURING ACTIVE CONSTRUCTION, AND WITHIN 24 HOURS AFTER A RAINFALL EVENT OF 0.5" IN 24 HOURS. INSPECTIONS WILL INCLUDE STABILIZED AREAS, EROSION PREVENTION AND SEDIMENT CONTROLS, AND INFILTRATION AREAS.

REFER TO MPCA'S COMPLIANCE GUIDE FOR EROSION AND SEDIMENT CONTROL FOR INSPECTION LOG REQUIREMENTS

MAINTENANCE RECORDS SHOULD INCLUDE: DATES & TIMES IF INSPECTION, NAME OF PERSON CONDUCTING THE INSPECTION, FINDINGS & LOCATIONS OF CORRECTIVE ACTIONS, PARTY COMPLETING MAINTENANCE ACTIVITIES, DATES & AMOUNTS OF RAINFALL EVENTS GREATER THAN 0.5" RAINFALL AMOUNTS ARE TO BE RECORDED WITH RAIN GAUGE ON SITE OR WEATHER STATION WITHIN 1 MILE OF SITE. ANY DISCHARGES OBSERVED SHOULD BE DESCRIBED & PHOTOGRAPHED.

RECORDS RETENTION

CONTRACTOR SHALL MAINTAIN RECORDS OF THE SEDIMENT RETENTION PROCEDURES ON-SITE. RECORDS WILL INCLUDE: COPY OF THE SWPPP AND ALL REVISIONS, INSPECTION AND MAINTAINANCE RECORDS, PERMANENT OPERATION AND MAINTAINANCE AGREEMENTS, CALCULATIONS FOR THE DESIGN OF TEMPORARY AND PERMANENT STORMWATER MANAGEMENT SYSTEMS, COPIES OF THE SWPPP MUST BE RETAINED ON SITE BY THE PERMITTEE

POLLUTION PREVENTION MEASURES

SOLID WASTE: COLLECTED SEDIMENT, ASPHALT AND CONCRETE MILLINGS, FLOATING DEBRIS, PAPER, PLASTIC, FABRIC, CONSTRUCTION AND DEMOLITION DEBRIS AND OTHER WASTES MUST BE DISPOSED OF PROPERLY AND MUST COMPLY WITH MPCA DISPOSAL REQUIREMENTS.

CONCRETE AND OTHER WASHOUTS: PERFORM ALL CONCRETE TRUCK WASHOUTS IN PROPER CONTAINMENT FACILITIES. SOLID AND LIQUID WASHOUT WASTE FROM OTHER MATERIALS (STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS ETC.) WILL BE DISPOSED OF IN A PROPERLY DESIGNATED LANDFILL.

PERFORM ALL WASHOUTS INCLUDING HANDTOOLS IN A LEAKPROOF CONTAINMENT FACILITY OR IMPERMEABLE LINER THAT PREVENTS RUNOFF ONTO ADJACENT SOILS. DEBRIS/SEDIMENT WILL NOT CONTACT THE GROUND SURFACE.

A SIGNE REQUIRING USE OF PROPER WASHOUT FACILITIES WILL BE INSTALLED ADJACENT TO SAID FACILITIES.

HAZARDOUS MATERIALS: OIL, GASOLINE, PAINT AND ANY HAZARDOUS SUBSTANCES MUST BE PROPERLY STORED, INCLUDING SECONDARY CONTAINMENT TO PREVENT SPILLS, LEAKS, OR OTHER DISCHARGE. RESTRICTED ACCESS TO STORAGE AREAS MUST BE PROVIDED TO PREVENT VANDALISM. STORAGE AND DISPOSAL OF HAZARDOUS WASTE MUST BE IN COMPLIANCE THE MPCA REGULATIONS.

EXTERNAL WASHING OF TRUCKS AND OTHER CONSTRUCTION VEHICLES MUST BE LIMITED TO A DEFINED AREA OF THE SITE. RUNOFF MUST BE CONTAINED OF AND WASTE PROPERLY DISPOSED OF. NO ENGINE DEGREASING IS ALLOWED ON SITE.

SWPPP AMENDMENTS

AMENDMENTS MADE IN THE FIELD TO THE SWPPP SHOULD BE UPDATED ON THE SWPPP. REFER TO PROCEDURES OUTLINED IN SECTION 6.1 OF THE PERMIT.

SWPPP IMPLEMENTATION CHAIN OF RESPOSIBILITY

THE GENERAL CONTRACTOR SHALL PROVIDE A TRAINED, CERTIFIED, KNOWLEDGEABLE PERSON WHO SHALL SERVE AS THE SITE'S EROSION CONTROL INSPECTOR. THIS PERSON SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL BMP'S, AND SHALL MAINTAIN THE INSPECTION LOG AT THE PROJECT SITE.

EACH SUBCONTRACTOR ON-SITE WILL DESIGNATE AN EMPLOYEE AS ITS PROJECT SWPPP OFFICER. A LIST OF THESE OFFICERS WITH CONTACT INFORMATION WILL BE AVAILABLE ON-SITE. IT WILL BE SOLELY THE SWPPP OFFICERS' RESPONSIBILITY TO ENSURE THAT ALL ON-SITE ACTIVITIES PERFORMED BY ITS COMPANY COMPLY WITH THE SWPPP. THE GENERAL CONTRACTOR'S SWPPP INSPECTOR WILL HAVE AUTHORITY OVER ALL SUBCONTRACTOR'S SWPPP OFFICERS FOR WORK PERTAINING TO COMPLIANCE.

SHOULD A SWPPP OFFICER FAIL TO ENSURE COMPLIANCE, THAT OFFICER'S FOREMAN OR DIRECT SUPERVISOR WILL ASSUME ALL RESPONSIBILITY.

SHOULD A SUBCONTRACTOR FAIL TO COMPLY WITH THE SWPPP, THE GENERAL CONTRACTOR WILL ASSUME ALL RESPONSIBILITY FOR COMPLIANCE.

SHOULD THE GENERAL CONTRACTOR FAIL TO COMPLY WITH THE SWPPP, THE OWNER WILL ASSUME ALL RESPONSIBILITY FOR COMPLIANCE.

CHANGES IN PERMIT AND NOTICE OF TERMINATION

THE CONTRACTOR WILL BE A CO-PERMITTEE DURING THE CONSTRUCTION OF THE PROJECT. AFTER GRAVEL SURFACING OF THE PROJECT HAS BEEN COMPLETED, AND 70% PERMANENT VEGETATIVE COVER HAS BEEN ESTABLISHED OVER THE PVIOUS AREAS OF THE SITE, AND THE WARRANTY PERIOD HAS ELAPSED, THE CONTRACTOR MAY SUBMIT A MPCA (NOT)F ORM TO THE OWNER FOR SIGNATURE AND SUBMITTAL TO THE MPCA.

THE OWNER WILL SUBMIT THE NOTICE OF TERMINATION (NOT) AFTER ONE FINAL ESTABLISHMENT OF ALL PVIOUS SURFACES ACCORDING TO THE MPCA GENERAL PERMIT REQUIREMENTS

NOTIFICATION OF THE MPCA IN CASE OF POLLUTION

IT IS THE DUTY OF THE CONTRACTOR TO NOTIFY THE MPCA IMMEDIATELY OF ANY DISCHARGE, ACCIDENTAL OR OTHERWISE, OF ANY SUBSTANCE OR MATERIAL UNDER HIS CONTROL WHICH, IF NOT RECOVERED, MAY CAUSE POLLUTION OF WATERS OF THE STATE, AND THE CONTRACTOR SHALL RECOVER AS RAPIDLY AND THOROUGHLY AS POSSIBLE SUCH SUBSTANCE OR MATERIAL AND TAKE IMMEDIATELY SUCH OTHER ACTION AS MAY BE REASONABLY POSSIBLE TO MINIMIZE OR ABATE POLLUTION OF WATERS OF THE STATE CAUSED THEREBY.

SEDIMENT LEAVING THE CONSTRUCTION SITE AND ENTERING A PUBLIC WATER IS CAUSE FOR NOTIFICATION.

MPCA DUTY OFFICER: 800-422-0798

QUALIFIED SWPPP PERSONNEL INFORMATION

SWPPP DESIGNER: BRIAN J. JOHNSON, PE
JONES HAUGH & SMITH, INC.
515 SOUTH WASHINGTON AVE
ALBERT LEA, MN 56007
(507) 373-4876

SWPPP INSTALLER:

NAME: _____

FIRM: _____

ADDRESS: _____

PHONE: _____

SWPPP INSPECTOR:

NAME: _____

FIRM: _____

ADDRESS: _____

PHONE: _____

GRADING CONTRACTOR:

NAME: _____

FIRM: BCM CONTRACTING

ADDRESS: _____

PHONE: _____

OTHER LAND DISTURBING CONTRACTOR:

NAME: _____

FIRM: _____

ADDRESS: _____

PHONE: _____

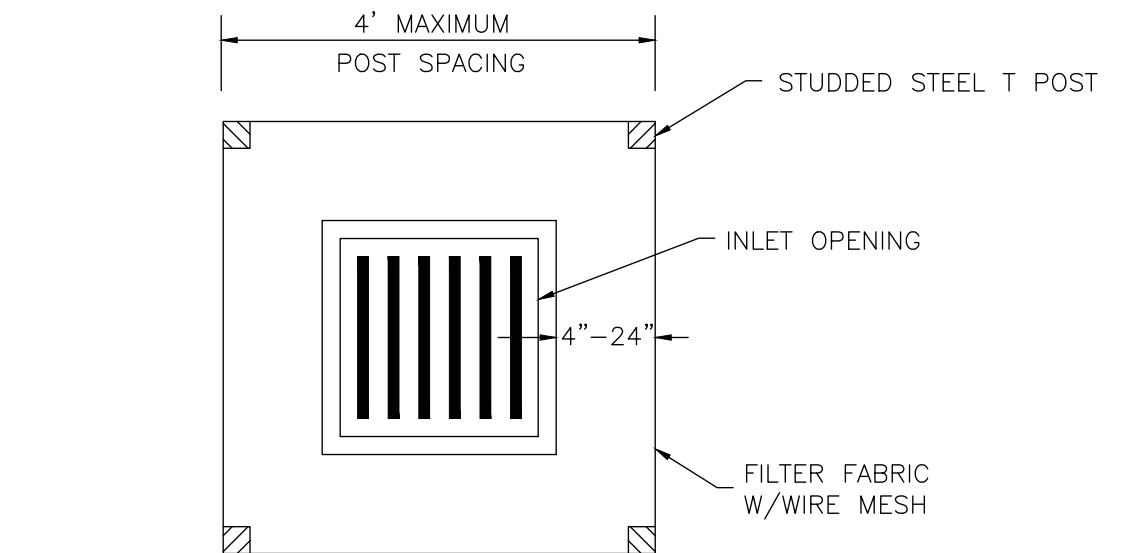
OTHER LAND DISTURBING CONTRACTOR:

NAME: _____

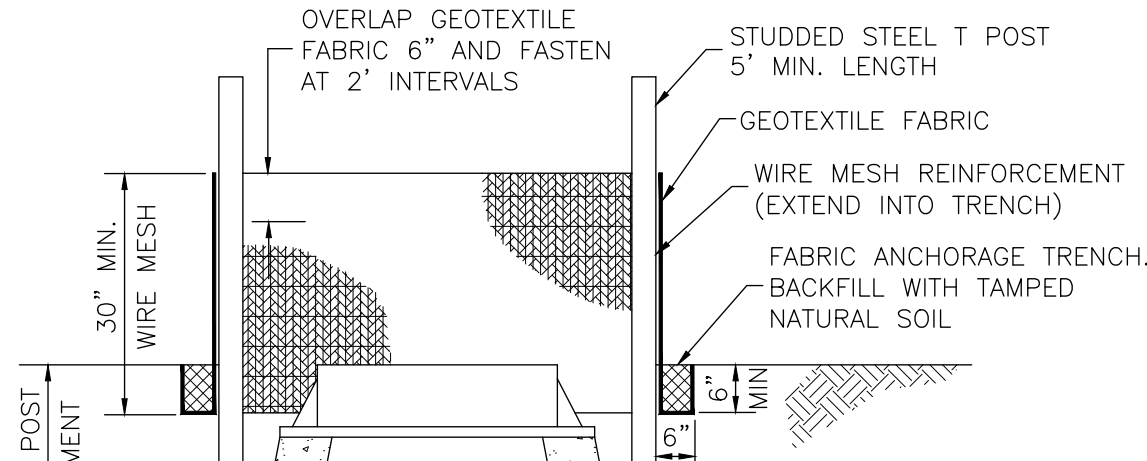
FIRM: _____

ADDRESS: _____

PHONE: _____



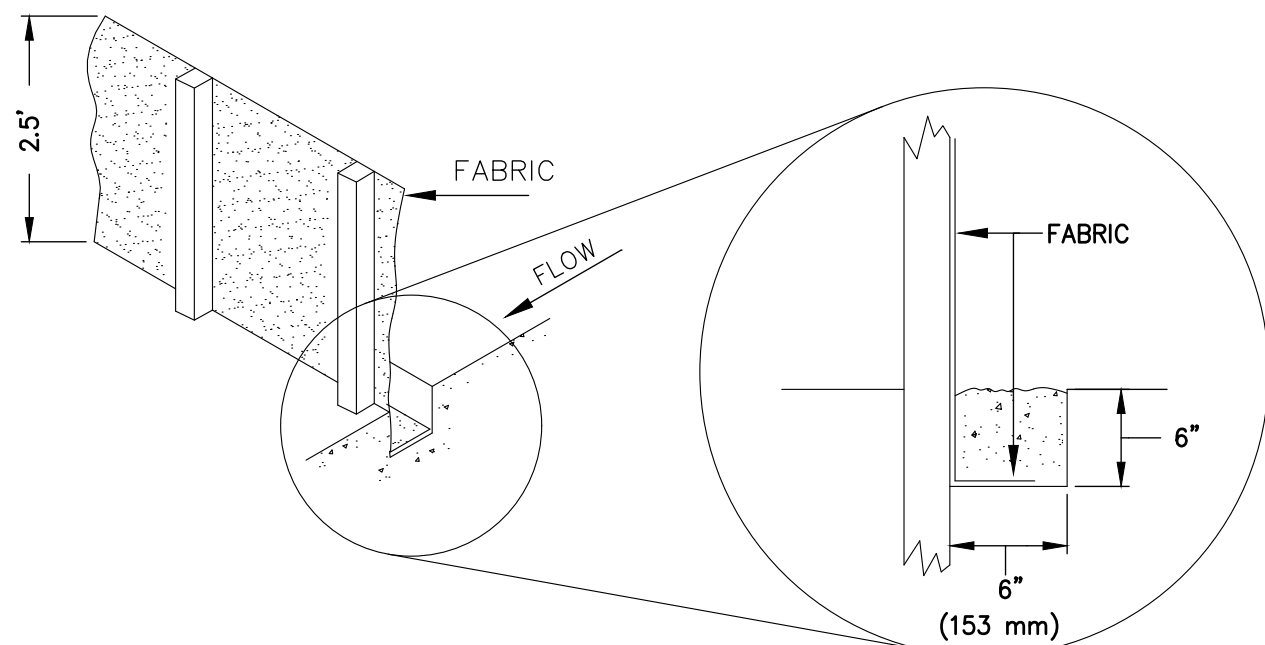
PLAN VIEW



NOTE: SILT FENCE SHALL CONFORM TO THE REQUIREMENTS OF (3886)

SECTIONAL VIEW

INLET PROTECTION – HEAVY DUTY

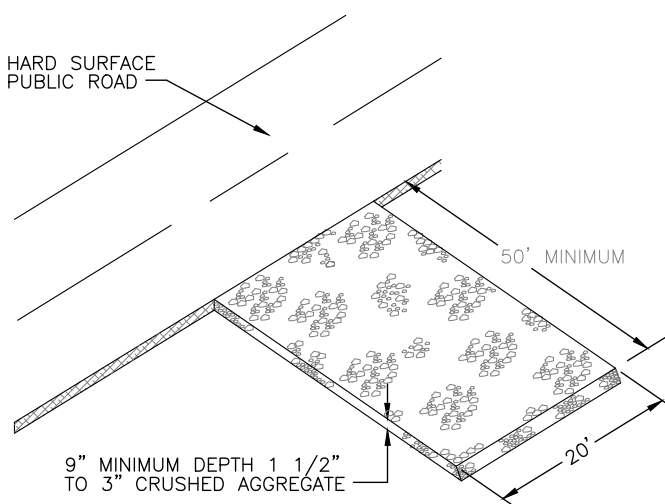


NOTES:

- PLACE BOTTOM EDGE OF FENCE INTO 6" (153 mm) DEEP
- POSTS SHALL BE:
 - 4" (1.22 m) ON CENTER
 - 2" (50.8 mm) X 2" (50.8 mm) HARDWOOD, PINE OR STANDARD STEEL FENCE POSTS
 - DRIVEN 2' (0.61 m) INTO THE GROUND.

EROSION CONTROL FENCE

(MACHINE SLICED)



EROSION CONTROL PROTECTION AT CONSTRUCTION ACCESS

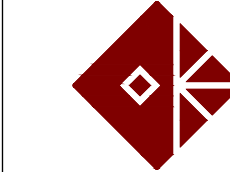
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Date: 9/20/25

Reg. No. 42744

515 South Washington Ave. Albert Lea, MN 5607-373-4876

JONES
HAUGH
SMITH



Consultant:

MANKATO
APARTMENTS

Project:

Revision:

No.: Date: 9/20/2025

Drawn: bj Checked:

Project Manager:

Project Status: CD

Sheet Title:

SWPPP
NARRATIVE &
DETAILS

Sheet No.:

C8

GOVERNING SPECIFICATIONS

The Minnesota Department of Transportation's "Standard Specifications for Construction" 2018 Edition, including the Mn/DOT Special Provisions modified for this project, Minnesota Plumbing Code and the City Engineers Association of Minnesota Standard Specification, 2018 Edition, will govern except as modified or altered in the Special Provisions. All references to "State of Minnesota" or "Commissioner of Transportation" or "Department" are hereby revised to mean "Owner."

WORK WITHIN PROPERTY

The Contractor will work only in areas secured by the Owner, and will comply with all requirements of access agreements.

MATERIALS TESTING

Materials Testing will be by the Contractor. The Contractor will hire an independent testing consultant, approved by the Engineer, prior to the start of work to be tested.

1. The following materials tests will be provided by the Testing Company:

Work to be Tested	Method	Reference Spec.	Testing Rate
Sewer & Water Service Trenches	Specified Density	MnDOT 2105, 2451, 2501	1 test per 500 lf
Storm Sewer Trench Compaction	Specified Density	MnDOT 2105, 2451, 2501	1 test per 500 lf
Subgrade/Embankment Compaction	Specified Density	MnDOT 2105	1 test per 2500 cy placed (Clay, Sand, etc.)
Test Rolling	Fully Loaded Dump Truck		1 test per road
Select Granular Borrow	Specified Density	MnDOT 3149	1 per 5000 ton
	Gradation	MnDOT 3149	1 per Source
Aggregate Base (CL 3, CL 5)	Modified DCP	MnDOT 2211	2 tests per 1000 ton
	Gradation	MnDOT 2211	1 per 5000 ton
Bituminous Paving	Ordinary Comp.-Control Strip	MnDOT 2360	1 control strip per mobilization and/or per workday
Concrete Curb & Gutter	Air, Slump, Temp, Strength	MnDOT 2461	If non-integral
	Air, Temp. - 1 per day		
	Slump, Strength - 1 per day; and each time water is added at the site		
Concrete Driveway or Sidewalk	Air, Slump, Temp, Strength	MnDOT 2461	
	Air, Temp. - 1 per day		
	Slump, Strength - 1 per day; and each time water is added at the site		
Concrete Paving		MnDOT 2301	
	All Concrete Field testing or Concrete Pavement per 2012 MnDOT Schedule of Materials Control (page 32), except Pavement Texture and Smoothness.		

Table Notes:

- Specified Density also requires Moisture-Density and Relative Density
- The Engineer may omit duplicative trench compaction tests at his discretion

MAINTENANCE OF TRAFFIC (1040)

The Contractor will be responsible for traffic control on the Project, and will furnish, erect, and maintain all necessary traffic control devices required to provide safe movement of vehicular traffic through the Project. Any traffic control device installed will meet the requirements of the Minnesota Manual on Uniform Traffic Control Devices, Field Manual, latest edition, and the latest MnDOT specifications approved at the time of bids.

The Contractor will prepare and submit to the City Engineer and County Engineer for Approval a Traffic Control Plan for any work in or utilization of traveled Right-of-Way. The plan will be submitted a minimum of 48 hours prior to the commencement of work. No work in the Right-of-Way will commence without an Approved Traffic Control Plan.

Traffic control will be in accordance with the Traffic Control Layout Plan and the following:

Traffic control devices include, but are not limited to, barricades, warning signs, lane markings, trailers, flashers, cones, and drums, as required, and sufficient barricade weights to maintain barricade stability.
No material will be deposited on a traveled roadway.
Materials will not be placed on road right of way more than one week in advance of their use.
Contractor will notify the affected parties at least one week prior to commencement of disturbance of the private or business drives.
Coordination will be maintained with the Fire and Police Departments to ensure that passage is maintained for emergency vehicles at all times.
The Contractor will make one person responsible for the maintenance of all signs. The Contractor will check each intersection at the end of each day whether it is a working day or not. The name and telephone number of this person will be left with the Police, the City Engineer, and the Fire Departments.

UTILITY PROPERTY AND SERVICE (1507)

Construction operations in the proximity of utility properties will be performed in accordance with the Provisions of 1507, except as modified below:

The first paragraph of 1507 is deleted and the following substituted therefore:

It will be the Contractor's responsibility to contact all local utility companies and ascertain the location of all existing underground utilities, if any, prior to performing any excavation operations. The Contractor will conduct his/her operations in the vicinity of any such facilities, which may exist, in a manner that will prevent damage thereto.

It will be the Contractor's responsibility to utilize the One-Call Excavation Notice System at 'Gopher State One Call' (1-800-252-1166) required under Minnesota Statute Chapter 216D, 48 hours prior to performing any excavation adjacent to any underground facility, which may exist, in a manner that will prevent damage thereto.

CONSTRUCTION STAKES, LINES AND GRADES (1508)

All construction staking will be provided by the Contractor and performed by or under the direct supervision of a Land Surveyor licensed in the State of Minnesota.

Field Fit Adjustments to Grade Stakes

The Engineer may make minor adjustments (< 0.5') to the grade stakes after they have been placed, in order to adjust to actual conditions in the field or to ensure proper or better drainage. Any adjustments to proposed or in-place materials required due to minor adjustments made by the Engineer are incidental to the work.

CONTROL OF HAUL ROADS (1515), LAWS TO BE OBSERVED (1701)

In addition to the requirements of 1515 and 1701, the Contractor will abide by all weight restrictions implemented by the governing road authorities in the performance of the work and in delivering materials and equipment to the project site.

AIR LAND AND WATER POLLUTION (1717)

The provisions of Mn/DOT 1717 are hereby modified and supplemented as follows:

DEWATERING

Any dewatering necessary to construct the work will be done by the Contractor. The Contractor is responsible to determine the type and method of dewatering and to provide and implement all equipment and materials necessary to accomplish the work on this project. Discharged water from dewatering will be routed through a temporary sediment basin. Sediment trapped in the temporary basins will be removed and disposed of on-site.

PROTECTION OF SURFACE STRUCTURES

The Contractor will not trespass on any private property without the express written consent of the Owner thereof. Trees, shrubs, fences, poles and all other private property will be protected unless their removal is authorized. Any property damaged will be satisfactorily restored at the expense of the Contractor. Any land survey or property monuments destroyed, covered, moved, bent or disturbed will be replaced by a Licensed Land Surveyor at the expense of the Contractor.

Wherever construction is planned to cross private property, an easement for the construction has been acquired from the property owner. The Contractor will familiarize himself with the terms of such easements, which the Owner will have on file.

Ground surface, trees, shrubbery, fences and other private property will be restored to the same condition as existed prior to the beginning of construction. This will include consolidating backfill, grading driveways and any other leveling and landscaping required to restore the premises to original condition. The topsoil will be piled separately from subsoil material and will be replaced in the trench above the subsoil material.

Except where sodding is required, all grassed areas disturbed during the construction will be seeded following landscaping.

The Contractor will restore at his own expense streets, roads, alleys, private or public structures such as water mains, water connections and appurtenances, culverts, drain tiles, sewers, manholes, catch basins, curb, gutter, sidewalk, street signs, or other structures designated to remain in place which are damaged or injured in any way by his acts, and will be responsible for all damages to other utilities he may encounter.

The Contractor will not claim, or be entitled to receive, compensation for any damages sustained by reason of the inaccuracy or omission of any of the information given on the drawings relative to surface, overhead, or underground structures, or by reason of his failure to properly protect such structures.

PROTECTION OF SIDE STREETS AND HAUL ROUTES

The Contractor will be responsible for any damage of the side streets in the area and any other streets that are used as haul routes. The Contractor will discuss all haul route possibilities with the City Engineer and County Engineer prior to their use. The City Engineer, County Engineer, and the Contractor together will inspect the condition of the proposed routes before, during and after their use. The Contractor will correct any damage that is caused by the hauling activities at no cost to the Owner.

DEWATERING

Any dewatering necessary to construct the work will be done by the Contractor. The Contractor is responsible to determine the type and method of dewatering and to provide and implement all equipment and materials necessary to accomplish the work on this project. Discharged water from dewatering will be routed through a temporary sediment basin. Sediment trapped in the temporary basins will be removed and disposed of on-site.

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Except where sodding is required, all grassed areas disturbed during the construction will be seeded following landscaping.

The Contractor will restore at his own expense streets, roads, alleys, private or public structures such as water mains, water connections and appurtenances, culverts, drain tiles, sewers, manholes, catch basins, sewer connections, curb, gutter, sidewalk, street signs, or other structures designated to remain in place which are damaged or injured in any way by his acts, and will be responsible for all damages to other utilities he may encounter.

The Contractor will not claim, or be entitled to receive, compensation for any damages sustained by reason of the inaccuracy or omission of any of the information given on the drawings relative to surface, overhead, or underground structures, or by reason of his failure to properly protect such structures.

PROTECTION OF SIDE STREETS AND HAUL ROUTES

The Contractor will be responsible for any damage of the side streets in the area and any other streets that are used as haul routes. The Contractor will discuss all haul route possibilities with the City Engineer and County Engineer prior to their use. The City Engineer, County Engineer, and the Contractor together will inspect the condition of the proposed routes before, during and after their use. The Contractor will correct any damage that is caused by the hauling activities at no cost to the Owner.

INTERFERENCE OF UNDERGROUND STRUCTURES

Existing utilities crossed by the new construction will be protected against damage, and/or replaced to original grade. Protection, temporary support and maintenance of existing utilities will be furnished by the Contractor at his own expense. The final installation will provide permanent support to prevent any settlement or movement, which may result in damage to these utilities.

Whenever existing pipe is replaced, the material of replacement will be DIP or PVC pipe of the same diameter as the original, long enough to extend at least one foot into the solid bank on either side of the excavation. The backfill under and around such pipe will be thoroughly compacted by mechanical means to preclude settlement. All connections between different types or sizes of pipe or improperly matched joint types will be encased in concrete with a minimum thickness of 6 inches.

Should it become necessary during the progress of the work to remove or relocate existing utilities or structures, the Owner will cause the same to be done at no expense to the Contractor, except as otherwise provided herein. The Contractor will notify those who maintain utilities sufficiently in advance of construction so they may make the necessary location, disclosure, relocation or other preparation. Where necessary to locate existing underground utilities, the Contractor, upon order of the Engineer, will make any required subsurface explorations and excavation, and will be allowed compensation therefore. Where relocation or reconstruction of existing utilities is impracticable, a change in line and/or grade of the new construction will be ordered, and the change will be made as directed. No deviation from the line or grade set by the Engineer will be made without his approval.

CONNECT TO EXISTING SANITARY SEWER

The Contractor will connect to the existing sanitary sewer at the locations shown on the plan. Exploratory excavation for determining the location of existing utilities and the connection to the existing sanitary sewer are incidental to the work. The Contractor will verify the connection elevation at the main is reasonably close to the elevation shown on the plan prior to beginning work. If the elevation is substantially different, the Contractor will notify the Owner and Engineer.

Where new connections are made to existing sanitary sewer manholes, the contractor will core drill the manhole wall and invert to the existing flow line, construct and shape a new invert for the new pipe, and provide a waterproof boot through the wall of the manhole for the new pipe.

SANITARY SEWER CONSTRUCTION REQUIREMENTS

- Noise -- The Contractor will insure all equipment is properly fitted with mufflers to reduce noise to the minimum attainable to avoid creating a nuisance in the residential and business area.
- Trench Compaction -- All trenches will be tamped using the existing material that has been excavated. Tamping will not be paid as a bid item, therefore the cost of this work will be included in the price bid for furnishing and installing the pipe.
- Piling Excavated Materials -- Excavated material will not be piled on private property without the express permission of the owner thereof, except where easements for the sewer construction or for related work have been obtained; nor will it be piled in any location that will require backfilling machinery to operate on private property. Where excavated material is piled on private property it will be placed to cause the least possible inconvenience to the property owner. Any damage caused thereby, including damage to buildings, walls, sidewalks, driveways, trees, shrubs, lawns, or any other property, will be repaired at the expense of the Contractor. Backcasting in order to minimize disturbance is incidental to the work.
- It will be the Contractor's responsibility to protect adjacent pipes in and around manholes to be reconstructed, and will replace any pipes damaged, cracked, or broken by the Contractor at their expense.
- All excavations, trenching and/or jacking and boring pits will be sheeted and/or shored as per OSHA requirements. No unsheeted trench will be left open overnight.
- Backfilling of all trenches within the limits of street excavation will comply with the provisions of Mn/DOT Specification 2112 including achieving 100% compacted density in the upper three feet of subgrade (below aggregate base) and 95% below the upper three feet. Density testing will be performed as directed by the Owner to verify compaction. Trench areas that are determined by the Owner to have yielded due to improper compaction will be deemed as Unacceptable Work and will be corrected by the contractor at no additional cost.
- Removal of former service lines. -- Service lines no longer being utilized will be removed to the main, as directed by the City. Removal and restoration of street surfacing required for the service removal is incidental.
- RECORDS OF LATERALS: The Contractor will maintain a complete and accurate record of the location and depth of each lateral. The Contractor will make measurements from the end of each service to prominent permanent features to facilitate its location in the future. The end of each lateral will be located in plan and elevation, and a sketch made to show the plan location. These records will be turned over to the Owner.
- Contractor shall televise all sewer main to be owned by the City.

MATERIALS FOR SANITARY SEWER CONSTRUCTION:

The project calls for the use of Poly-Vinyl Chloride (PVC). Pipe and fittings should be properly bedded and encased in accordance with the Standard Detail Sheets and Standard Specifications for Sanitary Sewer Installation. All 8" and larger sanitary sewer shall be SDR 35, pipe smaller than 8" shall be SDR 26 Bedding and encasement beneath, along the sides, and above the pipe will be Select Granular material, tamped in place. The only deviation will be in poor soil conditions, as approved by the Engineer, where foundation rock will be substituted. Pipe bedding is incidental to pipe installation. Foundation rock is incidental to pipe installation.
Joints for PVC-SDR 35, and PVC-SDR 26 gravity sewer pipe will be made using Elastomeric gaskets conforming to the requirements of ASTM D3212. Joints in precast concrete manholes will be made using a joint compound equal to Ram-Nek or rubber gasketed conforming to ASTM C443. All manhole castings will be equipped with solid lid covers, self-sealing, with concealed pick holes. Manhole casting will be Neenah R1772, or equal and will be labeled 'SANITARY' on casting.

CONNECT TO EXISTING WATERMAIN

The Contractor will connect to existing watermain at the locations shown on the plan. All connections to existing water main are incidental to the work. All exploratory excavation in determining the location of existing water main is incidental to the work. The Contractor will coordinate with the utility owner and be responsible for any fees due for connections.

WATERMAIN CONSTRUCTION REQUIREMENTS

- Noise -- The Contractor will insure all equipment is properly fitted with mufflers to reduce noise to the minimum attainable to avoid creating a nuisance in the residential and business area.
- Bedding and encasement beneath, along the sides, and above the pipe will be Select Granular material, tamped in place. The only deviation will be in poor soil conditions, as approved by the Engineer, where foundation rock will be substituted. Pipe bedding is incidental to pipe installation. Foundation rock will be paid at the unit price per ton. No payment will be made for bedding materials which, in the opinion of the Engineer, was unnecessary for proper pipe installation.
- Trench Compaction -- All trenches will be tamped using the existing material that has been excavated. Tamping will not be paid as a bid item, therefore the cost of this work will be included in the price bid for furnishing and installing the pipe.
- Piling Excavated Materials -- Excavated material will not be piled on private property without the express permission of the owner thereof, except where easements for the sewer construction or for related work have been obtained; nor will it be piled in any location that will require backfilling machinery to operate on private property. Where excavated material is piled on private property it will be placed to cause the least possible inconvenience to the property owner. Any damage caused thereby, including damage to buildings, walls, sidewalks, driveways, trees, shrubs, lawns, or any other property, will be repaired at the expense of the Contractor.
- It will be the Contractor's responsibility to protect adjacent pipes in and around manholes to be reconstructed, and will replace any pipes damaged, cracked, or broken by the Contractor at their expense.
- All excavations, trenching and/or jacking and boring pits will be sheeted and/or shored as per OSHA requirements. No unsheeted trench will be left open overnight.
- Backfilling of all trenches within the limits of street excavation will comply with the provisions of Mn/DOT Specification 2112 including achieving 100% compacted density in the upper three feet of subgrade (below aggregate base) and 95% below the upper three feet. Density testing will be performed as directed by the Engineer to verify compaction. Trench areas that are determined by the Engineer to have yielded due to improper compaction will be deemed as Unacceptable Work and will be corrected by the contractor at no additional cost.
- The Contractor will coordinate the construction of all private and municipal utilities.
- The Contractor will be responsible for all tapping or other fees paid to public or private utilities as work incidental to the contract.
- RECORDS OF LATERALS: The Contractor will maintain a complete and accurate record of the location and depth of each water lateral. The Contractor will make measurements from the end of each service to prominent features to facilitate its location in the future. The end of each lateral will be located in plan and elevation, and a sketch made to show the plan location. These records will be turned over to the Owner.

MATERIALS FOR WATERMAIN CONSTRUCTION- City standards shall govern over all material specs listed below if discrepancies exist.

- Watermain shall be DIP meeting the requirements of AWWA C-900. Pipe and fittings should be properly bedded and encased in accordance with manufacturer's requirements. Foundation rock will be used in poor soil conditions.
- Bedding and encasement for pipe, beneath, along the sides, and above the pipe will be Select Granular material, tamped in place. The only deviation will be in poor soil conditions, as approved by the Engineer, where foundation rock will be substituted. Pipe bedding is incidental to pipe installation. All joints between pipe, fittings, valves, and hydrants will be equipped to provide electrical conductivity.
- Gaskets will be mechanical joint rubber gaskets, unless otherwise specified.
- Hydrants shall be Watertous Pacer WB-67-250 with 6" mechanical joint inlet and valve boxes as manufactured by American Flow Control Series 2500 or US Metro Pipe Seal with the Top marked WATER.
- The furnishing and installing of disinfection materials to disinfect the watermains will be the responsibility of the Contractor. The City Utilities Department will assist the Contractor in flushing and testing the watermains.
- The Contractor will use restrained joint mechanical joint flanges with mega lug retainer glands or equal on all hydrants, watermain offsets, bends, or other mechanical fittings. STAINLESS STEEL BOLTS will be required on all mechanical joints and sleeves.
- All exposed parts of the bolts and nuts will be completely coated with an approved asphaltic type rust preventive material. Any parts of the fittings that have been scraped will also be coated with an approved asphaltic type rust preventive material. Watermain fittings will conform to ANSI Standard A21.10. All watermain fittings, hydrants and retaining rods will be protected by using sacrificial zinc anode caps such as 175P190 Protecto Caps as manufactured by Ebba Iron or an approved equal. Two caps per mechanical joint will be used.

TESTING OF WATER MAIN

Hydrostatic pressure testing of water main and services will be conducted as follows:

After the pipe has been laid, including fittings and valves and blocking, all newly laid pipe or any valved section thereof, unless directed otherwise by the Engineer, will be subject to hydrostatic pressure of 150 pounds per square inch. The duration of each such test will be at least two hours.

Each section of pipe to be tested will be filled with water and all air expelled at the highest point. The required taps to expel air or to fill the water main will be supplied and installed by the Contractor and will be 3/4 inch and will include an approved service saddle when required.

The test apparatus will be applied at the lowest elevation on the section to be tested. The apparatus will be connected to the main at a service tap or special tap location.
The pressure gauge will be a standard pressure gauge. The dial will register from 0 - 200 psi and have a dial size of 4 1/2 inches with 1-psi increments.

The hydrostatic test, pressure requirement for an acceptable test will be a maximum pressure drop of 2 psi during the last hour of the two-hour pressure test. If this test requirement cannot be met, the Contractor will investigate the cause, make corrections, and retest until the pressure drop requirement can be met.

Only if several consecutive tests indicate a consistent pressure drop and only after the Contractor has made numerous attempts to resolve the problem, acceptable to the Engineer, may the Contractor request in writing and the Engineer consider the use of the leakage test. The leakage test may be performed by the Contractor to determine the magnitude of the leak, however, meeting the leakage allowance will not automatically be considered acceptance, in lieu of the pressure test, for the section being tested. Final acceptance will be at the discretion of the Engineer.

When allowed, the leakage test will be performed in accordance with AWWA C-600, Section 4.1.5, 4.1.6 and the line will be accepted as per Section 4.1.7.

Operational Testing will be conducted as follows:

At the completion of the project and in the presence of the Engineer and the Contractor, representatives of the Owner will operate all valves, hydrants, and water services to ascertain that the entire facility is in good working order; that all valve boxes are centered and valves are opened; that all hydrants operate and drain properly; that all curb boxes are plumb and centered; and that water is available at all curb stops.

Disinfection Testing:

Before being placed in service, the completed water main will be disinfected. Disinfection materials and procedures, and the collection and testing of water samples, will be in accordance with the provisions of AWWA C-651. After the final flushing the water will be tested for bacteriologic quality and found to meet the standards prescribed by the Minnesota Department of Health.

Samples will be taken and tested after 24 and 48 hours of disinfection. Both tests must be returned with passing results prior to approval for service.

Where an existing water main is cut for the installation of any fitting, the pipe and fittings proposed to be installed will be disinfected prior to installation as follows:

The interior of the pipe and fittings will be cleaned of all dirt and foreign material.

The interior of the pipe and fittings will be thoroughly swabbed or sprayed with a 1 percent minimum hypochlorite solution.

Unless otherwise indicated in the Plans, Specifications, and Special Provisions, the Contractor will furnish all materials and perform the disinfecting, flushing, and testing as necessary for meeting the water quality requirements.

The flushing operations and the form of chlorine and method of application to be used will be subject to approval by the Engineer.

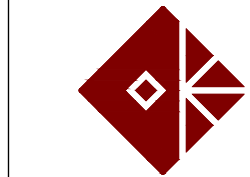
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Date: 9/20/2025

Reg. No. 42744

515 South Washington Ave. Albert Lea, MN 56007-373-4876

JONES
HAUGH
SMITH
Engineers & Surveyors



Consultant:

Project:

Project:

Revision:

No.:

Date: 9/20/2025

Drawn: bjj

Checked:

Project Manager:

Project Status: CD

Sheet Title:

SPECIFICATIONS

Sheet No.:

C9

MATERIALS FOR STORM SEWER CONSTRUCTION

1. All drainage structures with a depth of greater than 5' from top of casting elevation to bottom of structure elevation will be provided with steps.
2. Reinforced Concrete Pipe will be bedded and encased in accordance with plans and with material meeting the requirements of 2503. All RCP storm sewer pipe 15" in diameter or less will be Class 5, all other RCP storm sewer pipe will be Class 3 unless otherwise noted.
3. All PVC storm sewer will be Schedule 40 PVC, unless otherwise noted.

STORM SEWER CONSTRUCTION REQUIREMENTS

1. Unless otherwise noted, all existing drain tile encountered during the course of the work will be repaired if damaged by the work, or if the existing outlet is known to be removed or made dysfunctional, hooked up to the new storm sewer improvements. This work is incidental to the contract.
2. Where existing tile lines, sump pump lines, or other existing drainage lines are tied into RCP storm sewer lines, a hole will be created in the upper 1/3 of the side of the new storm sewer, the existing line will be inserted into the side of the new RCP to a depth of not greater than 2", geotextile fabric will be blanketed around or stuffed into the opening around the new pipe, and cement grout will be formed around the connection, so as to ensure water tightness. A maximum of 3 rings shall be used per standard plate 5043.
3. Where existing tile lines, sump pump lines, or other existing drainage lines are tied into HPDE storm sewer, fittings specifically manufactured for the connection of these lines will be used.
4. All existing drainage structures receiving new pipe will be cemented water tight around all pipes entering or exiting the structure. In addition, the inverts of all structures will be cemented so that all water entering the structure has a direct line out of the structure.
5. All new drainage structures will have integrally cast rubber boots to accept pipes and to ensure water-tightness. Worm screw stainless steel bands will be affixed to the boots to secure the pipe to the structure.
6. HDPE pipe will be installed accordance with ASTM F230

CASTING ASSEMBLIES (2506)

Casting assemblies will be of size and design noted on the plans. The work will include the cost of installing to final street surface grade on the manhole or inlet, including pavement removal and replacement if installed after paving.

Contractor will use at least two and not more than six standard adjusting rings immediately below the casting assembly which will be set in a mortar bed. Each adjusting ring will also be set in mortar. All adjusting rings will be plastered with a minimum of 1/2" of mortar on the interior and exterior, such that the casting is water tight from both the interior and exterior.

When bituminous paving lifts are scheduled for sequential construction seasons, castings will be set to the elevation of the non-wear course for the winter season, and then adjusted to final grade the following year. This work is incidental to construction.

Chimney Seal
Chimney seal will be furnished and installed on all sanitary manhole and ring casting assemblies. Seals will consist of rubberized sleeves or collars specially designed for covering manhole frames, rings and castings. Seals will be exterior seals with mechanical restraint as manufactured by Cretex Products or equal.

Furnish and installation of Chimney Seal is incidental to manhole castings and no additional payment will be made therefore.

Chimney Seal will not be required until final adjustment of castings at the time the final lift of bituminous paving is constructed.

ADJUST WATER VALVE BOX

This work will consist of the adjustment of all water valve boxes to conform to each grade of the bituminous pavement. This work includes multiple adjustments and is incidental to construction. If any structures are damaged by the Contractor's operations, the cost of repairs and replacement will be at the Contractor's expense. Final valve box adjustment at the final lift of paving will be by the paving contractor.

REMOVALS (2104)

Saw-cut Bituminous and/or Saw-cut Concrete

The edges of paving at the locations shown on the plan or directed as directed by the Engineer in the field will be full-depth saw-cut, typically at right angles to the faces to remain, in order to produce a clean edge of which to match the replacement paving or other surface to. Saw-cutting is incidental to the removals.

Remove Bituminous and/or Concrete Surface

After removal of bituminous or concrete surfacing in the traveled way, an aggregate surface will be provided in the removal area to the elevation of the removed materials. A minimum thickness of 6" of aggregate at the surface will be provided. This work is incidental to removals.

Disposal of Removed Materials

The removed materials will become property of the Contractor and be removed from the project site at the Contractor's expense.

Remove Storm Sewer

When existing storm sewer is designated to be removed, the existing pipe will be removed in its entirety, or crushed in its entirety and backfilled over, if directed by the Engineer.

EXCAVATION AND EMBANKMENT (2105)

1. The area designated for excavation will be excavated to sufficient depth to allow construction of the typical section shown on the plans except as otherwise directed by the Owner. The Contractor will verify to the Owner that the subgrade has been constructed to the proper elevation before base construction proceeds. The subgrade must be within 0.10' plus or minus of plan elevation before the construction is allowed to proceed. A subgrade elevation consistently above or below plan elevation will not be considered acceptable work. On average, the subgrade will be at about plan elevation.
2. Excess excavated material will be disposed of by the Contractor. Excess topsoil material will be stockpiled separately or leveled, as directed by the Owner. Stockpiling and leveling will be considered incidental to the excavation, and will not be paid for directly.
3. The contractor will salvage and stockpile suitable topsoil and surface material to the satisfaction of the Owner as necessary to provide for final seed and turf establishment and restoration. Topsoil salvage will be considered incidental to excavation and no direct compensation will be made therefore.
4. Removal of rocks, boulders, masonry or concrete within the excavated area will be considered common excavation. All roots, stumps, rubbish, rocks and other waste materials will be hauled to the nearest landfill. This work will be considered incidental to the construction and will not be paid for directly.
5. Paving sections will be required to allow construction of the typical cross-section. Embankment will be constructed in accordance with the provisions of 2105. Suitable excess excavated materials will be utilized for embankment to the fullest extent practicable. The remaining embankment material will be granular borrow conforming to the provisions of 3149.2A.
6. Site grading will be performed as required to establish plan grade. All excess becomes property of the Contractor to be disposed of off-site.
7. The Contractor will be responsible for ensuring that all areas within the limits of lot grading have a minimum of 6" of salvaged topsoil material on the final grade. It will be the Contractor's responsibility to coordinate and designate topsoil salvaging operations and stockpiling to ensure adequate topsoil is available for a 12" cover. All existing topsoil will be removed in all areas which will be filled with any material other than topsoil except that topsoil depths will not exceed two feet.
8. All borrow or salvaged excavated material to be used as embankment within the limits of paving construction will be approved by the Owner prior to placement. Embankment will comply with the provisions of Minnesota Department of Transportation Spec. 2112 including achieving 100% compacted density in the upper 3 feet of subgrade and 95% below the upper 3 feet of subgrade.
9. All natural topsoils will be removed from below all paving construction areas.
- 10.Suitable excavated material will be used as backfill. Embankments and boulevards not being seeded or sodded will be dragged or raked smooth prior to completion of each project.
- 11.Excess excavated material, excluding rocks, boulders, debris and organic material, will be the property of the Owner and will be stockpiled on site as directed by the Owner. All other excess material will be disposed of by the Contractor offsite.
- 12.When embankment materials are placed on existing ground with an existing slope of greater than 4:1, the embankment will be placed in accordance with 2105.3.B.
- 13.Where excavation is performed to the subgrade without the placing of embankment materials, the contractor will work the upper 1' of the subgrade to within 2% of optimum moisture prior to the test-rolling stated below. When the existing moisture content is greater or less than 2% of optimum, the contractor will "farn" the material to dry it, or add water and mix the materials until the subgrade reaches the desired moisture content. This work will be incidental to construction.
- 14.Backfill construction of concrete curb and gutter in accordance with 2531.J is incidental. The contractor will note that when this work is complete, continuous positive drainage is provided to the curb & gutter, which is defined by the MPCA as a stormwater conveyance.

TOPSOIL SALVAGE

All areas to be seeded will be finished with no less than 6 inches of topsoil salvage. This topsoil will be raked to a smooth surface free of roots, rocks and soil clumps. Topsoil salvage will be incidental to the project. All areas to receive fill material are subject to topsoil salvage. Topsoil may be placed over existing topsoil.

SUBGRADE PREPARATION (2112)

1. The provisions of 2112 will be follows and as outlined in 2112.
2. The final shaping and compacting of the subgrade will be done just prior to placing any base or surface course.
3. At the time the subgrade preparation operations have been completed, the prepared surface will be in reasonably close conformity with the cross sections shown in the Plans and the lines and grades shown on the plan.
4. Where excavation is performed to the subgrade with or without the placing of embankment materials, the contractor will work the subgrade to within 2% of optimum moisture. When the existing moisture content is greater or less than 2% of optimum, the contractor will "farn" the material to a minimum depth of 12" to dry it, or add water and mix the materials until the subgrade reaches the desired moisture content. This work will be incidental to construction.
5. The required stability will be such that when any material for base or surface courses is deposited on the subgrade, no rutting or displacement will occur.
6. The subgrade preparation prior to construction of underground utilities will not be subject to elevation tolerances.
7. Subgrade preparation is incidental to the contract

S-7 SUBGRADE COMPACTION

The subgrade when exposed will be compacted with a tamping roller, compactor or other means to not less than 100% Maximum Density and 2% Optimum Moisture. The Contractor will work the upper 1' of the subgrade to within 2% of optimum moisture during compaction. When the existing moisture content is greater or less than 2% of optimum, the contractor will "farn" the material to dry it, or add water and mix the materials until the subgrade reaches the desired moisture content. This work will be incidental to construction. Prior to placement of any stabilized base, a fully loaded dual axle dump truck will be driven over the completed sub-grade in the presence of the Contractor and Engineer present. The subgrade will be found suitable for placement when no rutting or displacement occurs. The test-rolling will be incidental to stabilized base and no specific payment will be made therefore.

S-8 SUBGRADE CORRECTION

If after substantial efforts by the contractor to correct the moisture content of the subgrade and re-compact the materials, the subgrade displays evidence of rutting or yielding prior to, during, or after this compactive effort, additional material will be excavated as directed by the Owner to the depth required to provide a stable foundation for the base material. Suitable material removed during excavation will be utilized for subgrade correction. This work will not be paid as Extra Work if it was or would have been, or could have been performed as part of any other grading activity.

STABILIZED BASE CONSTRUCTION (2211)

This work will consist of the excavation and embankment of existing subgrade and surface materials, and the construction of aggregate base.

1. Aggregate base will be either MnDOT Class 2 or Class 5, at the Contractor's option. Class 7 recycled base is acceptable where allowed in the MnDOT standard specifications.
2. Any damage by the Contractor's operations to any existing improvements which have not been designated for removal or disturbance will be repaired at the expense of the Contractor.
3. AGGREGATE: Aggregate for the purposes required by this contract will be furnished by the Contractor from sources selected by him.
4. AGGREGATE BASE: Aggregate base, will be constructed in accordance with the provisions of 2211. Aggregate will conform to the requirements of 3138.
5. Compaction will be obtained by the Modified Penetration Index Method modified as follows: The Owner will hire an independent testing laboratory to perform density and moisture testing. Moisture tests will be performed with each density test. Tests will be performed in accordance with the Materials Testing Section above. Penetration and moisture content testing will be performed along with to the density tests. No payment will be made for work tested that fail to meet the specified density. The Contractor will be responsible for any additional tests due to the failure of work. Water will be applied to the base material during mixing, spreading and compaction operations for proper compaction and will be considered incidental work.
6. Test rolling will be performed on the aggregate base in the presence of the Owner's testing subconsultant. Test rolling will be as specified in MnDOT specification 2111 except that the test will be performed with a fully loaded tandem axle dump truck in lieu of the test roller. The Owner may delete the requirement for test-rolling on all or portions of the stabilized base, at his discretion, after consultation with the Contractor.
7. Furnish and install Aggregate Base, Class 5 meeting MN/DOT Specification No. 3138 under all concrete or bituminous pavements and a minimum of 2 inches of Aggregate Base, Class 5 under all curb and gutter.

MAINTENANCE OF COMPLETED BASE

After completion of any part of the base, such base will be maintained in a dust free condition. It will be the Contractor's responsibility to repair at his expense all prepared and shaped surfaces until project is complete. Any water applied to keep the base dampened or reshaped will be at the Contractor's expense. The Contractor will maintain the completed aggregate base after rain events, and replace and recompact any eroded aggregate as work incidental to the contract. Maintenance of completed base is incidental to construction.

APPLICATION OF WATER (2130)

Application of water will be in accordance with the provisions of 2130 except as herein modified. No direct compensation will be made for water used in conjunction with the mixing, placing and compacting operations for base construction. The contractor is responsible for application of water for dust control in accordance with Mn/DOT 1717 and with the NPDES permit. Application of water for dust control is incidental to the work and no additional payment will be made therefore.

CONCRETE PAVEMENT (2301)

Jointed Type 3 Grade A Plain Concrete Pavement will be placed in accordance with the Mn/DOT standard specifications except as modified herein. Loading dock pavement will be reinforced.

The mix designs for concrete paving for this project are:
Standard Paving - 3A41
High Early Strength (if directed by Owner) - 3A41HE
Flexural strength at 28 days will be 750 psi.
Compressive strength at 28 days will be per the mix designations above.

High Early concrete areas will remain closed to traffic for 3 days or until they have achieved a flexural strength of 450 psi, whichever is shorter. Concrete will be supplied from a Mn/DOT certified producer. The Contractor will be responsible for supplying the mix designs. The Contractor will provide the Engineer with the mix designs a minimum of 24 hours prior to the first pour. Concrete will be cured by the use of membrane curing compound meeting the requirements of Mn/DOT 3754 AMS. All joint sealant will conform to 3723, Concrete Joint and Crack Sealer (Hot-Poured Elastic Type) sealant. Transverse metal-tie finishing will not be required. The location of transverse joints may be adjusted in the field by the Engineer. An increase in the number of transverse joints of up to five percent (5%) compared to the number shown on the plans will be incidental. All coarse aggregate for concrete pavement will meet the gradation requirements of Mn/DOT 3137 CA-50.

BITUMINOUS TACK COAT (2357)

Treating existing bituminous or concrete surfaces preparatory to placing a bituminous course thereon will be performed in accordance with the provisions of MN/DOT 2357 and the following:

A bituminous tack coat consisting of emulsified asphalt will be applied between all bituminous surfaces. A tack coat will be placed on the existing pavement prior to placing the next layer of bituminous and the edges of concrete pavement and curb and gutter that will come into contact with the new bituminous will be tacked. All surfaces will be cleaned of all dirt, debris and loose material prior to the application of the bituminous tack coat.

PLANT MIXED ASPHALT PAVEMENT (2360/2360)

Plant mixed asphalt pavement density will be constructed in accordance with Mn/DOT specification 2360, as published by Mn/DOT at the time of bid After placement of the base course of bituminous paving at the bus parking area and car parking area, the Contractor will flood the work area with water to identify possible "third bath" locations where the pavement has not been placed at enough grade to ensure proper drainage. Prior to or during placement of the wear course, the Contractor will ensure that these areas are graded to properly drain.

CONCRETE MIX FOR CURB & GUTTER, WALKS, & DRIVEWAYS (2461)

Concrete for this Contract will be as follows and as outlined in 2461: The concrete mix number to be used for slip form curb and gutter will be 3A22. The concrete mix number for hand formed curb and gutter, sidewalks, and driveways will be 3A32.

	Minnesota Highway Designation	Minnesota Highway Designation
Mix Number	3A32B	3A22B
Type of Concrete	Type 3 (Air Entrained)	Type 3 (Air Entrained)
Grade	Grade A	Grade A
28 Day Strength	27 Mpa (3900 psi)	27 Mpa (3900 psi)
Slump	50 mm to 75 mm (2" to 3")	25 mm to 50 mm (1" to 2")
Coarse Aggregate Composition	100% Class "B"	100% Class "B"
Gradation of Coarse Aggregate	CA25 or CA50 For Structural Concrete	CA25 or CA50 For Structural Concrete

Concrete will be supplied from a Mn/DOT certified producer. The Contractor will supply the mix designs. The Contractor will provide the Engineer with the mix design a minimum of 24 hours prior to the first pour.

WALKS (2521)

Concrete sidewalks will be constructed in accordance with 2521 and Standard Plate 7035M. Preformed joint filler material will be placed in accordance with Standard Plate 7035M. Concrete sidewalks will be mix design 3A32 with a maximum slump of 3". No water will be added to the mix to reduce the slump beyond 3" for temporary workability, as stated in 2461.B3. Colored concrete shall be as manufactured by Scofield with coloring as determined by the Landscape Plan.

CONCRETE CURING AND PROTECTION (2521, 2531)

All sidewalk, driveway, curb and gutter will be cured using a membrane curing compound conforming to the requirement of Minnesota Highway Department #3754. For concrete curb and gutter poured after October 1st, blanket or extreme service membrane methods of curing will be substituted for membrane curing, in accordance with 2531.

EXTREME TEMPERATURE CONCRETE

The following additional measures will be required for extreme temperature concrete construction, as work incidental to the contract:

Hot Weather Concrete Construction

1. Do not place concrete with a placing temperature that will cause difficulty from loss of slump, flash set, or cold joints.
2. Maintain a concrete temperature during placement of less than 90 degrees F.
3. Use all means necessary to avoid drying the concrete prior to the completion of finishing operations.
4. Provide and use windbreaks, sunshades, fog sprays, and other devices to protect the concrete.

Cold Weather Concrete Construction

1. Provide adequate protection when temperatures are 40 degrees F or lower occur durin ghte placing and early curing periods.
2. Comply with all pertinent recommendations of ACI 306 (Recommended Practice for Cold Weather Concreting).
3. Type IIA cement may be used.
4. The use of Calcium Chloride or other accelerators will not be permitted.
5. Maintain a concrete temperature during placement of more than 60 degrees F.
6. Use all means necessary to avoid exposure of concrete to freezing temperatures during placement, finishing, and curing.
7. Concrete will not be placed on a frozen subgrade.
8. Provide and maintain heated enclosures, insulating blankets, tarpaulins, heaters, fuel, and all other protective equipment required.
9. Maintain favorable curing temperature at all times until the concrete gains sufficient strength to withstand exposure to low temperature and applied loads.

CONCRETE CURBING & GUTTER (2531)

Concrete curb and gutter will be constructed in accordance with the provisions of 2531 and the following: Curing will be by the Membrane Curing Method as specified in 2531.3G (2). The sealing of joints in concrete curb and gutter will not be required.

Construction joints in curb and gutter will be installed at 10-foot intervals. Preformed joint filler material (1/2-inch) will be place at the ends of all street returns, at the ends of concrete driveway approaches, and in accordance with MN/Dot Standard Plate 7035N.

Concrete curb and gutter will be the style shown on the plans.

PEDESTRIAN CURB RAMPS (2531)

Unless otherwise dome sections will be red.

STORM WATER MANAGEMENT (2573)

The Stormwater Pollution Prevention Plan (SWPPP) required by the NPDES permit has been provided by the Owner and is incorporated into the plans and specifications.

The Minnesota Department of Transportation's Specification 2573 - Stormwater Management is hereby modified as follows:

1. The Contractor will apply for and comply with the provisions of the NPDES permit and the SWPPP (Stormwater Pollution Prevention Plan).
2. The Stormwater Pollution Prevention Plan provided by the Owner is meant and provided as a guide in the provision of Erosion and Sediment Control (ESC) Best Management Practices (BMP's) as required by the NPDES permit. The SWPPP is based on finish grade contours. Additional ESC measures, although not shown by the plan, may be required to comply with the provisions of the NPDES permit. Provision and maintenance of the ESC BMP's in accordance with the NPDES permit is the responsibility of the contractor, regardless of what is shown on the SWPPP. Interim ESC BMP's and updating of the SWPPP are the responsibility of the contractor. Maintenance of the ESC BMP's is incidental to the work and will be performed in accordance with 2573.M.
3. When updates to the SWPPP are required, the Contractor will provide the Engineer with sketches of the updated areas, so that the Engineer can update the SWPPP.
4. No additional payment will be made for additional ESC BMP's required by the NPDES permit but not shown on the SWPPP.
5. The contractor will obtain the NPDES permit from the MPCA and pay any applicable fees as work incidental to the contract. The contractor will remain named on the NPDES permit until the warranty period expires, at which time he/she may submit an NPDES Permit Modification/Transfer Form to the Owner for completion and submission to the MPCA.
6. The contractor will maintain the NPDES site inspection log.
7. The contractor will be responsible for all fines imposed by regulating agencies for failure to comply with the provisions of the NPDES permit.
8. If the Engineer determines that ESC BMP's have failed or require maintenance, the Contractor will correct the cause of failure, maintain the BMP's, and alleviate all sediment deposition outside the construction limits, to the fullest extent possible. If the Contractor fails to install or maintain erosion or sediment control measures required by the NPDES permit, fails to conduct required inspections, or fails to take action ordered by the Engineer to correct ESC problems, the Engineer will issue a written order to the Contractor. The Contractor will respond within 24 hours with sufficient personnel, equipment, and/or materials and conduct the required work or be subject to a \$500 per calendar day penalty for noncompliance. In addition, the Engineer may recommend that the Owner withhold payment from all work until the ESC BMP's are constructed or maintained.
9. The Engineer may require the Contractor to submit a site plan for certain portions of the work detailing proposed ESC BMP's, and a schedule indicating start and completion dates. The Contractor will not start work within these areas until the Engineer has accepted the site plan and schedule. No additional payment will be made for preparation of site plans required by the Engineer, or reasonable delays or production losses caused by this requirement.
- 10.Sediment removal required due to the failures to implement or maintain ESC BMP's will not be considered Extra Work. The Contractor will remove all sediment from areas accrued due to actions or inactions by the Contractor, at no cost to the Owner
- 11.The Contractor will designate a concrete washout area on-site and inform the Engineer of the chosen location at the pre-construction meeting. This area must be constructed so that it drains towards itself. Concrete debris will be removed from the concrete washout and removed from the site prior to final acceptance.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Eric J. Johnson
Reg. No. 42744
Date: 9/20/2025

JONES
HAUGH
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Engineers - Surveyors
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Consultant:

Project:

Revision:

No.: Date: 9/20/2025

Drawn: bj Checked:

Project Manager:

Project Status: CD

Sheet Title:

SPECIFICATIONS

Sheet No.:

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