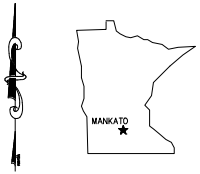
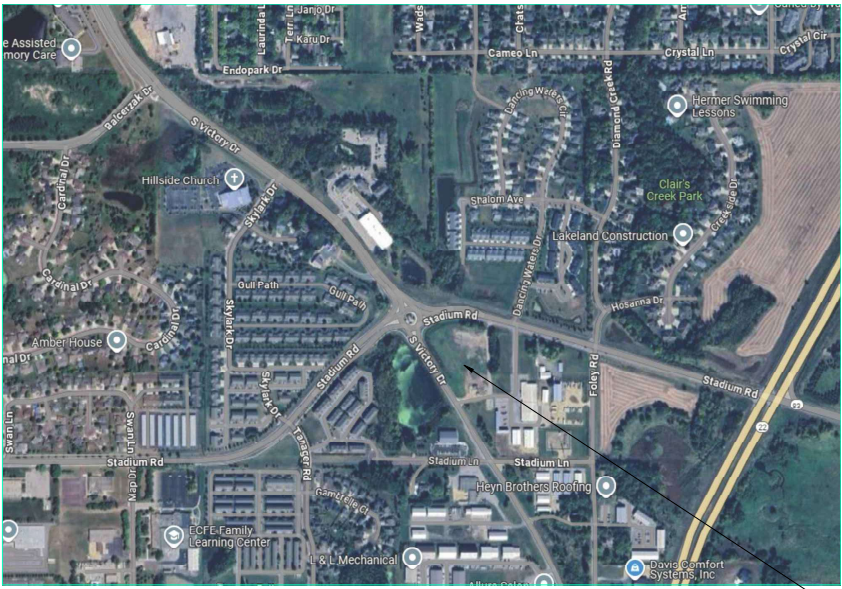


MANKATO APARTMENTS
MANKATO, MN



INDEX TO SHEETS

- C1: TITLE SHEET
- C2: EXISTING CONDITIONS
- C3: HARDSCAPE/UTILITY PLAN
- C4: GRADING PLAN
- C5: DETAILS
- C6: SWPPP NARRATIVE
- C7-8: SPECIFICATIONS

THIS PLAN CONTAINS 8 SHEETS

LEGEND

- = 5/8"Ø X 16" iron stake monument
- = Iron stake monument-Found
- W = Water Main
- S = Sanitary Sewer
- ST = Storm Sewer
- G = Gas Main
- UT = Underground Telephone
- OT = Overhead Telephone
- FO = Fiber-Optics
- UE = Underground Electric
- OE = Overhead Electric
- X = Chain Link Fence
- = Control Access
- = Gate Post
- = Bollards
- ⊞ = Electric Meter
- ⊞ = Gas Meter
- ⊞ = Fiber-Optics Box
- ⊞ = Telephone Pedestal
- ⊞ = Light Tower
- ⊞ = Silt Fence
- ⊞ = Furnish & Install
- 1272— = Existing Elevation Contour Line
- 1272— = Proposed Elevation Contour Line
- ⊞ = Sign
- ⊞ = Sign-Handicap
- ⊞ = Light Pole
- ⊞ = Power Pole
- ⊞ = Guy Anchor
- ⊞ = Fire hydrant
- ⊞ = Water Main Valve
- ⊞ = Fire Sprinkler
- ⊞ = Cleanout
- ⊞ = Culvert
- ⊞ = Gas Main Valve
- ⊞ = Catch Basin
- ⊞ = Manholes
- 1271.23 = Spot Elevation
- RM1275.48 = Rim Elevation
- FL1283.34 = Line Elevation
- ⊞ = Concrete Surface
- ⊞ = Bituminous Surface
- ⊞ = Gravel Surface
- ⊞ = Proposed Pavement Elevation
- ⊞ = Proposed Top/Bottom of Retaining Wall Elevation

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 HICCS 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 NAD83 (96) Ham Adjustment Grid

JONES, HAUGH & SMITH
Professional Engineer
No. 1000000000
Date: 4/20/23



515 South Washington Ave. Mankato, MN 56001-3334

MANKATO APARTMENTS

Project:
Revision:

No. 25-18 Date: 6/20/2023

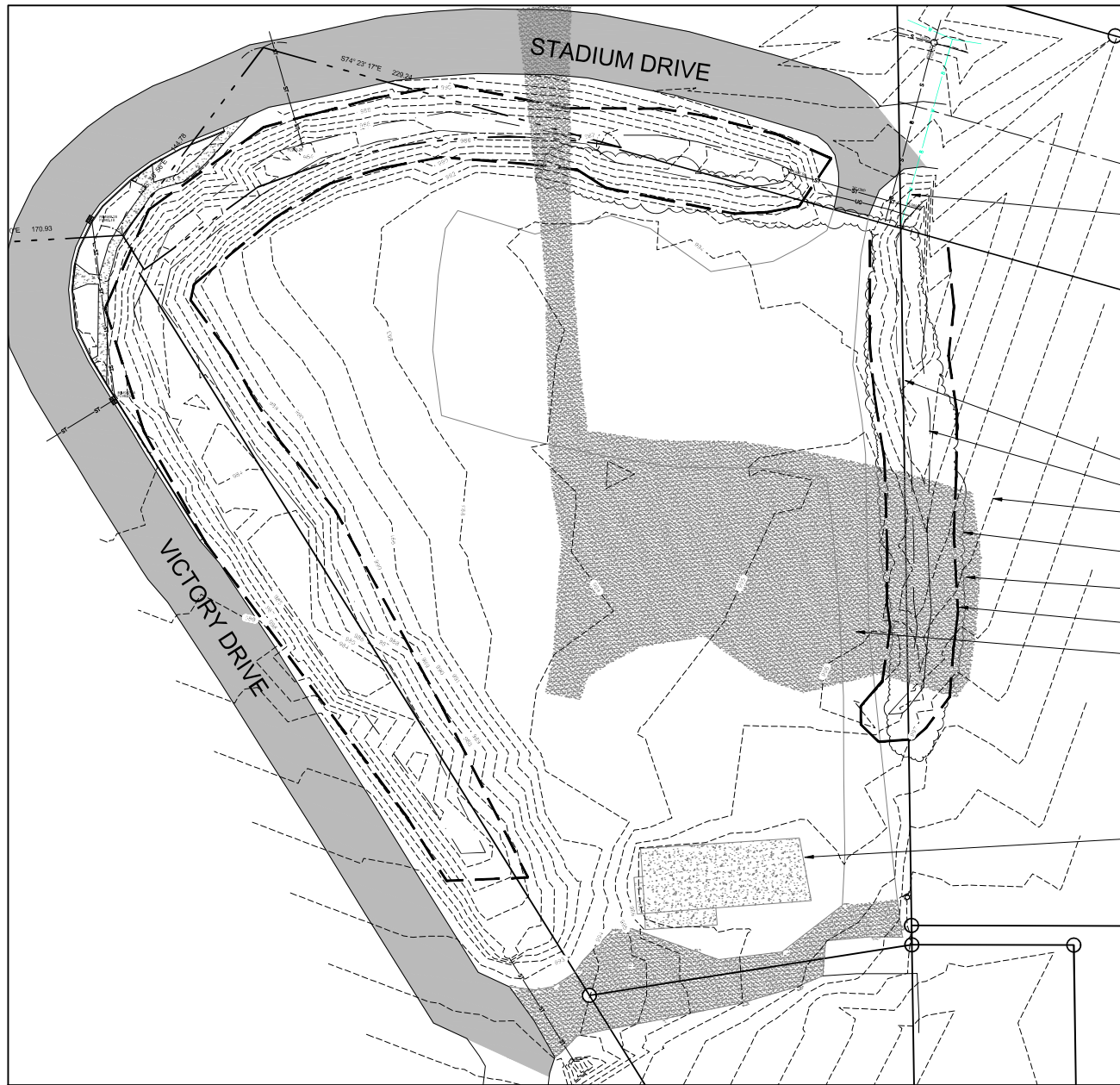
Drawn: HJ Checked:

Project Manager:

Drawn Date: 06

TITLE SHEET

Sheet No. C1



EXISTING SEWER/WATER SERVICES-FIELD VERIFY LOCATION

PROPERTY LINE TYP.

WETLAND DELINEATION LINE TYP.

EXISTING ELEVATION CONTOUR TYP.

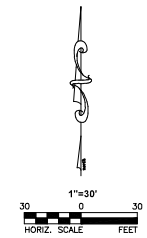
EDGE OF TREES TYP.

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.



MANKATO APARTMENTS

Drawn By: 26-118	Check: 4000000
Project Manager: HJ	Project Status: CD

EXISTING CONDITIONS

C2



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	999.81	3.99	R3067	48-4022	
4	993.00	999.94	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, 8" GATE VALVES, HYDRANT LEGS AND 8" HYDRANTS
CONNECT TO EXISTING SANITARY-F&I MANHOLES AS SHOWN-SEE STRUCTURE SCHEDULE
NEW CONCRETE 8618 CURB & GUTTER TYP.

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

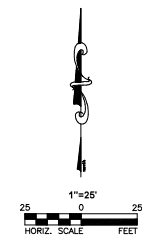
F&I LATEX PAVEMENT STRIPING-MESSAGES TYP.

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 IMPERVIOUS SURFACE=1.25 ACRES
WQV VOLUME REQUIRED: 0.104 AC.-FT.
WQV VOLUME PROVIDED: 0.115 AC.-FT.
WQV ELEVATION=988.20
DISCHARGE RATE AT WQV: 1.17 CFS
BASIN HWL=990.76

DISCHARGE RATES (CFS):		
	PRE-DEVELOPMENT	POST-DEVELOPMENT
2 YEAR	5.34	1.17
10 YEAR	10.06	2.74
100 YEAR	20.58	4.52

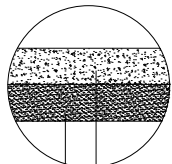


JONES HAUGH SMITH
Engineers - Surveyors
515 South Washington Ave. Albert Lea, MS 38701-3731
Phone: 662-389-4444
Fax: 662-389-4445

MANKATO APARTMENTS

NO. _____ Date: 6/20/2023
Client: MJC Checked: _____
Project Manager: _____
Project Status: CD
Sheet No.: _____
HARDSCAPE & UTILITY PLAN

Sheet No.: **C3**



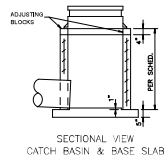
ALL JOINTS SHALL BE SEALED USING AN APPROVED
MN/DOT HOT POUR ELASTIC SEALANT (3723)
(INCIDENTAL)

7" CONCRETE PAVEMENT (MN/DOT 2301)

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

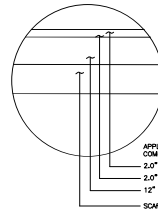
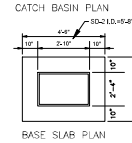
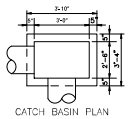
ALL CONCRETE SHALL BE PORTLAND CEMENT CONCRETE PAVEMENT
WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS,
A 4" MAXIMUM SLUMP AND 5% - 7% ENTRAINED AIR.

CONCRETE PAVEMENT SECTION



- NOTES:
1. TO BE USED WITH MEDIAN PROSET FRAMED COVER WITH IF RAIL, CURB BOX OR APPROVED EQUAL.
 2. PIPE OUTLETS TO BE LOCATED WHERE REQUIRED.
 3. ALTERNATE CAST-IN-PLACE BASE CURB USED.
 4. MINIMUM REINFORCING SHALL BE WIRE FABRIC HAVING AN AREA OF NOT LESS THAN 0.50 SQ. YD. PER FOOT IN BOTH DIRECTIONS.

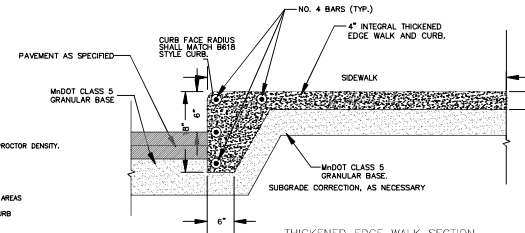
FOR USE WITH ROBOT CASTING
CATCH BASIN 2X3



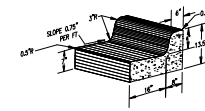
PARKING LOT PAVEMENT SECTION

- APPLY BITUMINOUS TACK COAT BETWEEN LIFTS
COMPACT ALL GRANULAR MATERIAL TO 100% OF PROCTOR DENSITY.
- 2.0" TYPE SPW6240B WEAR COURSE
 - 2.0" TYPE SPW6200B BASE COURSE
 - 12" CLASS V AGGREGATE BASE (2211)
- SCURRY THE UPPER 12" OF SUBGRADE IN "CUT" AREAS

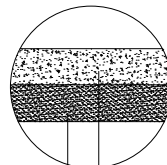
ALL GRAVEL BASE SHALL EXTEND A MINIMUM OF 1' BEHIND ALL CURB



THICKENED EDGE WALK SECTION



CONCRETE CURB & GUTTER DESIGN B618



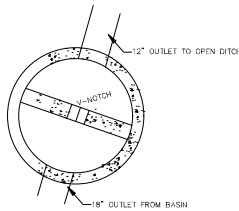
ALL JOINTS SHALL BE SEALED USING AN APPROVED
MN/DOT HOT POUR ELASTIC SEALANT (3723)
(INCIDENTAL)

4" CONCRETE PAVEMENT (MN/DOT 2301)

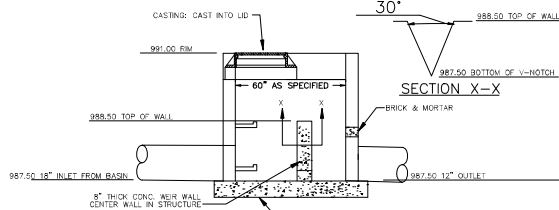
3" AGGREGATE BASE CLASS V (MN/DOT 2211)

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.

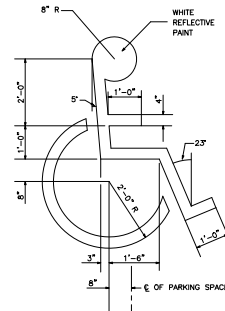
CONCRETE SIDEWALK SECTION



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

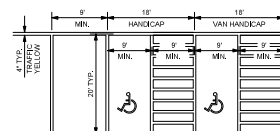
SIGN PANEL DETAIL



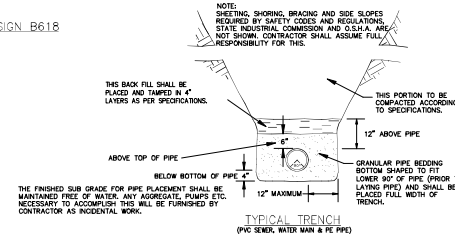
STEEL POST MOUNTED (PERMANENT)

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

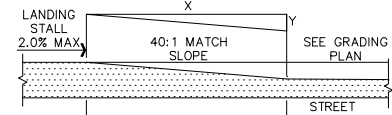
SIGN PANEL DETAIL



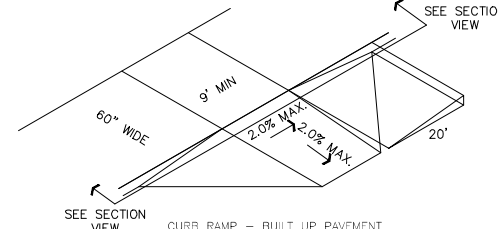
90° STALL



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



CROSS SECTION



CURB RAMP - BUILT UP PAVEMENT

Sheet No: **C8**