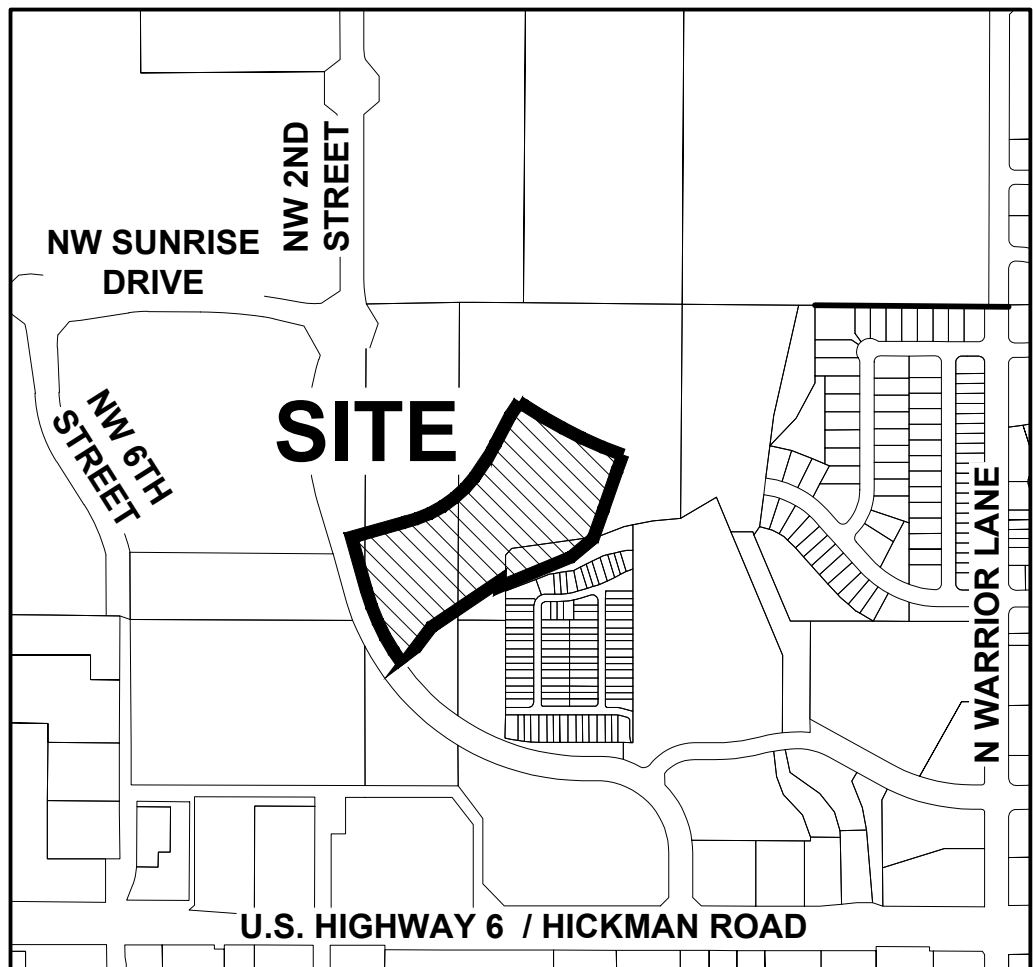


CONSTRUCTION PLANS FOR:
INDI RUN PLAT 6

WAUKEE, IOWA

VICINITY MAP

NOT TO SCALE



WAUKEE, IOWA

INDEX OF SHEETS

NO.	DESCRIPTION
1	TITLE SHEET
2-4	TYPICAL SECTIONS AND DETAILS
5	QUANTITIES AND REFERENCE NOTES
6	HYDRANT COVERAGE PLAN
7-9	EROSION AND SEDIMENT CONTROL PLAN
10-13	GRADING PLAN
14-18	PLAN AND PROFILE
19-22	WATER MAIN PLAN AND PROFILE
23-24	INTERSECTION DETAILS
25	LANDSCAPE PLAN

GENERAL LEGEND

PROPOSED

PROPERTY BOUNDARY	— — — — —
SECTION LINE	— — — — —
CENTER LINE	— — — — —
RIGHT OF WAY	- - - - R/W - - - -
BUILDING SETBACK	— — — — —
PERMANENT EASEMENT	— — — — —
TEMPORARY EASEMENT	— — — — —
TYPE SW-501 STORM INTAKE	— — — — —
TYPE SW-502 STORM INTAKE	— — — — —
TYPE SW-503 STORM INTAKE	— — — — —
TYPE SW-505 STORM INTAKE	— — — — —
TYPE SW-506 STORM INTAKE	— — — — —
TYPE SW-512 STORM INTAKE	— — — — —
TYPE SW-513 STORM INTAKE	— — — — —
TYPE SW-401 STORM MANHOLE	— — — — —
TYPE SW-402 STORM MANHOLE	— — — — —
FLARED END SECTION	— — — — —
TYPE SW-301 SANITARY MANHOLE	— — — — —
STORM/SANITARY CLEANOUT	— — — — —
WATER VALVE	— — — — —
FIRE HYDRANT ASSEMBLY	— — — — —
SIGN	— — — — —
DETECTABLE WARNING PANEL	— — — — —
WATER CURB STOP	— — — — —
STORM SEWER STRUCTURE NO.	— — — — —
STORM SEWER PIPE NO.	— — — — —
SANITARY SEWER STRUCTURE NO.	— — — — —
SANITARY SEWER	— — — — —
SANITARY SERVICE	— — — — —
STORM SEWER	— — — — —
STORM SERVICE	— — — — —
WATERMAIN WITH SIZE	— — — — —
WATER SERVICE	— — — — —
SAWCUT (FULL DEPTH)	— — — — —
SILT FENCE	— — — — —
USE AS CONSTRUCTED	(UAC)
MINIMUM PROTECTION ELEVATION	MPE
TOP OF PROPOSED GROUND	TG

EXISTING

SANITARY MANHOLE	— — — — —
WATER VALVE BOX	— — — — —
FIRE HYDRANT	— — — — —
WATER CURB STOP	— — — — —
WELL	— — — — —
STORM SEWER MANHOLE	— — — — —
STORM SEWER SINGLE INTAKE	— — — — —
STORM SEWER DOUBLE INTAKE	— — — — —
FLARED END SECTION	— — — — —
DECIDUOUS TREE	— — — — —
CONIFEROUS TREE	— — — — —
DECIDUOUS SHRUB	— — — — —
CONIFEROUS SHRUB	— — — — —
ELECTRIC POWER POLE	— — — — —
GUY ANCHOR	— — — — —
STREET LIGHT	— — — — —
POWER POLE W/ TRANSFORMER	— — — — —
UTILITY POLE W/ LIGHT	— — — — —
ELECTRIC BOX	— — — — —
ELECTRIC TRANSFORMER	— — — — —
ELECTRIC MANHOLE OR VAULT	— — — — —
TRAFFIC SIGN	— — — — —
TELEPHONE JUNCTION BOX	— — — — —
TELEPHONE MANHOLE/VAULT	— — — — —
TELEPHONE POLE	— — — — —
GAS VALVE BOX	— — — — —
CABLE TV JUNCTION BOX	— — — — —
CABLE TV MANHOLE/VAULT	— — — — —
MAIL BOX	— — — — —
BENCHMARK	— — — — —
SOIL BORING	— — — — —
UNDERGROUND TV CABLE	— — — — —
GAS MAIN	— — — — —
FIBER OPTIC	— — — — —
UNDERGROUND TELEPHONE	— — — — —
OVERHEAD ELECTRIC	— — — — —
UNDERGROUND ELECTRIC	— — — — —
FIELD TILE	— — — — —
SANITARY SEWER WITH SIZE	— — — — —
STORM SEWER WITH SIZE	— — — — —
WATER MAIN WITH SIZE	— — — — —

AS-BUILT DRAWINGS

AS-BUILT PLANS ARE BASED ON SURVEYED INVERT ELEVATIONS AND INFORMATION SUPPLIED BY THE CONTRACTOR. CIVIL DESIGN ADVANTAGE TAKES NO RESPONSIBILITY FOR UNAUTHORIZED CHANGES TO THE PLANS WITHOUT CITY/OWNER KNOWLEDGE. FIELD VERIFICATION OF UTILITIES OR OTHER PLAN ELEMENTS IS ALWAYS RECOMMENDED.

OWNER/APPLICANT

INDI RUN WEST, LLC
17389 BERKSHIRE PARKWAY
CLIVE, IOWA 50325
PH: 515-975-7441
CONTACT: ERIC GRUBB
EMAIL: ERIC@SOLIDGROUNDIOWA.COM

ENGINEER

CIVIL DESIGN ADVANTAGE, LLC
4121 NW URBANDALE DRIVE
URBANDALE, IOWA 50322
PH: 515-369-4400
CONTACT: DOUG MANDERNACH
EMAIL: DOUGM@CDA-ENG.COM

SURVEYOR

CIVIL DESIGN ADVANTAGE
4121 NW URBANDALE DRIVE
URBANDALE, IA 50322
CONTACT: CHARLIE MCGLOTHLEN
EMAIL: CHARLIE@CDA-ENG.COM
PH: (515) 369-4400

DATE OF SURVEY

JANUARY 3, 2022

SUBMITTAL DATES

FIRST SUBMITTAL:	06/14/2022
SECOND SUBMITTAL:	07/15/2022
THIRD SUBMITTAL:	08/02/2022
FOURTH SUBMITTAL:	08/11/2022
FIFTH SUBMITTAL:	08/30/2022
SIXTH SUBMITTAL:	09/08/2022
AS-BUILT SUBMITTAL:	10/10/2023

BENCHMARKS

BURY BOLT ON HYDRANT @ SE CORNER OF NE BADGER LANE AND N WARRIOR LANE. ELEVATION = 1014.03

BURY BOLT ON HYDRANT @ SE CORNER OF DOUGLAS PARKWAY AND NE BADGER LANE. ELEVATION = 999.60

LEGAL DESCRIPTION

A PART OF PARCEL "22-20" AS SHOWN ON THE PLAT OF SURVEY RECORDED IN BOOK 2022, PAGE 9854, BEING A PART OF THE SOUTH ONE HALF OF SECTION 28, TOWNSHIP 79 NORTH, RANGE 26 WEST OF THE FIFTH PRINCIPAL MERIDIAN, IN THE CITY OF WAUKEE, DALLAS COUNTY, IOWA AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF THE COMMONS AT GREENWAY PLAT 2, AN OFFICIAL PLAT IN SAID CITY OF WAUKEE; THENCE NORTH 00°23'18" EAST, 24.15 FEET; THENCE SOUTH 55°06'57" WEST, 350.36 FEET; THENCE SOUTH 36°19'40" WEST, 199.30 FEET TO THE WESTERLY LINE OF SAID PARCEL "22-20"; THENCE NORTHWESTERLY ALONG SAID WESTERLY LINE AND A CURVE CONCAVE NORTHEASTERLY WHOSE RADIUS IS 950.01 FEET, WHOSE ARC LENGTH IS 350.40 FEET AND WHOSE CHORD BEARS NORTH 27°07'52" WEST, 348.42 FEET; THENCE NORTH 16°33'44" WEST CONTINUING ALONG SAID WESTERLY LINE, 235.24 FEET; THENCE NORTH 73°26'14" EAST, 229.99 FEET; THENCE NORTH 72°46'50" EAST, 54.66 FEET; THENCE NORTH 67°12'02" EAST, 61.27 FEET; THENCE NORTH 60°22'40" EAST, 61.31 FEET; THENCE NORTH 53°33'10" EAST, 61.31 FEET; THENCE NORTH 46°43'40" EAST, 61.31 FEET; THENCE NORTH 39°54'11" EAST, 61.31 FEET; THENCE NORTH 33°15'21" EAST, 108.08 FEET; THENCE SOUTH 62°58'08" EAST, 0.28 FEET; THENCE NORTH 27°01'52" EAST, 60.00 FEET; THENCE NORTH 27°01'52" EAST, 133.32 FEET; THENCE NORTH 32°07'05" EAST, 70.00 FEET; THENCE SOUTHEASTERLY ALONG A CURVE CONCAVE SOUTHWESTERLY WHOSE RADIUS IS 3035.00 FEET, WHOSE ARC LENGTH IS 27.25 FEET AND WHOSE CHORD BEARS SOUTH 57°37'29" EAST, 27.25 FEET; THENCE SOUTHEASTERLY ALONG A CURVE CONCAVE NORTHEASTERLY WHOSE RADIUS IS 1965.00 FEET, WHOSE ARC LENGTH IS 465.73 FEET AND WHOSE CHORD BEARS SOUTH 64°09'26" EAST, 464.64 FEET; THENCE SOUTH 19°03'10" WEST, 70.00 FEET; THENCE SOUTH 18°20'27" WEST, 176.25 FEET; THENCE SOUTH 18°27'35" WEST, 128.15 FEET TO THE SOUTHERLY LINE OF SAID PARCEL "22-20"; THENCE SOUTH 49°12'27" WEST ALONG SAID SOUTHERLY LINE, 122.95 FEET; THENCE SOUTH 66°33'54" WEST CONTINUING ALONG SAID SOUTHERLY LINE, 325.11 FEET TO THE POINT OF BEGINNING AND CONTAINING 12.73 ACRES (554,693 SQUARE FEET).

THE PROPERTY IS SUBJECT TO ANY AND ALL EASEMENTS OF RECORD.

ZONING

R-2 ONE AND TWO FAMILY RESIDENTIAL DISTRICT

UTILITY WARNING

THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY AND RECORDS OBTAINED BY THIS SURVEYOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL THE UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION SHOWN.



4121 NW URBANDALE DRIVE, URBANDALE, IA 50322

PH: (515) 369-4400

PROJECT NO. 1806.355

THE PROJECT REQUIRES AN IOWA NPDES PERMIT #2 AND CITY OF WAUKEE COSECO PERMIT. CIVIL DESIGN ADVANTAGE WILL PROVIDE THE PERMITS AND THE INITIAL STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR THE CONTRACTORS USE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR UPDATING THE SWPPP THROUGHOUT CONSTRUCTION AND MEETING LOCAL, STATE AND FEDERAL REQUIREMENTS.

ALL CONSTRUCTION MATERIALS, DUMPSTERS, DETACHED TRAILERS OR SIMILAR ITEMS ARE PROHIBITED ON PUBLIC STREETS OR WITHIN THE PUBLIC R.O.W.

THE 2020 EDITION OF THE WAUKEE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND 2022 EDITION OF SUDAS STANDARD SPECIFICATIONS SHALL APPLY TO ALL WORK ON THIS PROJECT EXCEPT AS MODIFIED HEREIN.

JEFFREY J. NESVIK, P.E.

10/26/2023

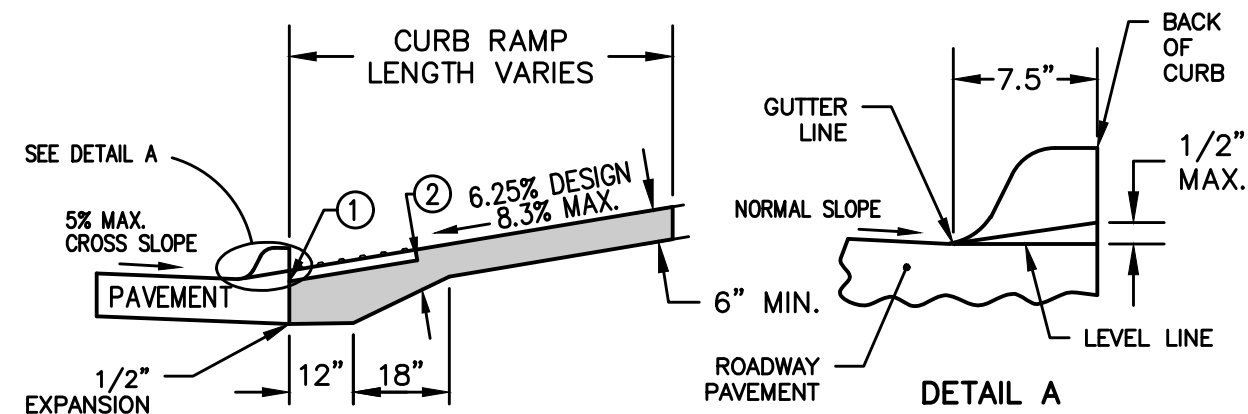
DATE

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

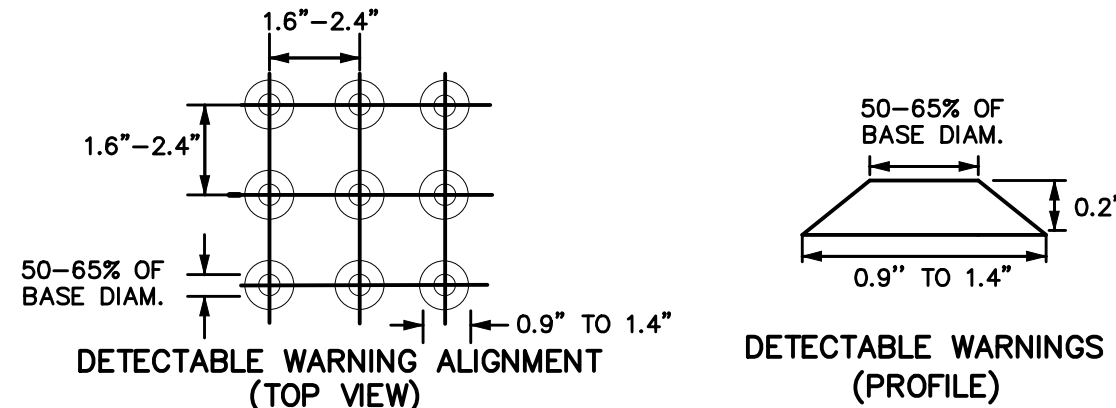
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2022

PAGES OR SHEETS COVERED BY THIS SEAL:

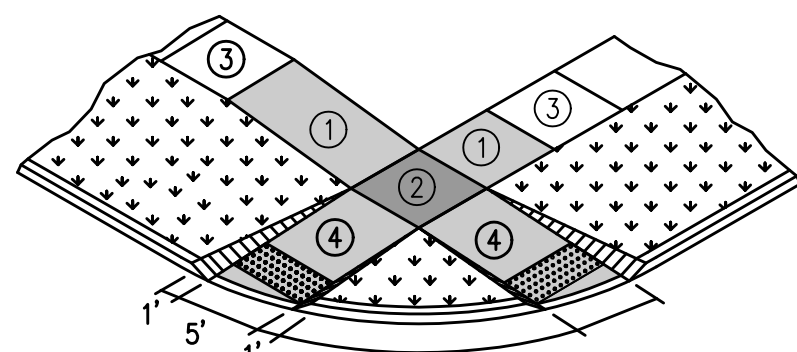
SHEETS 1-24



1. INSTALL A 24 INCH WIDE (MIN.) STRIP OF DETECTABLE WARNINGS AT THE BACK OF CURB. EXTEND THE DETECTABLE WARNINGS ACROSS THE FULL WIDTH OF THE RAMP.
2. PROVIDE A MINIMUM OF 6 INCHES OF CONCRETE BELOW THE DETECTABLE WARNING PANEL.

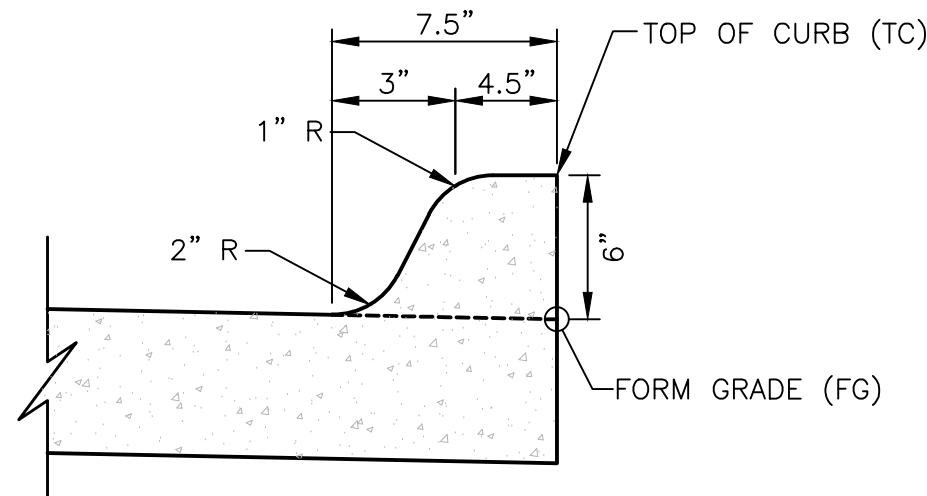


DETECTABLE WARNING DETAIL
NOT TO SCALE

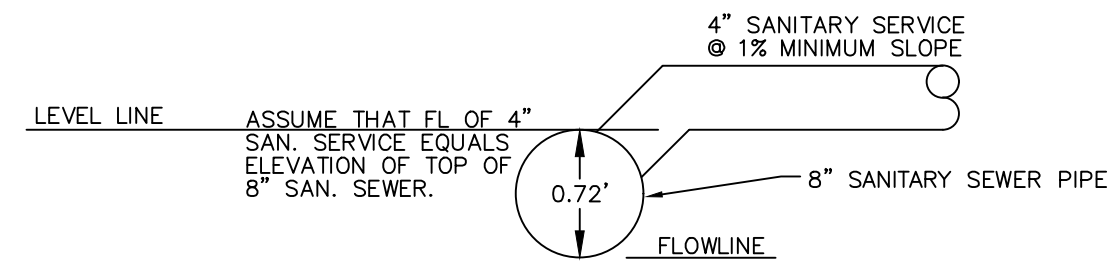


- Key
- 1. CURB RAMP
 - 2. TURNING SPACE
 - 3. DETECTABLE WARNING
1. PARALLEL CURB RAMP: TARGET CROSS SLOPE OF 1.5% WITH A MAXIMUM CROSS SLOPE OF 2.0%. THE LENGTH OF THE PARALLEL RAMP IS NOT TO EXCEED 15 FEET, REGARDLESS OF RESULTING SLOPE. DO NOT EXCEED 8.3% SLOPE FOR PARALLEL RAMP SHORTER THAN 15 FEET.
2. TURNING SPACE: TARGET SLOPE OF 1.5% WITH A MAXIMUM SLOPE PERPENDICULAR TO THE TRAVEL DIRECTIONS OF 2.0%. AT MID-BLOCK CROSSINGS, CROSS SLOPE OF LANDING MAY EXCEED 2.0% TO MATCH THE ROADWAY GRADE. MINIMUM 5 FEET BY 5 FEET.
3. TARGET CROSS-SLOPE OF 1.5% WITH A MAXIMUM CROSS-SLOPE OF 2.0%.
4. PERPENDICULAR CURB RAMP: TARGET RUNNING SLOPE OF 6.25% WITH MAXIMUM RUNNING SLOPE OF 8.3%.
- THE MINIMUM PAVEMENT DEPTH FOR RAMPS AND TURNING SPACE SHALL BE 6-INCHES.

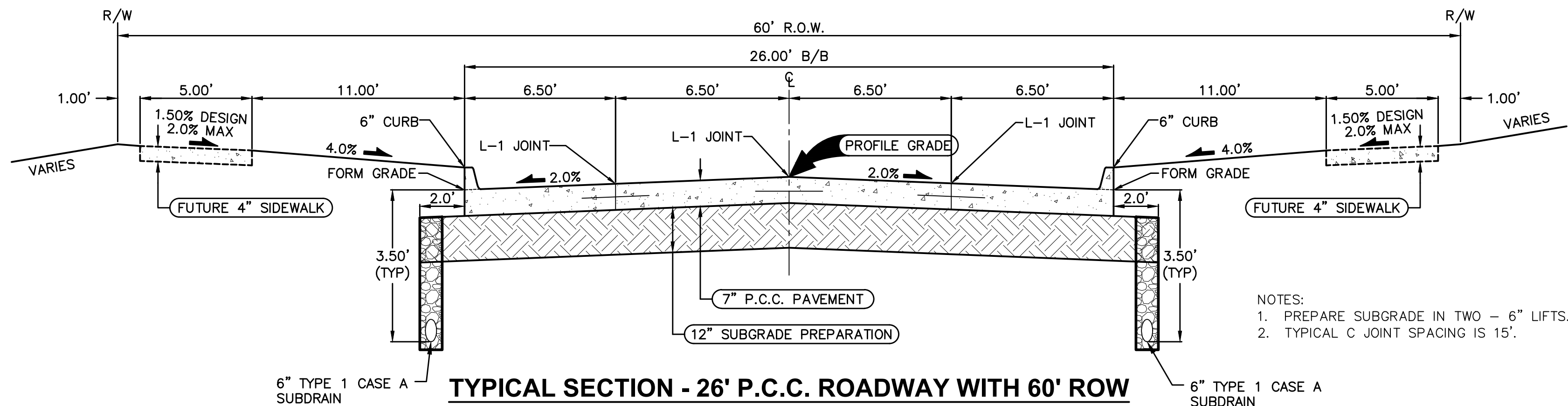
CURB RAMPS OUTSIDE OF INTERSECTION RADIUS
NOT TO SCALE



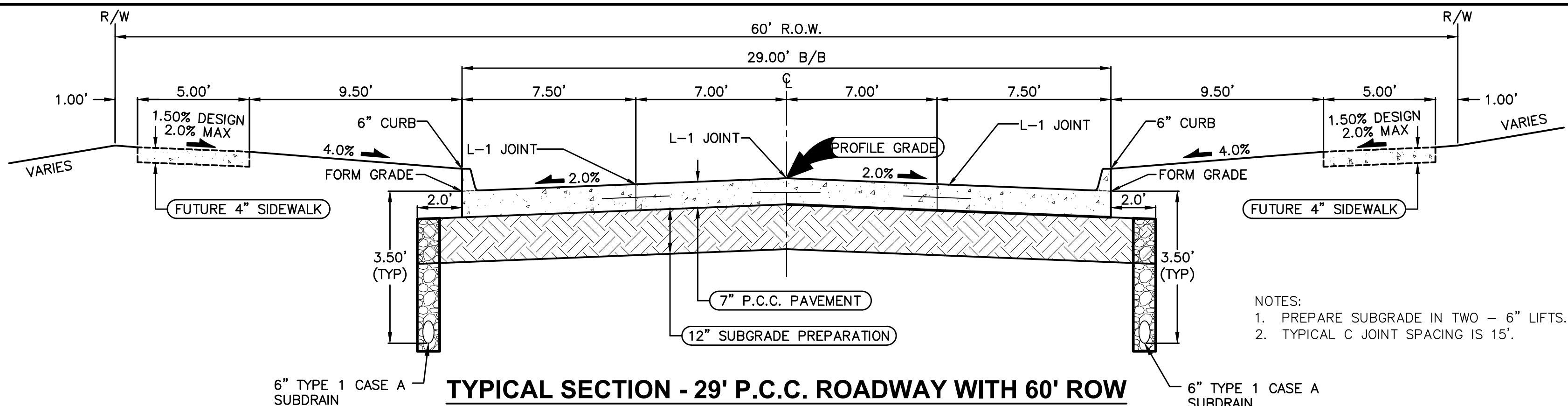
INTEGRAL 6" STANDARD SPOT ELEVATION REFERENCE DETAIL
NOT TO SCALE



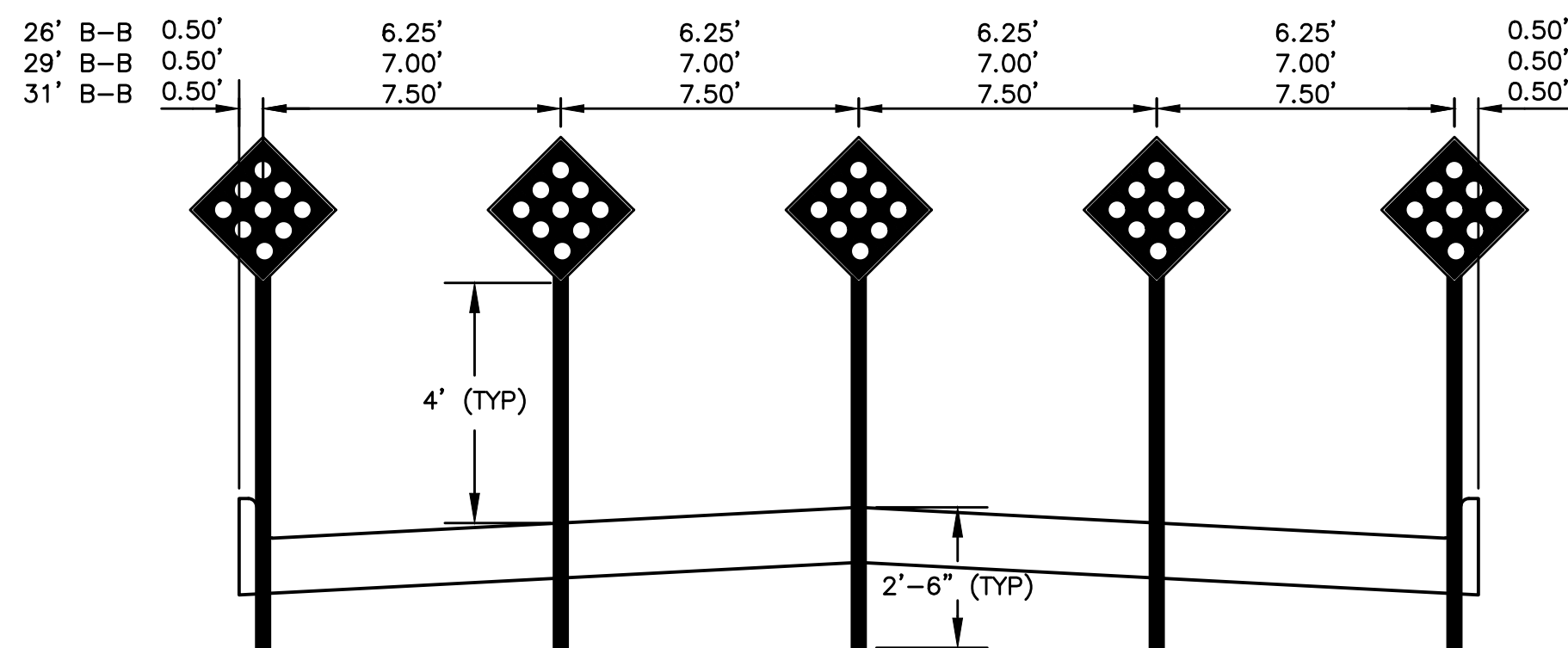
SANITARY SERVICE CONNECTION DETAIL
(BASED ON DESIGN ASSUMPTIONS FOR MINIMUM DEPTH OF SANITARY SERVICE)



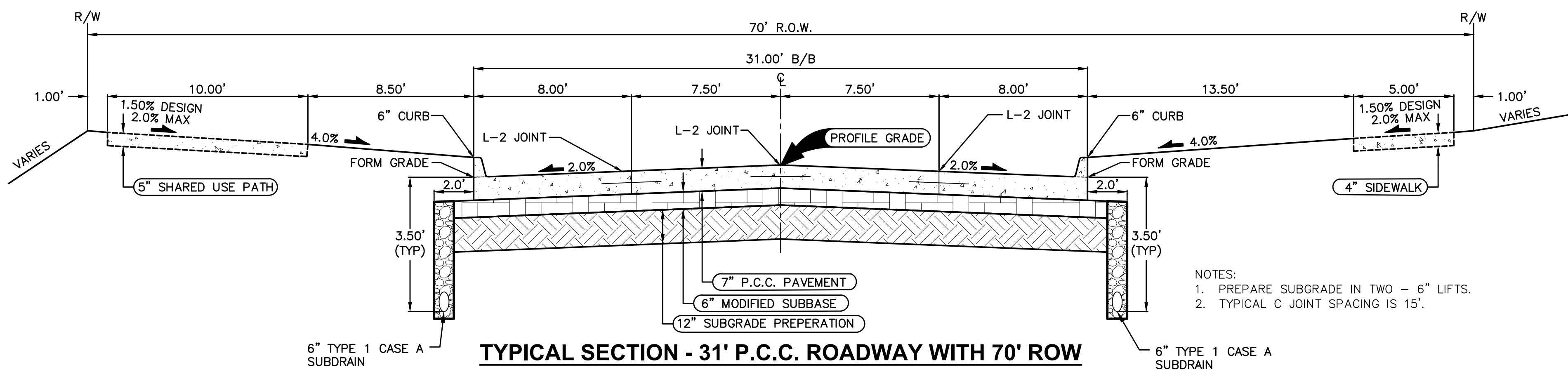
TYPICAL SECTION - 26' P.C.C. ROADWAY WITH 60' ROW
NOT TO SCALE
NW RYDER DRIVE



TYPICAL SECTION - 29' P.C.C. ROADWAY WITH 60' ROW
NOT TO SCALE
NW RYDER DRIVE & NW INDEPENDENCE CIRCLE



PERMANENT ROAD CLOSURE SIGN SPACING DETAIL
NOT TO SCALE
SI-182



TYPICAL SECTION - 31' P.C.C. ROADWAY WITH 70' ROW
NW SUNRISE DRIVE

10/10/2023	AS-BUILT SUBMITTAL
09/08/2023	SIXTH SUBMITTAL
08/30/2023	FIFTH SUBMITTAL
08/11/2023	FOURTH SUBMITTAL
08/02/2023	THIRD SUBMITTAL
07/15/2023	SECOND SUBMITTAL
05/23/2023	FIRST SUBMITTAL

4121 NW URBANDALE DRIVE
URBANDALE, IA 50322
PHONE: (515) 369-4400

ENGINEER: J.JN

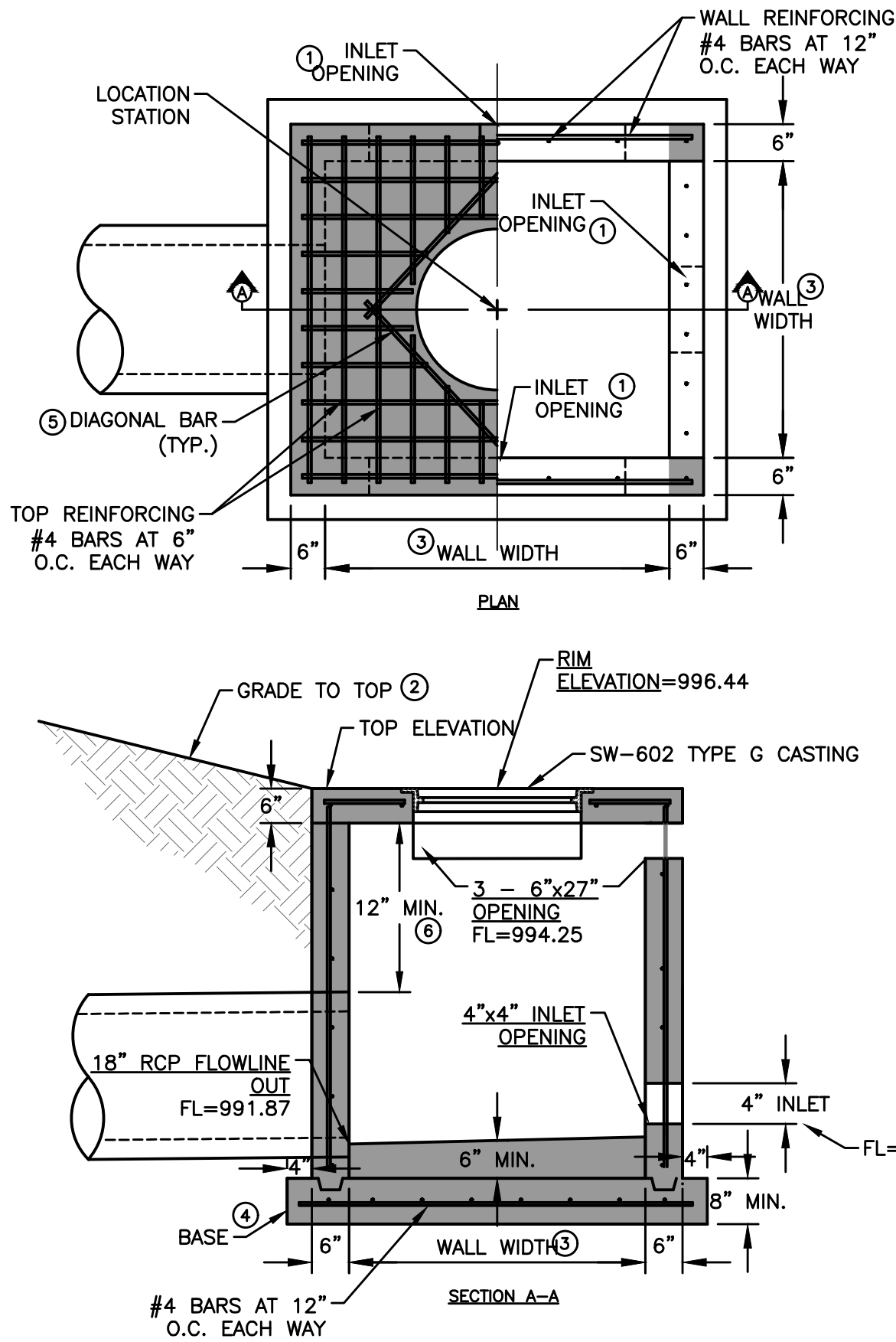
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WAUKEE, IOWA

INDI RUN PLAT 6
TYPICAL SECTIONS AND DETAILS

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DATE PLOTTED: 10/10/2023 12:14 PM
PLOTTER: HP PLOTTER
DRAWN BY: JNN

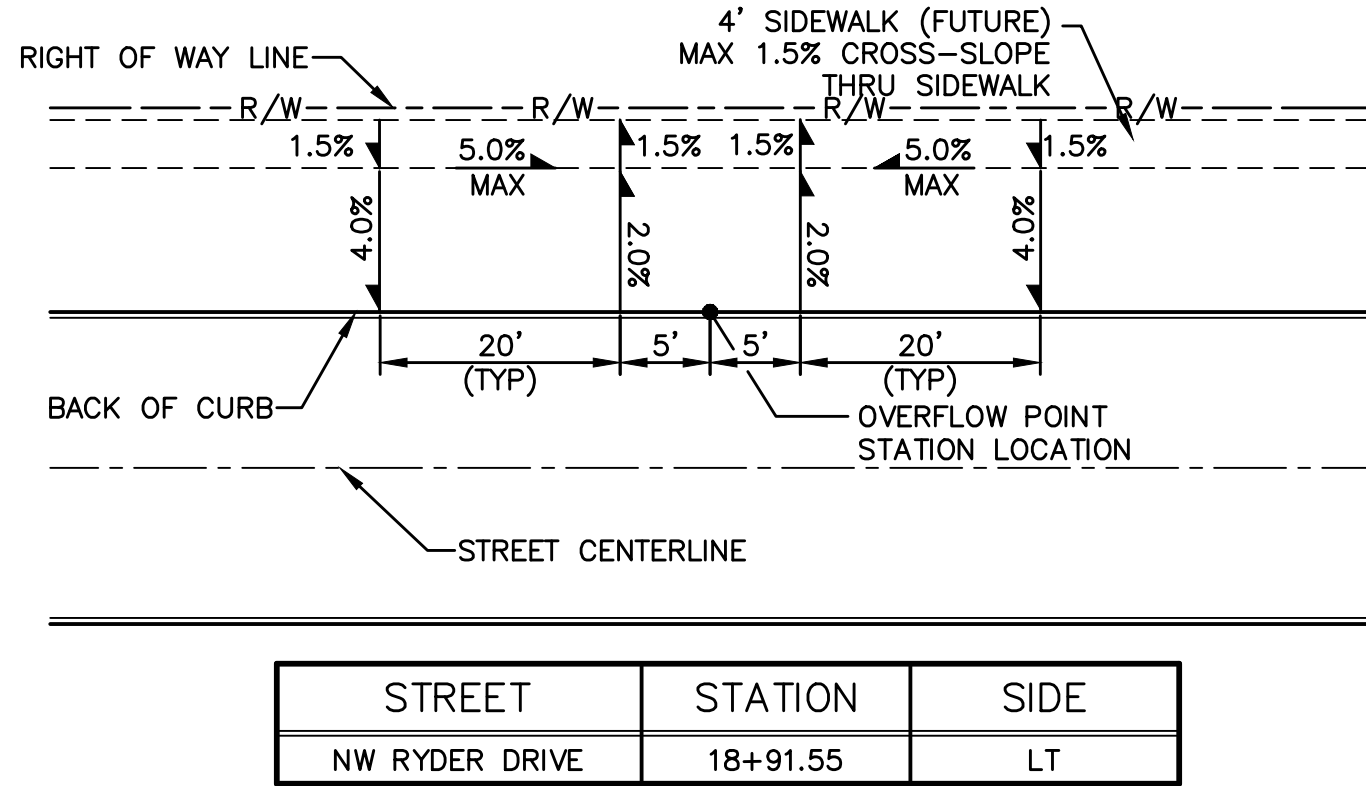


ST-2: SW-513 INTAKE

STRUCTURE MAY BE BUILT WITH OPENINGS ON ANY OR ALL SIDES. PROVIDE OPENINGS AND ORIENTATION AS SPECIFIED IN THE CONTRACT DOCUMENTS.

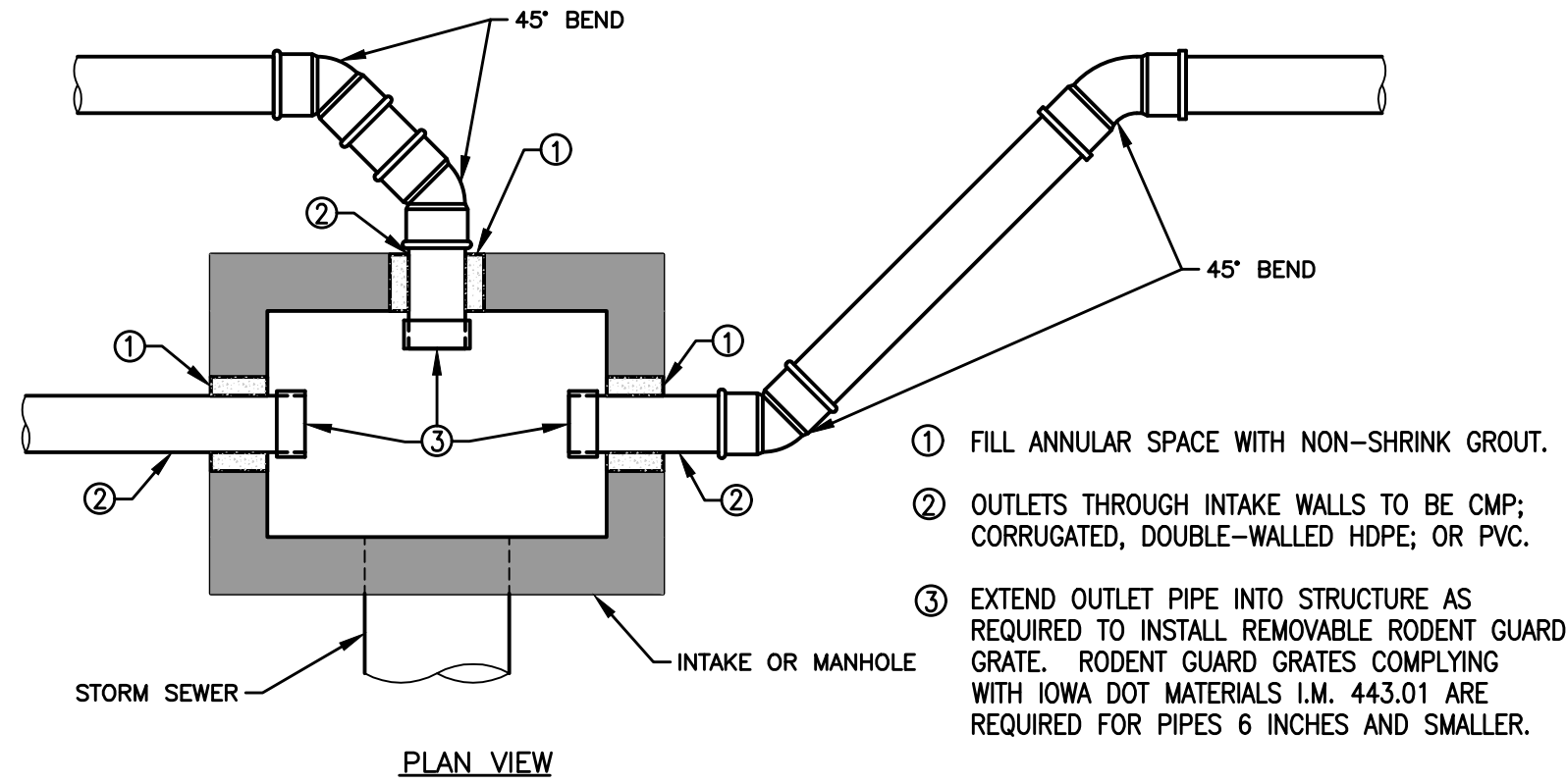
ADJACENT WALLS MAY HAVE DIFFERENT WIDTHS BASED UPON PIPE CONFIGURATION, BUT STRUCTURE MUST BE RECTANGULAR.

1. CONSTRUCT INLET OPENINGS WITH 15-INCH #4 EPOXY-COATED BARS AT 8 INCHES ON CENTER. EMBED BARS A MINIMUM OF 3 INCHES INTO WALLS AND TOP AT ALL OPENINGS.
2. GRADE TO TOP ELEVATION ON CLOSED SIDES.
3. WALL WIDTHS VARY WITH PIPE DIAMETER. PROVIDE 6 INCHES OF WALL WIDTH (MINIMUM) EACH SIDE OF PIPE OPENING. MINIMUM WALL WIDTH IS 36 INCHES. MAXIMUM WALL WIDTH IS 72 INCHES.
4. CAST-IN-PLACE BASE SHOWN. IF BASE IS PRECAST INTEGRAL WITH WALLS, THE FOOTPRINT OF BASE IS NOT REQUIRED TO EXTEND BEYOND THE OUTER EDGE OF THE WALLS.
5. INSTALL FOUR #4 DIAGONAL BARS AT ALL PIPE OPENINGS.
6. 12" MINIMUM WALL HEIGHT ABOVE ALL PIPES.

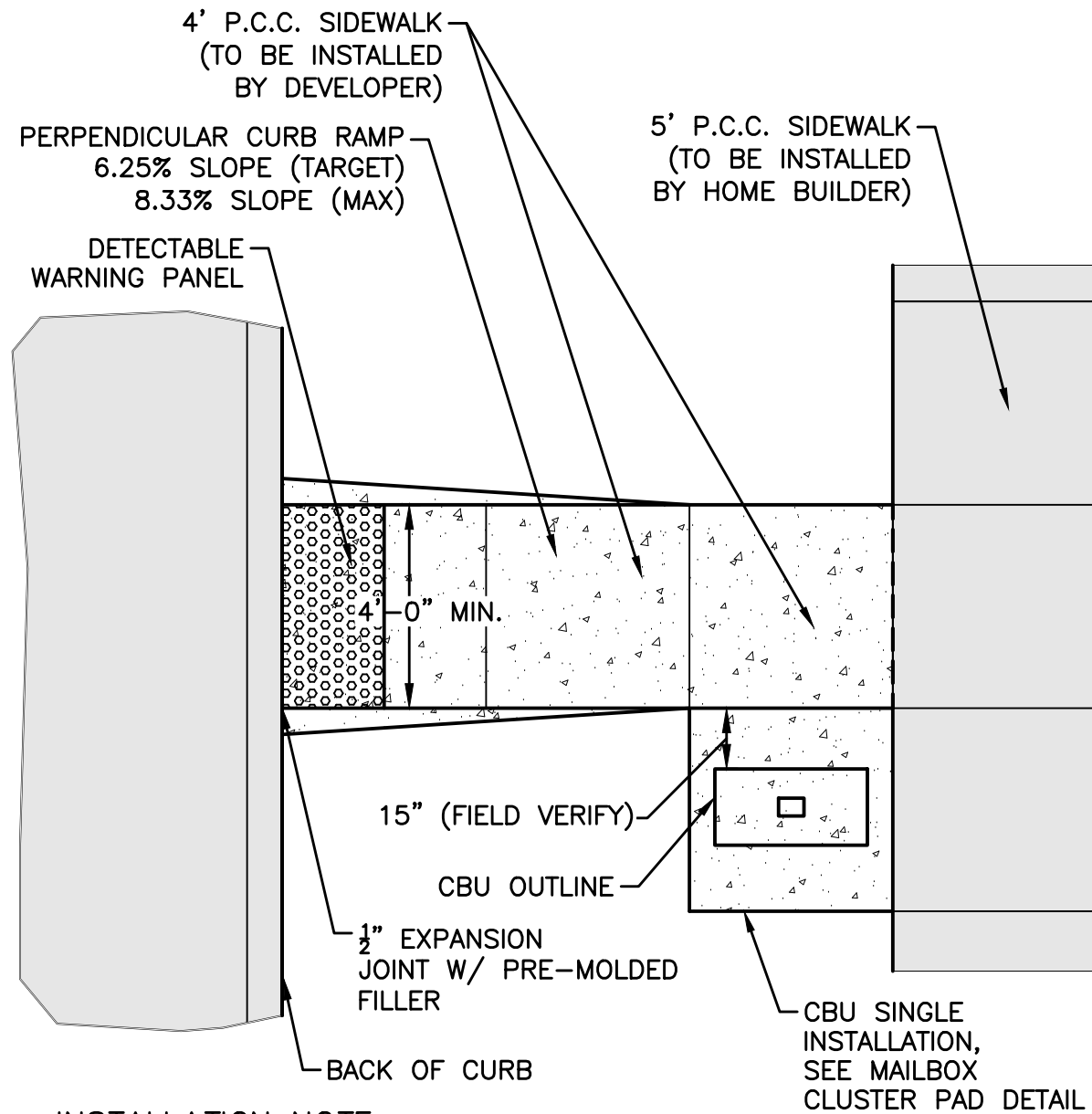


NOT TO SCALE

TYPICAL RIGHT OF WAY GRADING AT STORM WATER OVERFLOW POINTS



SUBDRAIN CONNECTION TO INTAKE

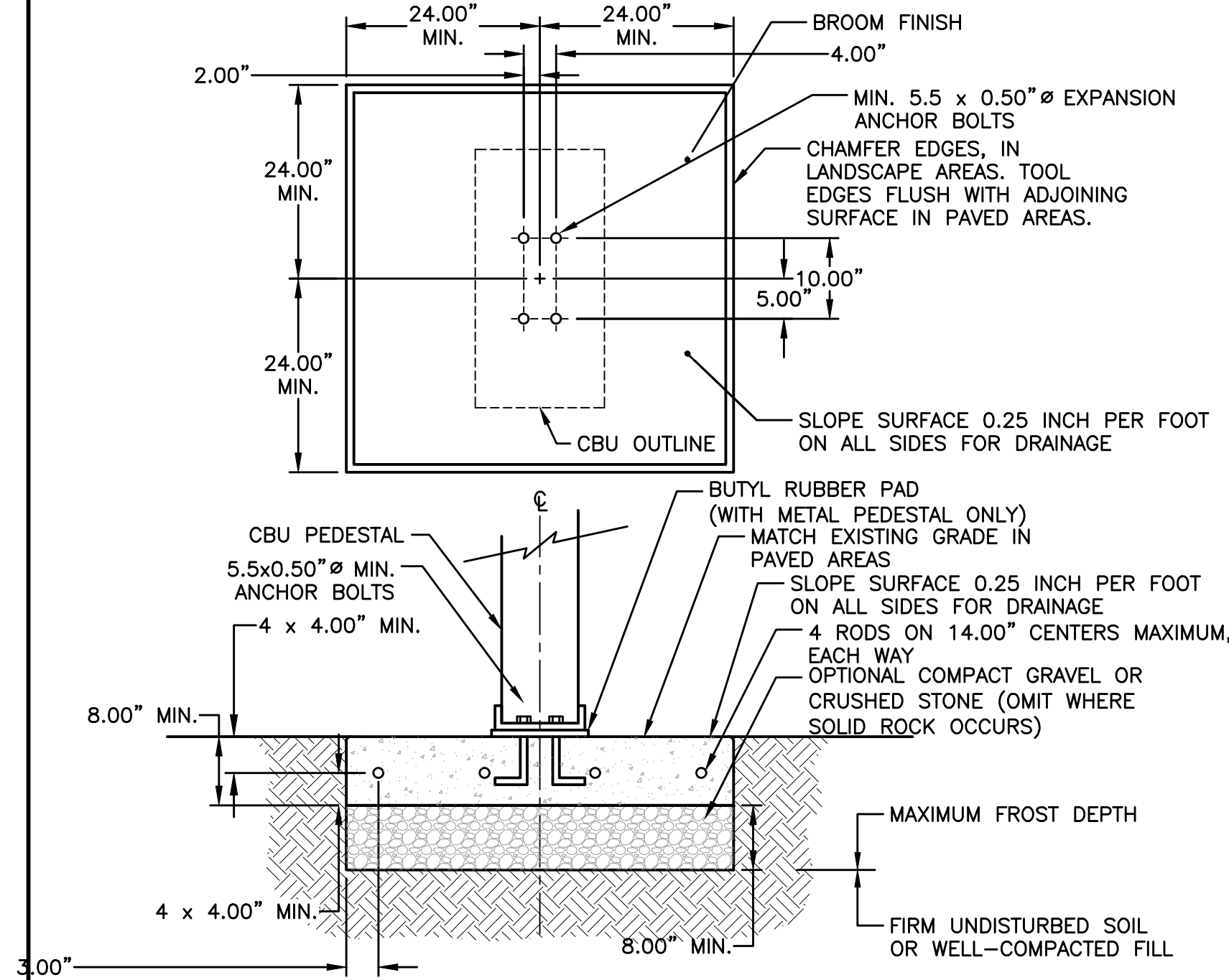


INSTALLATION NOTE:

1. MAILBOX PADS TO BE INSTALLED BY DEVELOPER.
2. CLUSTER MAILBOX TO BE LOCATED ON THE NO PARKING/STREET LIGHT SIDE OF STREET.
3. DO NOT LOCATE AT INTERSECTION.
4. LOCATE NEAR SHARED PROPERTY LINE PER APPROVED PLAN.
5. DETERMINE SIDEWALK SIDE OF MAILBOX PAD ELEVATION ASSUMING CONSTANT 4% SLOPE FROM BACK OF CURB TO SIDEWALK SIDE OF MAILBOX PAD. RESULTING SLOPE FROM BACK OF CURB TO STREET SIDE OF MAILBOX PAD WILL BE GREATER THAN 4%. FOR EXAMPLE, FOR A 29' WIDE PAVEMENT WITH A 60' WIDE R.O.W. AND A 2% MAILBOX PAD CROSS SLOPE, THE RESULTING SLOPE FROM THE BACK OF CURB TO THE STREET SIDE OF MAILBOX PAD IS 6.2%.

MAILBOX PAD DETAIL

NOT TO SCALE



NOTES:

1. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS, CONTAIN 4% MIN. - 6% MAX. AIR ENTRAINMENT AND BE PLACED WITH A 3.50" - 4.00" SLUMP IN ACCORDANCE WITH ACI 301.
2. REINFORCING STEEL RODS SHALL CONFORM TO ASTM A615, GRADE 60.
3. EXPANSION BOLTS SHALL BE EQUIVALENT TO THE FOLLOWING PROVIDERS:
 - A. HILTI KWIK BOLT (WWW.USHLTI.COM) II-1/2" DIAMETER X 5-1/2" OVERALL LENGTH. GALVANIZED, CATALOG # 000-453-696 KB II 12-512, STAINLESS STEEL: CATALOG # 000-454-744. ENSURE THAT THE MIN. EMBEDMENT IN CONCRETE IS AT LEAST 3-1/2"
 - B. ITW RAMSET REDHEAD TRUBOLT (WWW.RAMSET-REDHEAD.COM) GALVANIZED, 1/2" DIAMETER X 7" OVERALL LENGTH; CATALOG NUMBER: WS-1270G. ENSURE THAT MIN. EMBEDMENT IS CONCRETE IS AT LEAST 4-1/8"
 - C. RAWL STUD (WWW.RAWL.COM) GALVANIZED, 1/2" X 5-1/2" OVERALL LENGTH; CATALOG NUMBER: 7724. ENSURE THAT MIN. EMBEDMENT IN CONCRETE IS AT LEAST 4"

MAILBOX CLUSTER PAD DETAIL

NOT TO SCALE

CITY OF WAUKEE
WATER SERVICE CONNECTION
NOT TO SCALE

- NOTES
1. MINIMUM SIZE FOR PIPING, VALVES AND FITTINGS FROM WATER MAIN TO HYDRANT INLET: 6".
 2. PROVIDE TRACER WIRE AND TRACER WIRE STATION.
 3. WRAP HYDRANT, PIPE AND FITTINGS WITH POLYETHYLENE ENCASEMENT.

CITY OF WAUKEE HYDRANT ASSEMBLY
NOT TO SCALE

- NOTES
1. SLOPE SUBDRAINS TO DRAIN.
 2. 6" BACK OF CURB SUBDRAINS AND ALL BACK AND SIDE YARD SUBDRAINS;USE PEA GRAVEL FOR POROUS BACKFILL.
 3. DIRECT PERFORATIONS DOWN FOR SUBDRAINS AND UP FOR SUMPS PUMP COLLECTOR LINES.

CITY OF WAUKEE SUBDRAIN
NOT TO SCALE

- NOTES
1. INSTALL RISER TO BEAR FIRMLY AGAINST UNDISTURBED WALL OF TRENCH. STAKE RISER PIPE IN PLACE PRIOR TO BACK-FILLING TO PREVENT MOVEMENT OF PIPE
 2. NOTCH WALL OF TRENCH TO RECEIVE PIPE WHERE POSSIBLE.

CITY OF WAUKEE
SANITARY SEWER SERVICE RISER
NOT TO SCALE

CITY OF WAUKEE UTILITY SERVICE LOCATIONS

- ## NOTES
1. EXTEND CLASS B CONCRETE SUPPORT FOR MJ AND PE QUARTER BEND 8" ALL SIDES.
 2. USE ANSI A21.50 DUCTILE IRON PIPE; MINIMUM THICKNESS CL. 52; COAT WITH STANDARD COATING INSIDE AND OUT.
 3. USE ANSI A21.10 MECHANICAL JOINT FITTINGS; 150 PSI PRESSURE RATING. COAT WITH STANDARD COATING INSIDE AND OUT.
 4. DROUT PIPE IN BLOCK WITH NON-SHRINK GROUT IF PRECAST MANHOLE SECTION IS USED.
 5. DROP CONNECTIONS NOT PERMITTED ON 18" OR LARGER SEWER PIPE.

NOT PERMITTED ON 18" OR
E. **CITY OF WAUKEE**
OUTSIDE DROP CONNECTION
NOT TO SCALE

ESTIMATED PROJECT QUANTITIES			
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
1	CLEARING AND GRUBBING	LS	1
2	TOP SOIL, ON-SITE	LS	1
3	EXCAVATION, CLASS 10	LS	1
4	SUBGRADE PREPARATION, 12 IN. DEPTH	SY	5,952
5	MODIFIED SUBBASE, 6 IN. DEPTH	SY	2,199
6	SANITARY SEWER GRAVITY MAIN, TRENCHED, PVC, 8 IN. DIA.	LF	772
7	SANITARY SEWER SERVICE STUB, PVC, 4 IN. DIA.	EA	22
8	SANITARY SEWER DROP CONNECTION	EA	1
9	STORM SEWER, TRENCHED, RCP, 15 IN. DIA.	LF	705
10	STORM SEWER, TRENCHED, RCP, 18 IN. DIA.	LF	324
11	PIPE APRON, RCP, 18 IN. DIA.	EA	1
12	SUBDRAIN, CORRUGATED PVC, 6 IN. DIA.	LF	1,823
13	SUBDRAIN CLEANOUT, TYPE A-1, 6 IN. DIA.	EA	4
14	FOOTING DRAIN COLLECTOR, HDPE, 8 IN. DIA.	LF	195
15	FOOTING DRAIN CLEANOUT, TYPE A-1, 8 IN. DIA.	EA	1
16	STORM SEWER SERVICE STUB, PVC, 2 IN. DIA.	EA	26
17	WATER MAIN, TRENCHED, PVC, 8 IN. DIA.	LF	1,545
18	WATER SERVICE STUB, PVC, 1 IN. DIA.	EA	26
19	VALVE, GATE, 8 IN. DIA.	EA	5
20	FIRE HYDRANT ASSEMBLY	EA	7
21	FIRE HYDRANT ASSEMBLY, OFFSET	EA	1
22	BLOWOFF HYDRANT	EA	2
23	MANHOLE TYPE SW-301, 48 IN. DIA.	EA	3
24	MANHOLE TYPE SW-401, 48 IN. DIA.	EA	3
25	INTAKE TYPE SW-501	EA	2
26	INTAKE TYPE SW-503	EA	2
27	INTAKE TYPE SW-505	EA	2
28	INTAKE TYPE SW-506	EA	1
29	INTAKE TYPE SW-513	EA	1
30	PAVEMENT, PCC, 7 IN.	SY	5,263
31	SIDEWALK, PCC, 6 IN.	SY	94
32	SIDEWALK, PCC, 5 IN.	SY	479
33	SIDEWALK, PCC, 4 IN.	SY	621
34	MAILBOX PAD	EA	1
35	DETECTABLE WARNING	SF	112
36	TRAFFIC CONTROL	LS	1
37	PERMANENT ROAD CLOSURE SIGN – URBAN, SI-182, RELOCATED	EA	10
38	CONVENTIONAL SEEDING, SEEDING, FERTILIZING, AND MULCHING	AC	20.60
39	EROSION AND SEDIMENT CONTROL	LS	1
40	TURF REINFORCEMENT MAT	SF	16
41	8-INCH GRANULAR TURNAROUND	SY	558
42			
43			
44			
45			
46			
47			
48			
49			
50			
51			

ESTIMATE REFERENCE INFORMATION	
ITEM NO.	DESCRIPTION
	THE 2020 EDITION OF THE CITY OF WAUKEE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND THE 2022 EDITION OF SUDAS STANDARD SPECIFICATIONS SHALL APPLY TO ALL WORK PERFORMED ON THIS PROJECT EXCEPT AS MODIFIED HEREIN. ALL REFERENCES TO SECTIONS AND FIGURES ARE TO THE SUDAS STANDARD SPECIFICATIONS. CITY OF WAUKEE STANDARD DETAILS SHALL GOVERN IF ANY DISCREPANCIES.
1	CLEAR AND GRUB ALL AREAS AFFECTED BY GRADING OPERATIONS. THE CONTRACTOR SHALL FIELD VERIFY CLEARING AND GRUBBING NEEDS PRIOR TO BIDDING. INCLUDES REMOVAL OF ANY EXISTING FIELD FENCE. ALL MATERIAL THAT IS REMOVED FROM THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR. DO NOT DISTURB CROPS OUTSIDE OF THE PROJECT LIMITS.
2	STRIP, SALVAGE AND SPREAD THE TOP 12 INCHES OF TOPSOIL. RESPREAD TOPSOIL WITHIN THE RIGHT OF WAY, ON BACKSLOPES AND IN DEVELOPED AREAS A MINIMUM OF 8 INCHES THICK. TOPSOIL TO BE RESPREAD SHALL BE FREE OF ROCK AND DEBRIS AND BE SUITABLE FOR THE GROWTH OF GRASS. COORDINATE LOCATION OF STOCKPILE WITH OWNER.
3	EXCAVATION INCLUDES ALL WORK NECESSARY TO ACHIEVE PROPER GRADES AS SHOWN IN THE PLANS. NO PAYMENT FOR OVERHAUL SHALL BE ALLOWED. SHRINKAGE WAS ASSUMED TO BE 25%.
4	REFER TO SHEET 2 FOR TYPICAL LOCATIONS AND THICKNESS. QUANTITY BASED ON TWO-6 INCH LIFTS.
6-8	REFER TO FIG. 3010.101 - TRENCH BEDDING AND BACKFILL ZONES AND FIG. 3010.103 - FLEXIBLE GRAVITY PIPE TRENCH BEDDING FOR CONSTRUCTION DETAILS. GRANULAR PIPE BEDDING SHALL BE CONSIDERED INCIDENTAL. SANITARY SEWER SHALL BE SOLID WALL PVC OR TRUSS PIPE. TELEVIEW SANITARY SEWER PRIOR TO PAVING AND PROVIDE TELEVIEWING REPORT TO THE CITY IN HARD COPY AND ELECTRONIC FORMAT. TELEVIEWING SHALL BE CONSIDERED INCIDENTAL. CONNECTION TO EXISTING SANITARY SEWER SHALL BE CONSIDERED INCIDENTAL. REFER TO SHEET 4 FOR DROP CONNECTION DETAIL.
7	REFER TO FIG. 4010.201 - SANITARY SEWER SERVICE STUB FOR CONSTRUCTION DETAILS.
7, 16, 18	REFER TO TYPICAL SERVICE INSTALLATION DETAIL ON SHEET 2 FOR INTERIM SERVICE LOCATION.
9-10, 14	REFER TO FIG. 3010.101 - TRENCH BEDDING AND BACKFILL ZONES, FIG. 3010.102 - RIGID GRAVITY PIPE TRENCH BEDDING, AND FIG. 3010.103 - FLEXIBLE GRAVITY PIPE TRENCH BEDDING FOR BEDDING AND BACKFILL DETAILS. GRANULAR PIPE BEDDING SHALL BE CONSIDERED INCIDENTAL. PIPE LENGTHS INCLUDE PIPE APRONS. TELEVIEW STORM SEWER PRIOR TO PAVING AND PROVIDE TELEVIEWING REPORT TO THE CITY IN HARD COPY AND ELECTRONIC FORMAT. TELEVIEWING SHALL BE CONSIDERED INCIDENTAL. CONNECTION TO EXISTING STORM SEWER SHALL BE CONSIDERED INCIDENTAL. WHERE THE STORM SEWER CROSSES OVER THE WATER MAIN LOCATE ONE FULL LENGTH OF REINFORCED CONCRETE PIPE (RCP) WITH FLEXIBLE O-RING GASKET JOINTS SO BOTH JOINTS ARE LOCATED AS FAR AS POSSIBLE FROM THE WATER MAIN. CONSTRUCTION OF ROCK CHIMNEYS IS INCIDENTAL TO STORM SEWER CONSTRUCTION WHERE LONGITUDINAL STORM SEWER IS ALSO FUNCTIONING AS A SUBDRAIN. REFERENCE SHEET 4 OF THESE CONSTRUCTION DRAWINGS FOR SUBDRAIN DETAIL.
12	REFER TO FIG. 4040.231 - SUBDRAINS (CASE A - TYPE 1) AND SHEET 3 FOR CONSTRUCTION DETAILS. ALL FITTING AND POROUS BACKFILL SHALL BE CONSIDERED INCIDENTAL. DO NOT WRAP TRENCH IN ENGINEERING FABRIC. ALL ENCOUNTERED FIELD TILE SHALL BE DOCUMENTED AND CONNECTED TO PROPOSED SUBDRAIN. CONNECTIONS TO PROPOSED SUBDRAIN SHALL BE CONSIDERED INCIDENTAL.
15	REFER TO FIG. 4040.232 - SUBDRAIN CLEANOUTS FOR CONSTRUCTION DETAILS.
17	REFER TO FIG. 3010.101 - TRENCH BEDDING AND BACKFILL ZONES AND FIG. 3010.104 - PRESSURE PIPE TRENCH BEDDING FOR BEDDING AND BACKFILL DETAILS. GRANULAR PIPE BEDDING MATERIAL SHALL BE CONSIDERED INCIDENTAL. REFER TO FIG 5010.101 FOR THRUST BLOCK DETAILS. REFER TO FIG. 5010.102 FOR TRACER WIRE DETAILS. CONNECTIONS TO EXISTING WATER MAIN, ALL FITTINGS, PIPE BEDDING MATERIAL, POLYETHYLENE ENCASEMENT, THRUST BLOCKS, AND TRACER WIRE SYSTEM SHALL BE CONSIDERED INCIDENTAL. CONTRACTOR SHALL INSTALL BENDS AND DEFLECT PIPE JOINTS PER SECTION 5010, PART 301, A.6 AS NECESSARY TO INSTALL HYDRANT ASSEMBLIES AT THEIR SPECIFIED OFFSET AND ROADWAY CENTERLINE AND TO FOLLOW THE WATER MAIN ALIGNMENT AS SHOWN IN THE PLANS.
18	INCLUDES WATER SERVICE, CORPORATION VALVE, AND STOP BOXES.
19	INCLUDES VALVE, VALVE BOX AND COVER, VALVE BOX EXTENSION, AND VALVE STEM EXTENSION.

ESTIMATE REFERENCE INFORMATION	
DATA LISTED BELOW IS FOR INFORMATIONAL PURPOSE ONLY AND SHALL NOT CONSTITUTE A BASIS FOR ANY EXTRA WORK ORDERS.	
ITEM NO.	DESCRIPTION
20-22	REFER TO FIG. 5020.201 - FIRE HYDRANT ASSEMBLY FOR FIRE HYDRANT CONSTRUCTION DETAILS. INCLUDES ANCHORING TEE, ANCHORING ELBOW, GATE VALVE, VALVE BOX, ANCHORING PIPE, ANCHORING COUPLING, ELBOWS, TRACER WIRE STATION, FIRE HYDRANT, AND THRUST BLOCKS. CONCRETE FOR THRUST BLOCKS SHALL BE CONSIDERED INCIDENTAL.
23	REFER TO FIG. 6010.301 - CIRCULAR SANITARY SEWER MANHOLE FOR CONSTRUCTION DETAILS. REFER TO FIG. 6010.601 - CASTINGS FOR SANITARY SEWER MANHOLES FOR CASTING DETAILS. TYPE A CASTINGS REQUIRED FOR ALL MANHOLES OUT OF PAVEMENT. TYPE A CASTINGS WITH PRORINGS PER WAUKEE SPECIFICATIONS REQUIRED FOR ALL MANHOLES IN PAVEMENT. THE MAXIMUM HEIGHT OF ADJUSTING RINGS ALLOWED FOR MANHOLE CASTINGS IS 12 INCHES.
24	REFER TO FIG. 6010.401 - CIRCULAR STORM SEWER MANHOLE FOR CONSTRUCTION DETAILS. REFER TO FIG. 6010.602 - CASTINGS FOR STORM SEWER MANHOLES FOR CASTING DETAILS. TYPE E CASTINGS REQUIRED FOR ALL MANHOLES OUTSIDE OF PAVEMENT. TYPE F CASTINGS REQUIRED FOR ALL MANHOLES IN PAVEMENT. THE MAXIMUM HEIGHT OF ADJUSTING RINGS ALLOWED FOR MANHOLE CASTINGS IS 12 INCHES.
25-28	REFER TO FIG. 6010.514 - BOXOUTS FOR GRATE INTAKES. REFER TO FIG. 6010.603 - CASTINGS FOR GRATE INTAKES FOR TYPE R GRATE DETAILS AND FIG. 6010.602 - CASTINGS FOR STORM SEWER MANHOLES FOR TYPE E CASTING DETAILS. THE MAXIMUM HEIGHT OF ADJUSTING RINGS ALLOWED FOR INTAKE CASTINGS IS 8 INCHES. THE MAXIMUM HEIGHT OF ADJUSTING RINGS ALLOWED FOR MANHOLE CASTINGS IS 12 INCHES.
25	REFER TO FIG. 6010.501 - SINGLE GRATE INTAKE FOR CONSTRUCTION DETAILS.
26	REFER TO FIG. 6010.503 - SINGLE GRATE INTAKE WITH MANHOLE FOR CONSTRUCTION DETAILS.
27	REFER TO FIG. 6010.505 - DOUBLE GRATE INTAKE FOR CONSTRUCTION DETAILS.
28	REFER TO FIG. 6010.506 - DOUBLE GRATE INTAKE WITH MANHOLE FOR CONSTRUCTION DETAILS.
29	REFER TO DETAIL ON SHEET 3 FOR CONSTRUCTION DETAILS.
30	REFER TO FIG. 7030.101 - JOINTS FOR CONSTRUCTION DETAILS. REFER TO INTERSECTION SHEETS FOR JOINTING AND GEOMETRIC PLAN DETAILS. TYPICAL 'C' AND 'CD' JOINT SPACING IS 15 FEET. COARSE AGGREGATE FOR PCO PAVEMENT SHALL BE CLASS 3 DURABILITY.
31-33	REFER TO TO FIG. 7030.207 - CURB RAMP FOR CLASS B OR C SIDEWALK FOR CONSTRUCTION DETAILS. SIDEWALK SHALL BE 6 INCHES IN DEPTH FOR RAMPS AND TURNING SPACES. MINOR GRADING ADJACENT TO SIDEWALKS SHALL BE CONSIDERED INCIDENTAL.
35	REFER TO FIG. 7030.210 DETECTABLE WARNING PLACEMENT FOR CONSTRUCTION DETAILS. DETECTABLE WARNING PANELS SHALL BE INSTALLED PER SECTION 7030. DETECTABLE WARNING PANELS SHALL BE BRICK RED, PLASTIC PRE-MANUFACTURED PANELS.
36	REFER TO TRAFFIC CONTROL NOTES ON THIS SHEET. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). THE CONTRACTOR SHALL INSTALL AND MAINTAIN ROAD BARRICADES AT THE END OF EXISTING PAVEMENT UNIT THE PROJECT IS ACCEPTED BY THE CITY
37	REFER TO IOWA DEPARTMENT OF TRANSPORTATION STANDARD ROAD PLAN SI-182 FOR CONSTRUCTION DETAILS EACH ITEM INCLUDES 5 DELINEATOR POSTS WITH SIGN PANELS.
38	INCLUDES ALL MATERIALS, EQUIPMENT, AND LABOR NEEDED TO PERFORM SEEDING. SEED MIXTURE SHALL BE TYPE 1 (PERMANENT LAWN MIXTURE) AND TYPE 4 (URBAN TEMPORARY EROSION CONTROL MIXTURE). REFER TO SECTION 9010, 2.02A TYPE 1 (PERMANENT LAWN MIXTURE) AND 2.02D TYPE 4 (URBAN TEMPORARY EROSION CONTROL MIXTURE) FOR SEED MIXTURE. CONTRACTOR SHALL SEED ALL DISTURBED AREAS.
39	REFER TO SEPARATE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR CONSTRUCTION DETAILS AND INITIAL EROSION CONTROL PLAN. THE CLIENT/OWNER WILL BE RESPONSIBLE FOR MONITORING THE SITE AND KEEPING THE SWPPP CURRENT THROUGHOUT EACH PHASE OF CONSTRUCTION. CIVIL DESIGN ADVANTAGE IS NOT RESPONSIBLE FOR KEEPING THE SWPPP UPDATED THROUGHOUT CONSTRUCTION OR FOR DISTRIBUTION OF THE PLAN TO CONTRACTORS. IT WILL BE THE DUTY OF THE CLIENT OR CLIENT'S AGENT TO SEE THAT ALL CONTRACTORS RECEIVE A COPY OF THE SWPPP AND SIGN THE CERTIFICATION STATEMENTS. IT IS ALSO THE DUTY OF THE CLIENT OR CLIENT'S AGENT TO PERIODICALLY UPDATE THE SWPPP THROUGHOUT CONSTRUCTION TO MEET ALL EPA, IDNR AND LOCAL GOVERNMENTAL AGENCY'S REQUIREMENTS.
41	REFER TO SHEET 6 FOR LOCATION. TEMPORARY TURNAROUND TO BE 4-INCHES OF 3-INCH ROCK AND 4-INCHES OF GRANULAR SURFACING.

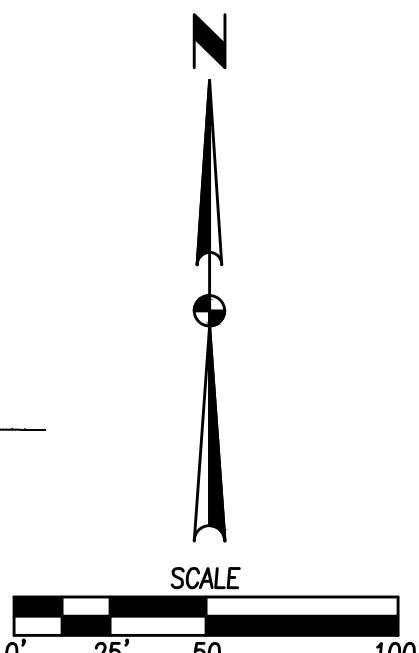
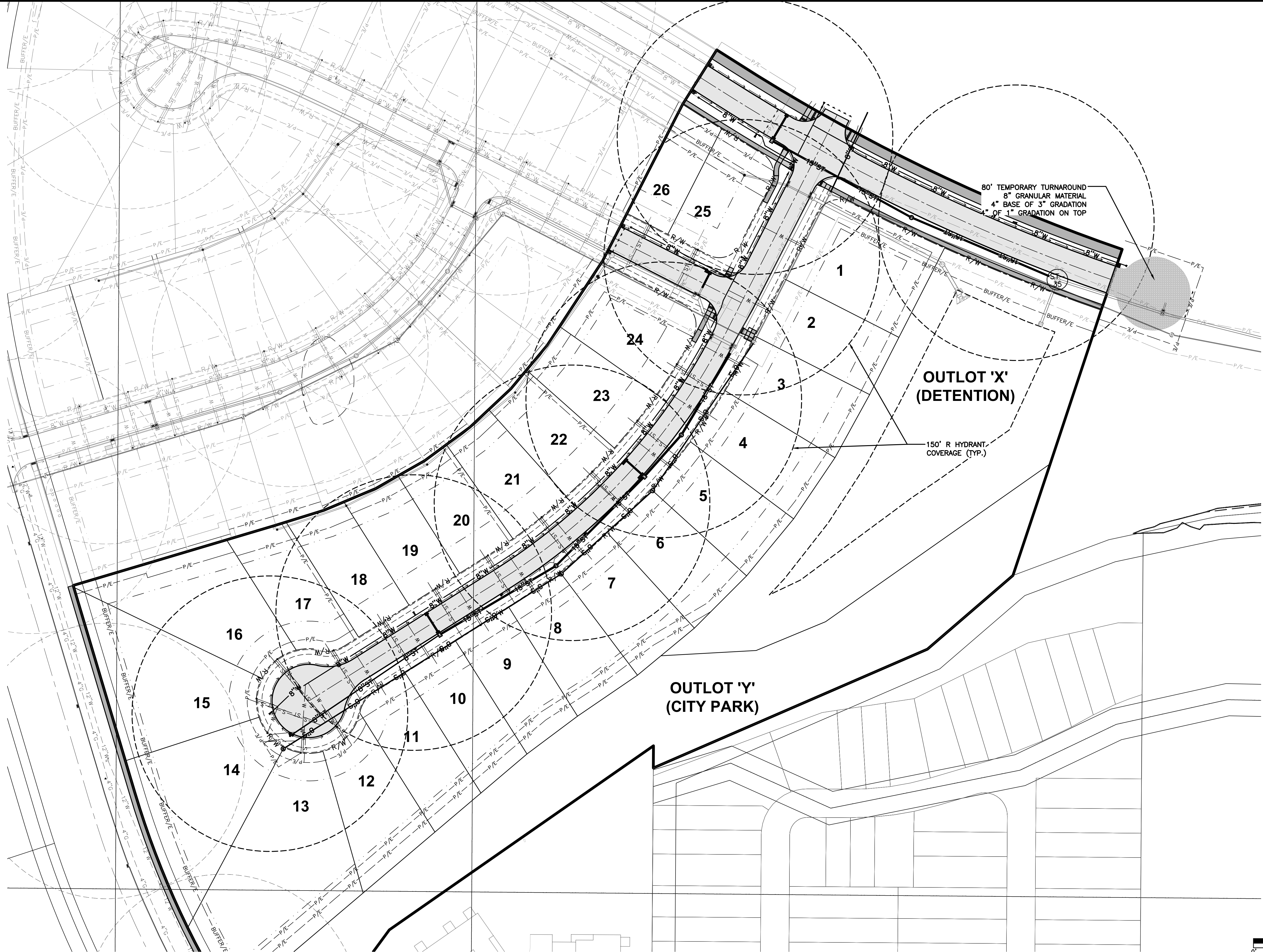
WHERE PUBLIC UTILITY FIXTURES ARE SHOWN AS EXISTING ON THE PLANS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREA, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNERS OF THOSE UTILITIES PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL AFFORD ACCESS TO THESE FACILITIES FOR NECESSARY MODIFICATION OF SERVICES. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATIONS AND TO AVOID DAMAGE THERETO. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OR DELAY CAUSED BY SUCH WORK.

THE CONTRACTOR IS REQUIRED TO UTILIZE THE UTILITY ONE-CALL SERVICE AT 800-292-8989 AT LEAST 48 HOURS PRIOR TO EXCAVATING ANYWHERE ON THE PROJECT.

2. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL NOTIFY (48 HRS NOTICE) THE FOLLOWING:
 - A. CITY OF WAUKEE
 - B. APPROPRIATE UTILITY COMPANIES
 - C. OWNER
 - D. CIVIL DESIGN ADVANTAGE
3. THE CONTRACTOR SHALL NOTIFY THE CITY OF WAUKEE AT LEAST ONE WEEK PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY AREAS OF PAVEMENT OR SIDEWALK NOT TO BE REMOVED THAT IS DAMAGED DUE TO OPERATING EQUIPMENT ON THE PAVEMENT OR SIDEWALK.
5. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF WORK BETWEEN ALL SUPPLIERS AND SUBCONTRACTORS INVOLVED IN THE PROJECT. INCLUDING STAGING OF CONSTRUCTION DETAILS.
6. THE CONTRACTOR SHALL APPLY NECESSARY MOISTURE TO THE CONSTRUCTION AREA AND HAUL ROADS TO PREVENT THE SPREAD OF DUST.
7. THE CONTRACTOR MAY BE REQUIRED AS DIRECTED BY THE ENGINEER OR THE CITY, TO PLACE TEMPORARY WARNING DEVICES AND SAFETY FENCE AT CERTAIN LOCATIONS WHERE REPLACEMENT FEATURES ARE NOT INSTALLED THE SAME DAY. THIS WILL BE INCIDENTAL TO THE BID ITEM TRAFFIC CONTROL.
8. SPECIAL CARE SHALL BE TAKEN WHEN FORMING AT INTERSECTIONS SO THE PROFILES SHOWN ON THE PLANS AND THE ELEVATIONS SHOWN ON THE INTERSECTION DETAILS ARE OBTAINED. SHORT LENGTHS OF FORMS OR FLEXIBLE FORMS MAY BE NECESSARY AT THESE LOCATIONS.
9. TO OBTAIN THE CORRECT FORM GRADES AT LOW POINTS WHERE INTAKES ARE LOCATED, THE CONTRACTOR MUST EXERCISE ADDITIONAL CARE WHEN PAVING FULL WIDTH PAVEMENTS. THIS MAY REQUIRE POURING ONE HALF OF THE PAVEMENT AT A TIME OR OTHER METHODS APPROVED BY THE ENGINEER.
10. THE CONTRACTOR SHALL CONFINE HIS GRADING OPERATIONS TO WITHIN THE PROPOSED AND EXISTING RIGHT OF WAY, CONSTRUCTION LIMITS AND EASEMENTS SHOWN ON THE PLANS.
11. PLAN AND PROFILE SHEETS INCLUDED IN THE PROJECT ARE FOR THE PURPOSE OF ALIGNMENT, LOCATION AND SPECIFIC DIRECTIONS FOR WORK TO BE PERFORMED UNDER THIS CONTRACT. IRRELEVANT DATA ON THESE SHEETS IS NOT TO BE CONSIDERED A PART OF THIS CONTRACT.
12. THE CONTRACTOR IS REQUIRED TO BE FAMILIAR WITH AND COMPLY WITH OSHA STANDARDS. NOTHING WITHIN THESE PLANS SHALL RELIEVE THE CONTRACTOR OF THIS REQUIREMENT.
13. CIVIL DESIGN ADVANTAGE WILL PROVIDE ALL CONSTRUCTION STAKING ON THIS PROJECT. NOTIFY CHARLIE MCGLOTHLEN (515-369-4433) A MINIMUM OF 48 HOURS BEFORE CONSTRUCTION STAKES ARE REQUIRED.
14. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF ALL EROSION CONTROL MEASURES REQUIRED ON THE STORM WATER POLLUTION PREVENTION PLAN.
15. IN THE EVENT OF A DISCREPANCY BETWEEN DETAILED PLANS AND QUANTITIES, THE DETAILED PLANS SHALL GOVERN.
16. THE CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC CONTROL. ALL TRAFFIC CONTROL SHALL COMPLY WITH MUTCD.
17. ALL SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING.
18. DO NOT STORE CONSTRUCTION MATERIALS AND EQUIPMENT IN THE RIGHT OF WAY.
19. ALL PROPERTY PINS SHALL BE PROTECTED FROM GRADING OR OTHER OPERATIONS. ANY PINS DISTURBED SHALL BE RESET AT THE CONTRACTOR'S EXPENSE.
20. ALL FIELD TILES ENCOUNTERED SHALL BE REPAIRED AND CONNECTED TO STORM SEWERS WHERE POSSIBLE. LOCATIONS SHALL BE PROVIDED TO ENGINEER FOR NOTATION ON AS-BUILTS INCLUDING LOCATION, TYPE OF TILE, & TILE ELEVATION.
21. PRIOR TO ANY WORK AT THIS SITE, CONTRACTOR SHALL EXAMINE ANY APPLICABLE DRAWINGS AVAILABLE FROM THE OWNER OR ENGINEER, AND CONSULT WITH OWNER'S PERSONNEL AND UTILITY COMPANY REPRESENTATIVES. NO COMPENSATION WILL BE ALLOWED FOR DAMAGE FROM FAILURE TO COMPLY WITH THIS REQUIREMENT.
22. CONTRACTOR SHALL COMPLY WITH ALL PROWAG A.D.A. REQUIREMENTS FOR ACCESSIBLE SIDEWALK RAMPS INCLUDING RAISED TRUNCATED DOME DETECTABLE WARNINGS.
23. CONTRACTOR SHALL NOT DISTURB DESIRABLE GRASS AREAS AND TREES OUTSIDE THE CONSTRUCTION LIMITS. THE CONTRACTOR WILL NOT BE PERMITTED TO PARK OR SERVICE VEHICLES AND EQUIPMENT OR USE THESE AREAS FOR STORAGE OF MATERIALS. PARKING AND SERVICE AREAS WILL BE SUBJECT TO THE APPROVAL OF THE OWNER.
24. ALL MATERIAL TESTING SHALL BE CONSIDERED INCIDENTAL TO OTHER CONSTRUCTION.
25. ALL MANHOLE TWO PIECE CASTINGS WITH PRORINGS SHALL BE BOXED OUT IN THE PAVEMENT.
26. THE GRADING OF THE DETENTION FACILITY AND INSTALLATION OF THE STORM SEWER SYSTEM SHALL BE COMPLETED AND FUNCTIONAL PRIOR TO ANY INCREASE IN THE SIZE OF IMPERVIOUS SURFACES WITHIN THE SITE OR THE PREVIOUSLY MENTIONED ITEMS SHALL BE GRADED/INSTALLED AS SOON AS PRACTICAL.

1. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. PERMANENT SIGNING THAT CONVEYS A MESSAGE CONTRARY TO THE MESSAGE OF TEMPORARY SIGNING AND NOT APPLICABLE TO THE WORKING CONDITIONS SHALL BE COVERED BY THE CONTRACTOR WHEN DIRECTED BY THE CITY.
3. THE CONTRACTOR SHALL COORDINATE HIS TRAFFIC CONTROL WITH OTHER CONSTRUCTION PROJECTS IN THE AREA.
4. SIDEWALK CLOSED SIGNS REQUIRED FOR ALL SIDEWALK CLOSURES. SIGNAGE AND TEMPORARY PEDESTRIAN ACCESS ROUTE THROUGH CONSTRUCTION AREA SHALL MEET THE REQUIREMENTS OF PUBLIC RIGHT-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG), SECTION R205 AND IOWA DOT DESIGN MANUAL, CHAPTER 12A-4.
5. THE CONTRACTOR IS CAUTIONED NEITHER TO OBSTRUCT NOR REMOVE ANY EXISTING PAVEMENT, NOR TO DISTURB THE EXISTING TRAFFIC PATTERNS MORE THAN IS NECESSARY FOR THE PROPER EXECUTION OF THE WORK.

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PLOT BY: JEFF NEVINS



INDI RUN PLAT 6
HYDRANT COVERAGE PLAN

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WAUKEE, IOWA

ENGINEER: J.J.N

PM: DAM

4121 NW URBANDALE DRIVE
URBANDALE, IA 50322
PHONE: (515) 369-4400

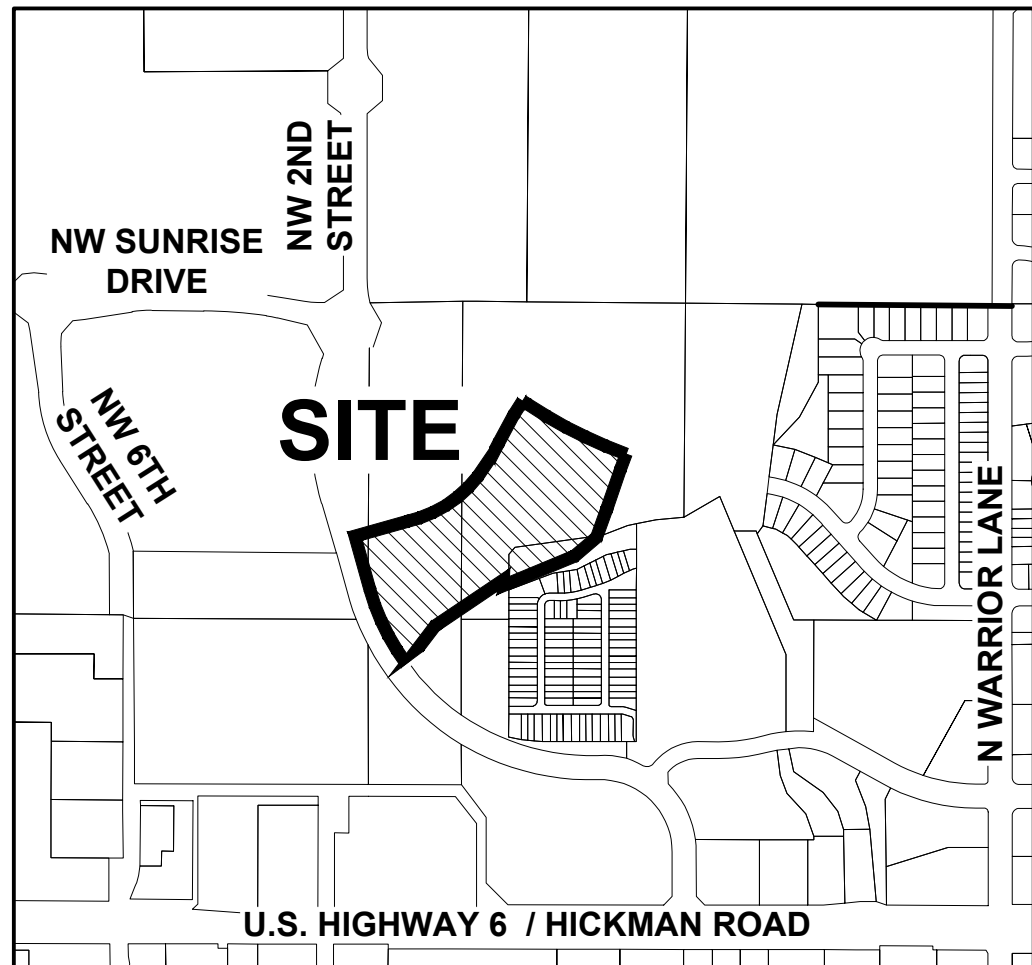
AS-BUILT SUBMITTAL	10/10/2023
SIXTH SUBMITTAL	09/08/2023
FIFTH SUBMITTAL	08/30/2023
FOURTH SUBMITTAL	08/11/2023
THIRD SUBMITTAL	08/02/2023
SECOND SUBMITTAL	07/15/2023
FIRST SUBMITTAL	05/23/2023

INDI RUN PLAT 6

EROSION AND SEDIMENT CONTROL PLAN

VICINITY MAP

NOT TO SCALE



WAUKEE, IOWA

STABILIZATION QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL
1	SILT FENCE	LF	6,779
2	FILTER SOCK	LF	30
3	SEEDING, FERTILIZING, AND MULCHING	AC	20.60
4	INLET PROTECTION DEVICES	EA	17
5	CONCRETE WASHOUT PIT	EA	1
6	TURF REINFORCEMENT MAT	SF	16

NOTES:

- IF DEWATERING IS NEEDED FOR ANY REASON, DISCHARGE OF WATER OFFSITE IS TO CONFORM WITH THE GENERAL PERMIT #2 REQUIREMENT.
- DISTURBED AREAS SHALL BE TEMPORARILY SEEDED OR MULCHED IMMEDIATELY WHENEVER CLEARING, GRADING, EXCAVATING, OR OTHER EARTH DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. SHOULD A TEMPORARY SEED MIX BE REQUIRED TO CONFORM WITH THE GENERAL PERMIT #2 REQUIREMENTS IT SHALL BE A SUDAS TYPE 4 TEMPORARY SEED MIX.
- STORM SEWERS AND DRAINAGE WAYS SHALL BE PROTECTED FROM CONCRETE SLURRY PRODUCED BY SAWCUTTING AND CONCRETE GRINDING.
- DEBRIS SPILLED ONTO THE STREET MUST BE PICKED UP BY THE END OF THE WORK DAY AND PRIOR TO ANY RAIN EVENT.
- FEMA FLOODPLAIN MAPPING UTILIZED AS DEPICTED IN PANEL 19049C0335F WITH AN EFFECTIVE DATE OF 12/07/2018.

DISCHARGE POINT SUMMARY

DISCHARGE POINT #1 TO AN UNNAMED TRIBUTARY OF LITTLE WALNUT CREEK ±1800 FT

TOTAL AREA DISTURBED TO DISCHARGE POINT 22.62 ACRES
STORAGE VOLUME REQUIRED (# OF ACRES*3600 CU FT) 81,432 CU FT

VOLUME PROVIDED IN FILTER SOCK (30 LF @ 2.0 CU FT/LF OF SOCK) 60 CU FT
VOLUME PROVIDED IN SILT FENCE (6779 LF @ 4.5 CU FT/LF OF FENCE) 30,506 CU FT
VOLUME PROVIDED IN TSB #1 72,695 CU FT
TOTAL VOLUME PROVIDED 103,261 CU FT

SWPPP LEGEND

DRAINAGE ARROW

X.XX %

GRADING LIMITS

FILTER SOCK

|||||

SILT FENCE

DITCH CHECK

INLET PROTECTION

○

PORTABLE RESTROOM

R

PERMANENT STANDPIPE

●

CONCRETE WASHOUT PIT

□

AREA TO BE SEEDED

TURF REINFORCEMENT MAT

UNDISTURBED AREA

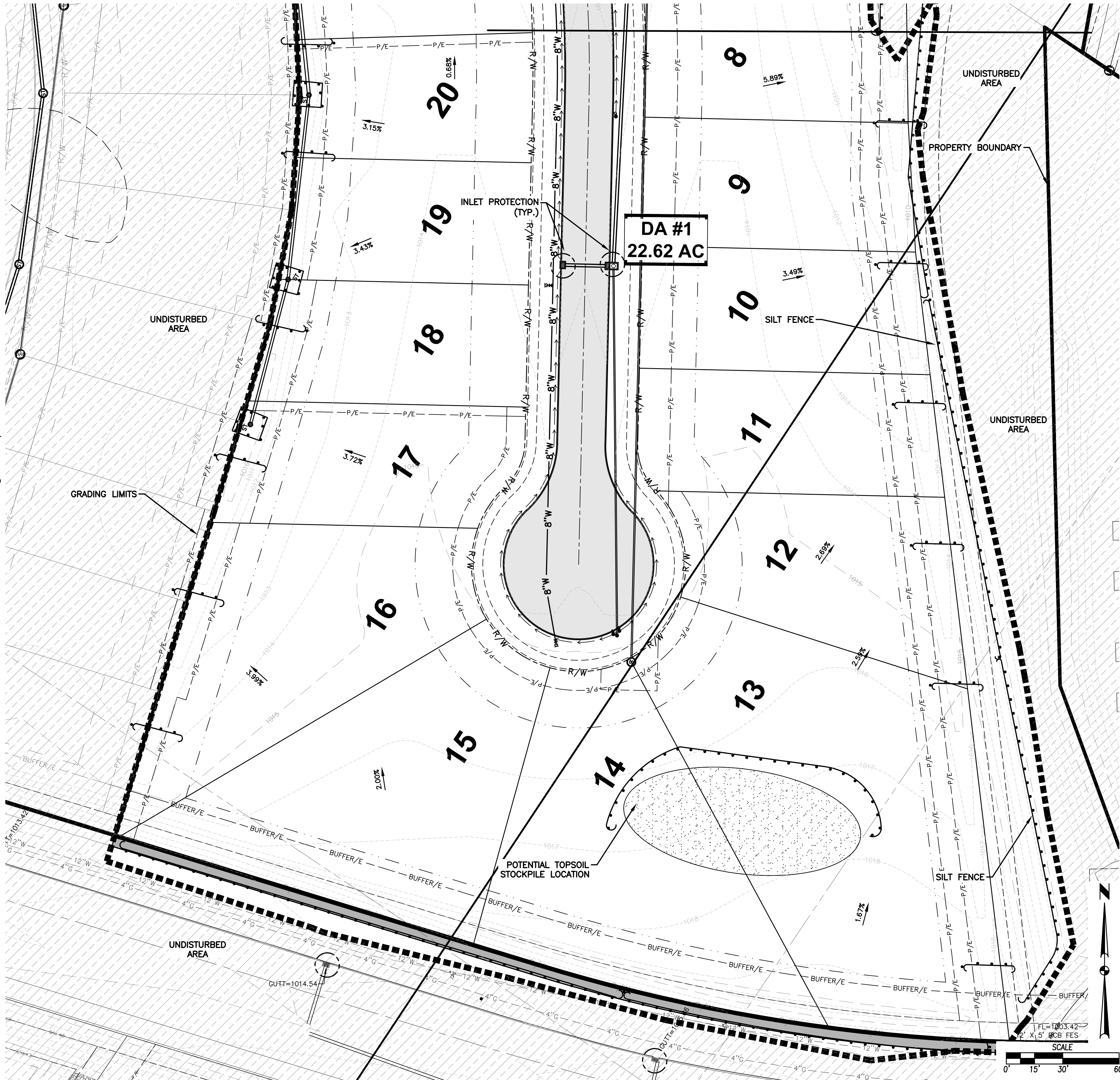
RIP-RAP

GRAVEL ENTRANCE

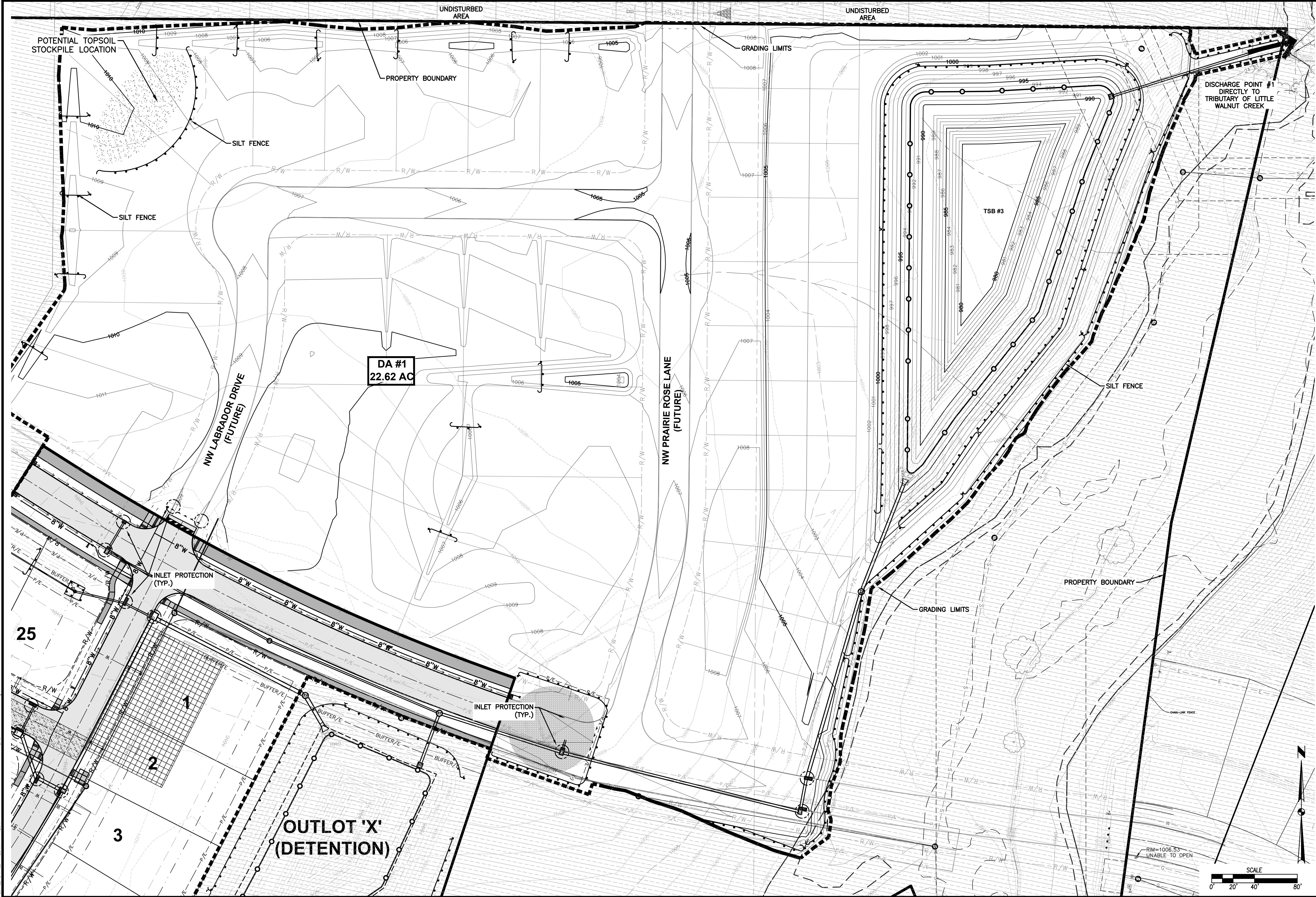
STAGING AREA

TEMPORARY SEDIMENT BASIN

TSB #



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INDIRUN PLAT 6
EROSION AND SEDIMENT CONTROL PLAN

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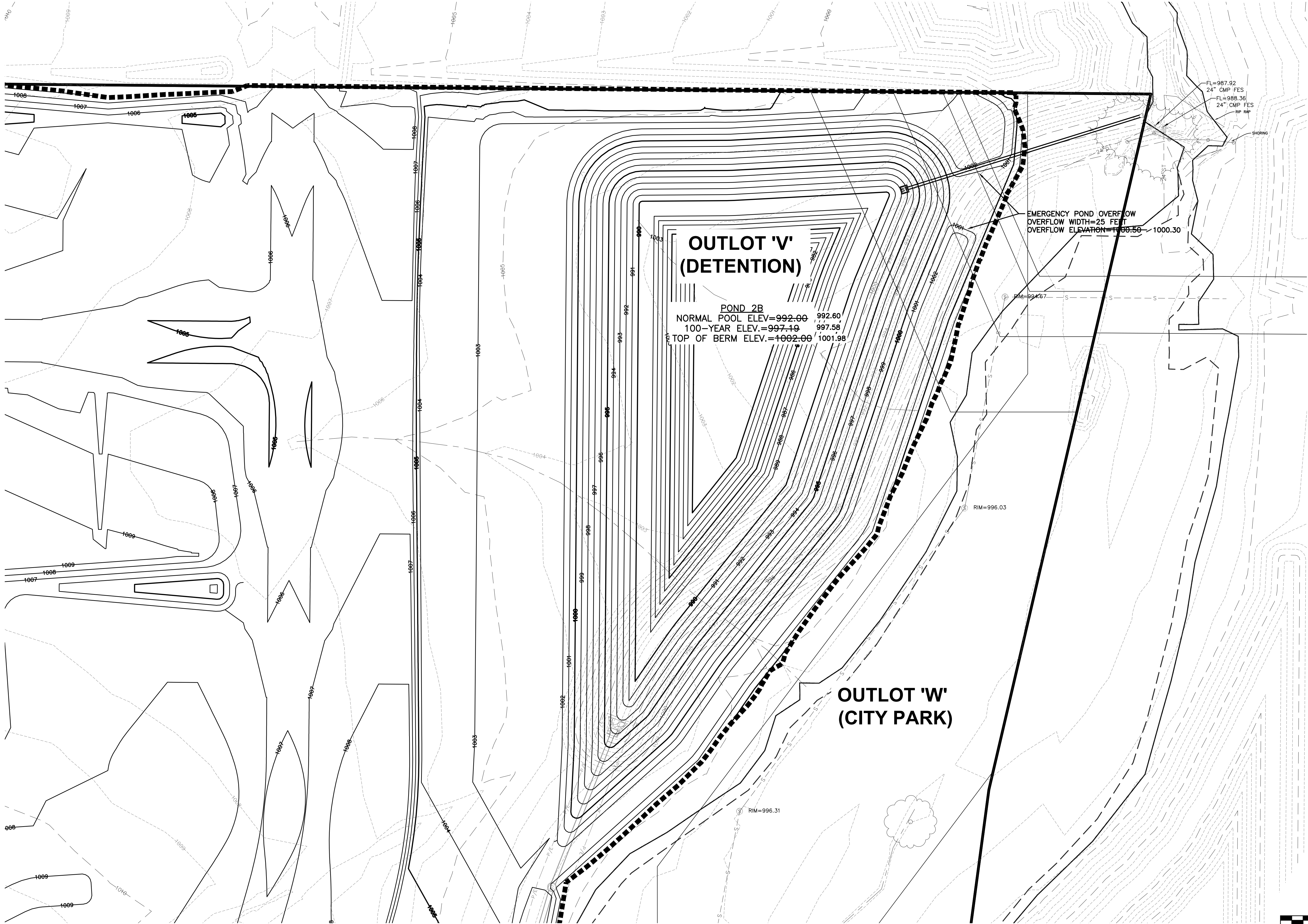
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CIVIL DESIGN ADVANTAGE

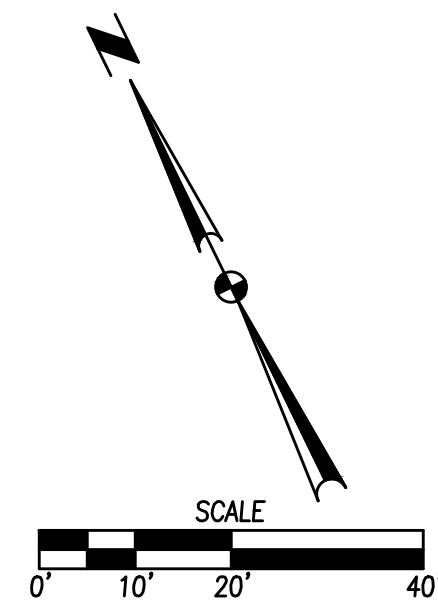
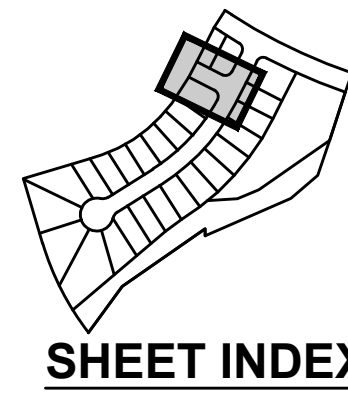
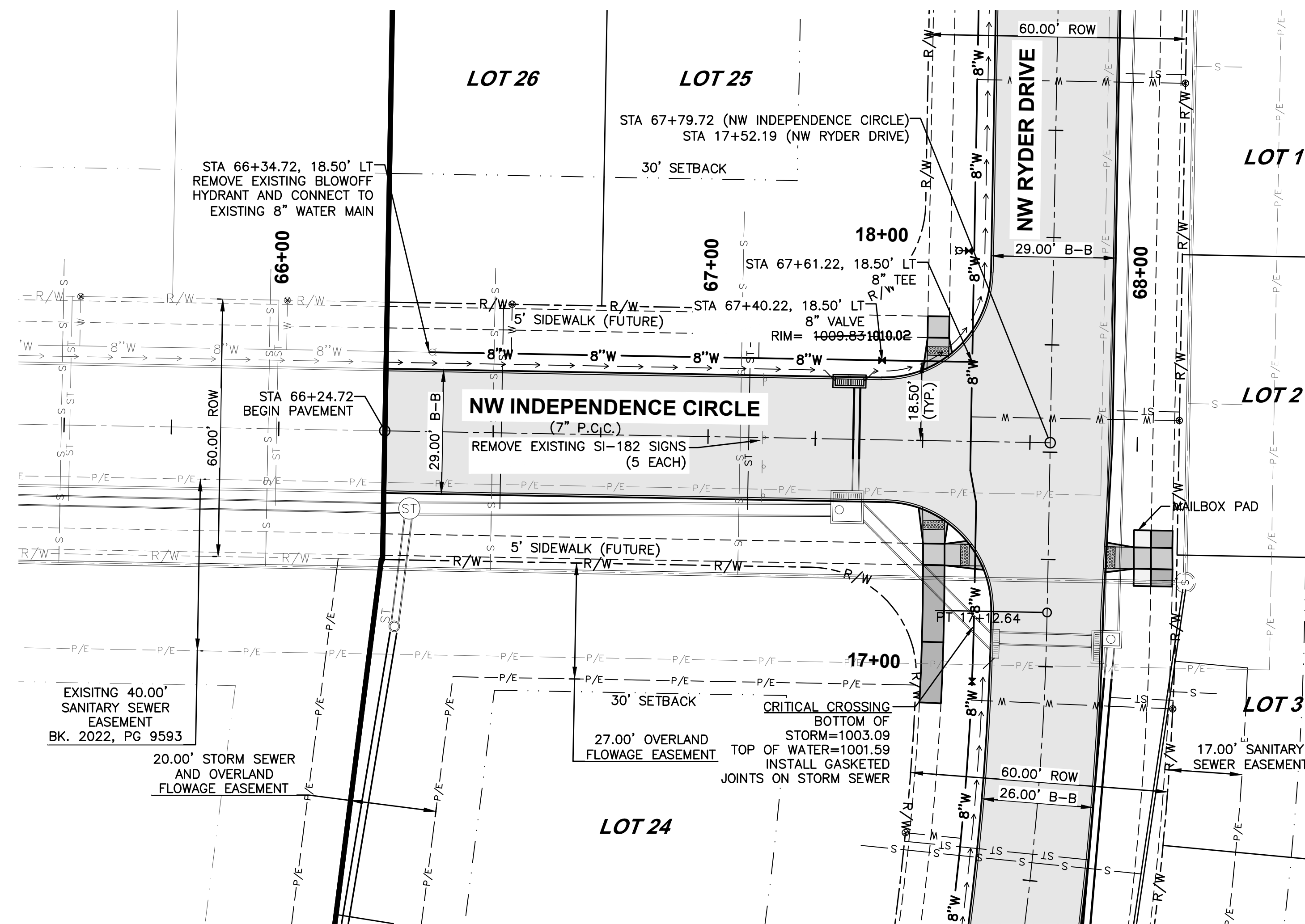
4121 NW URBANDALE DRIVE
URBANDALE, IA 50322
PHONE: (515) 369-4400

ENGINEER: JLN
PM: DAM

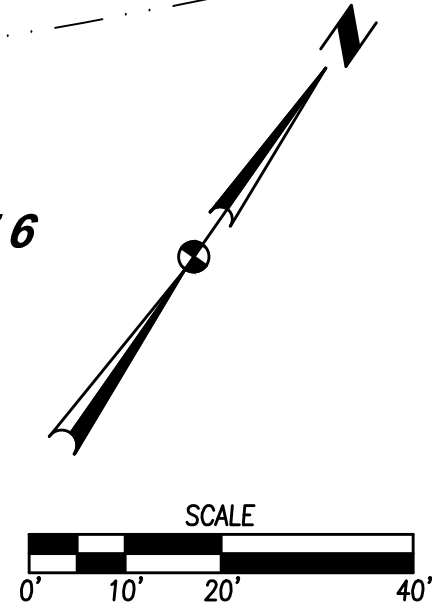
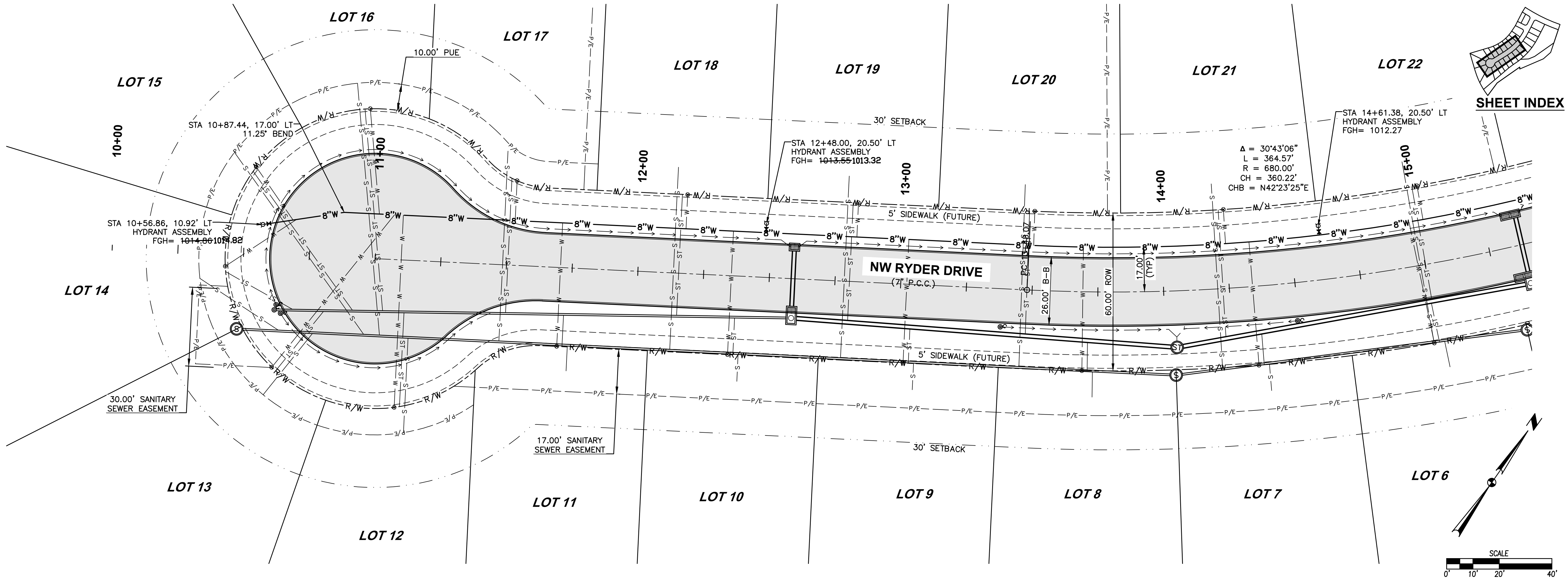
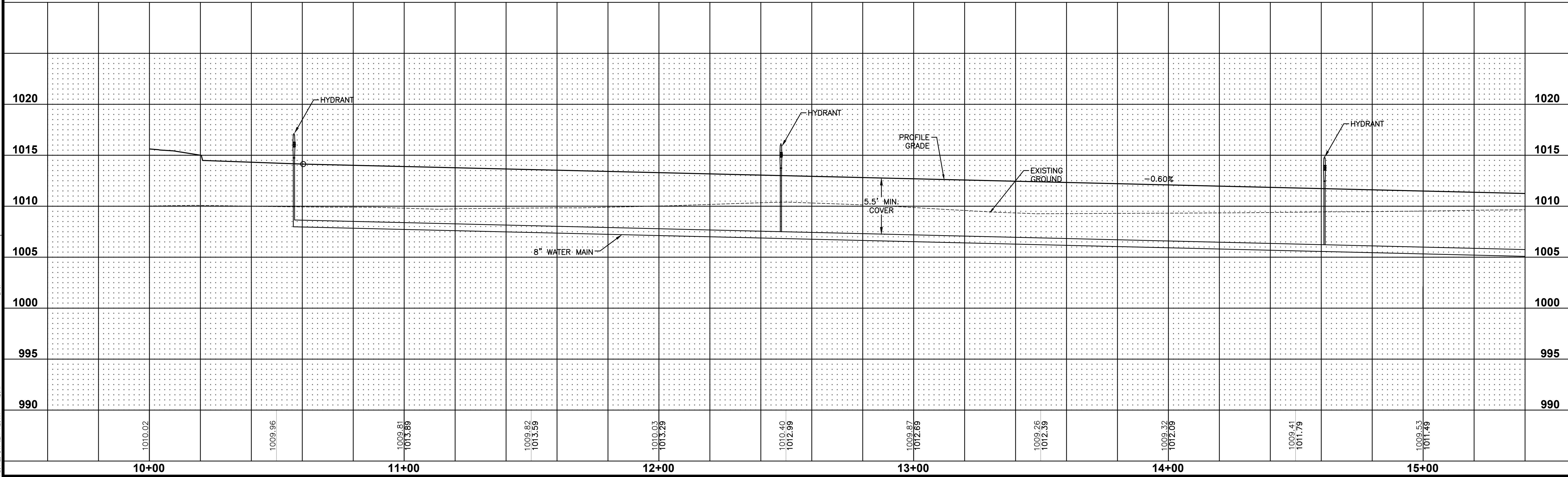
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09/08/2023	SIXTH SUBMITTAL
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08/11/2023	FOURTH SUBMITTAL
08/02/2023	THIRD SUBMITTAL
07/15/2023	SECOND SUBMITTAL
05/23/2023	FIRST SUBMITTAL

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PLOTTER DRIVER: HP-GL/PS-2



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INDI RUN PLAT 6

WATER MAIN PLAN AND PROFILE

WAUKEE, IOWA



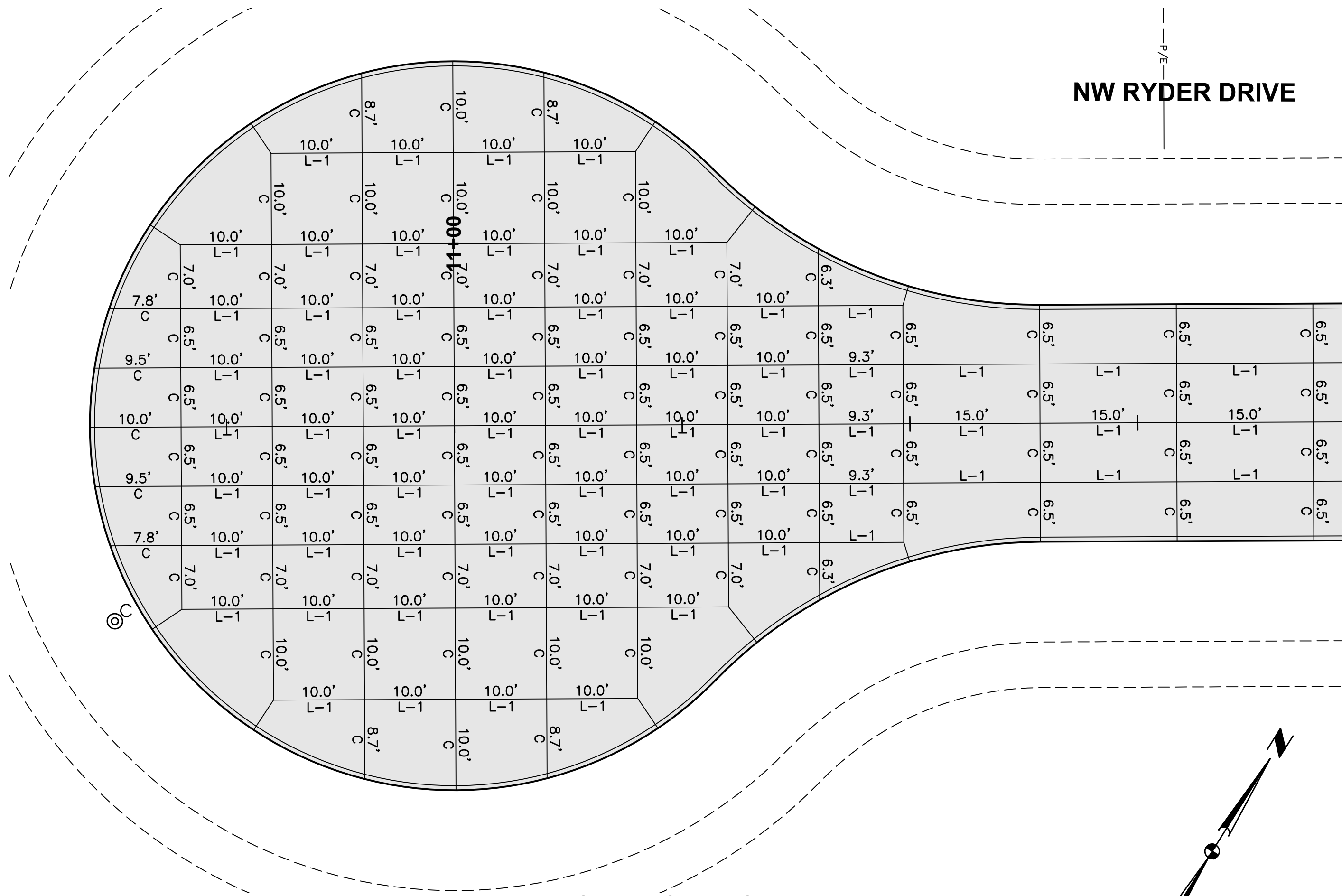
4121 NW URBANDALE DRIVE
URBANDALE, IA 50322
PHONE: (515) 369-4400

ENGINEER: JLN

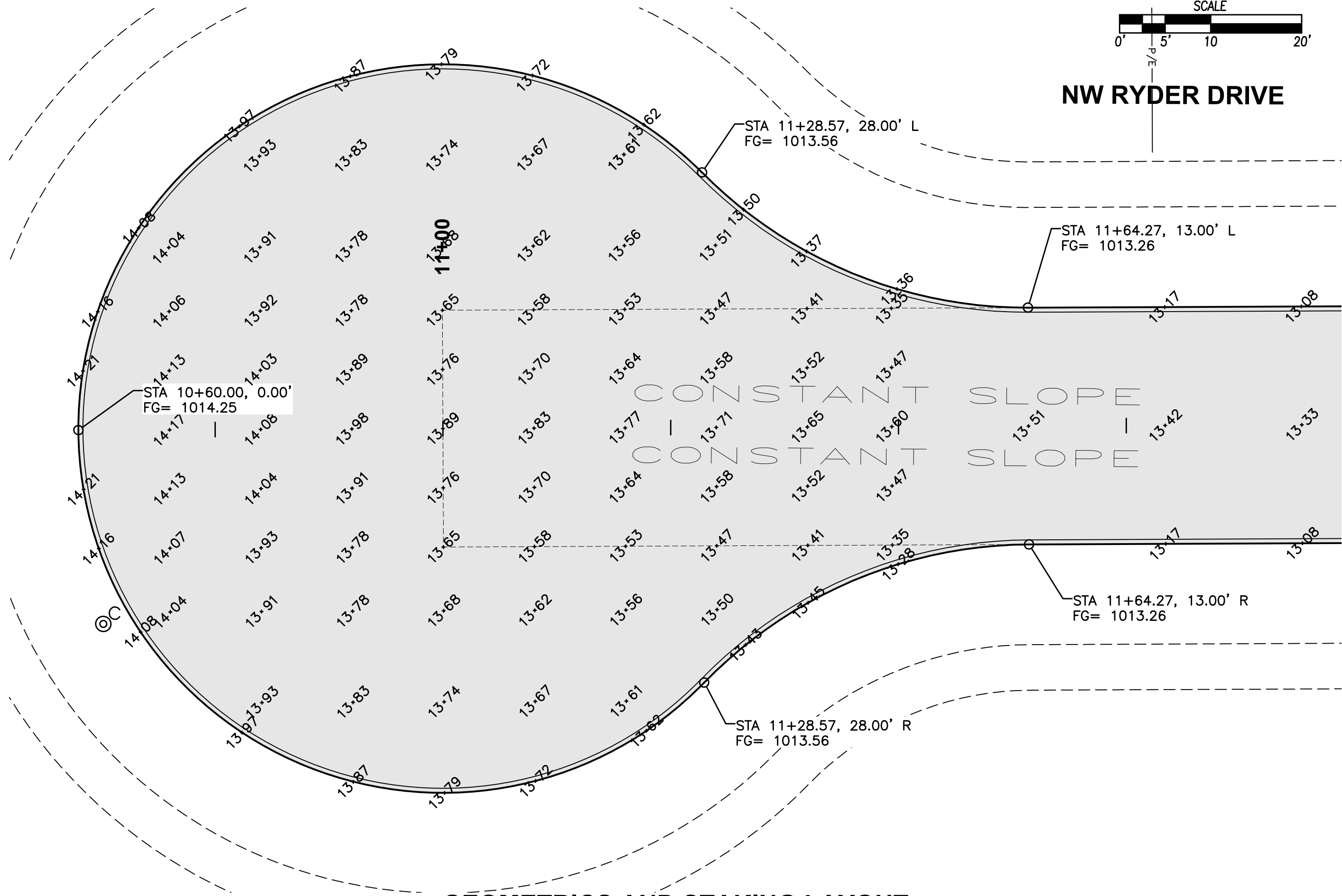
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AS-BUILT SUBMITTAL	10/10/2023
SIXTH SUBMITTAL	09/06/2023
FIFTH SUBMITTAL	08/30/2023
FOURTH SUBMITTAL	08/11/2023
THIRD SUBMITTAL	08/02/2023
SECOND SUBMITTAL	07/15/2023
FIRST SUBMITTAL	05/23/2023

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PLOTTER DRIVER: HP PLOTTER

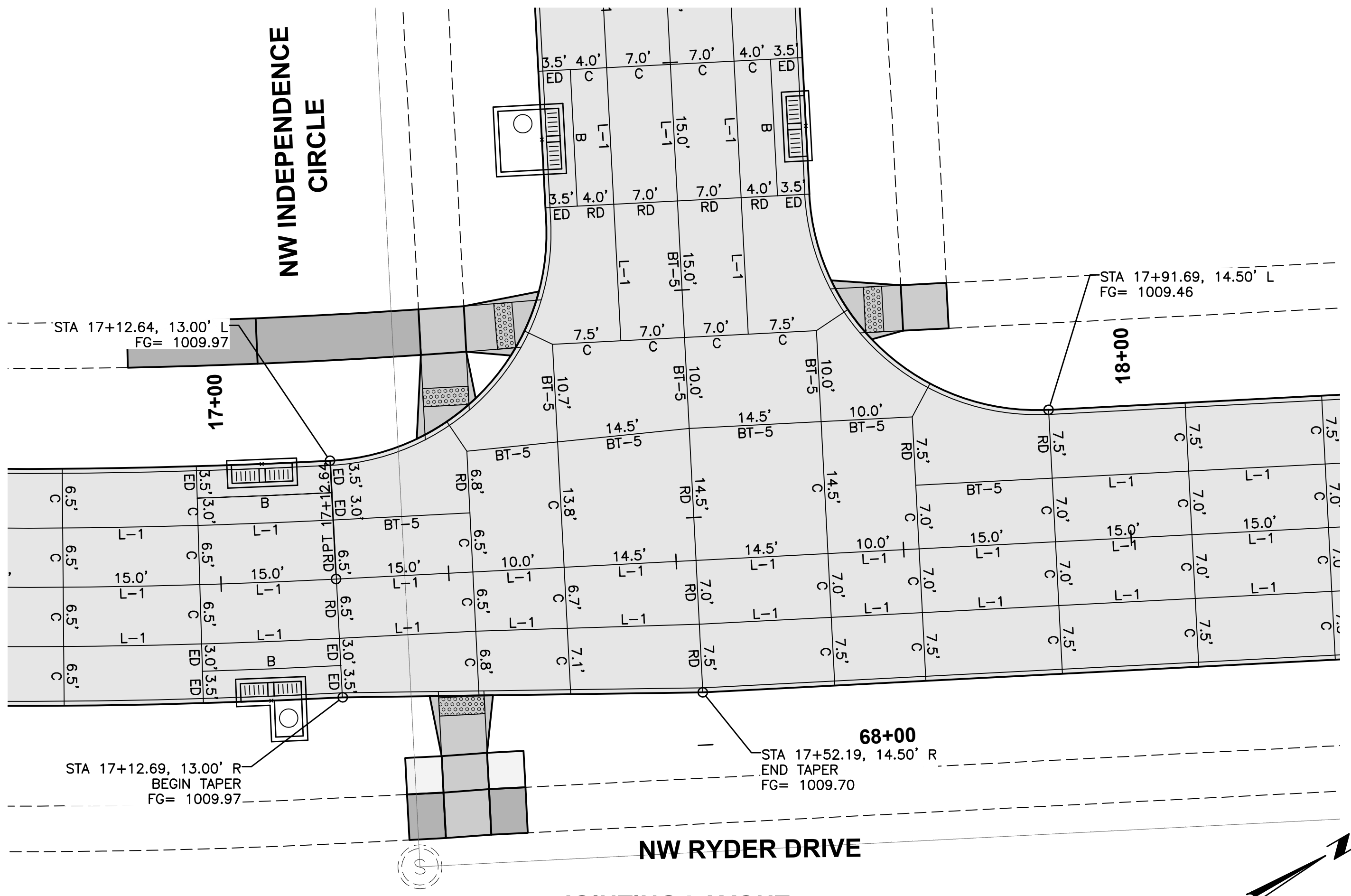


JOINTING LAYOUT

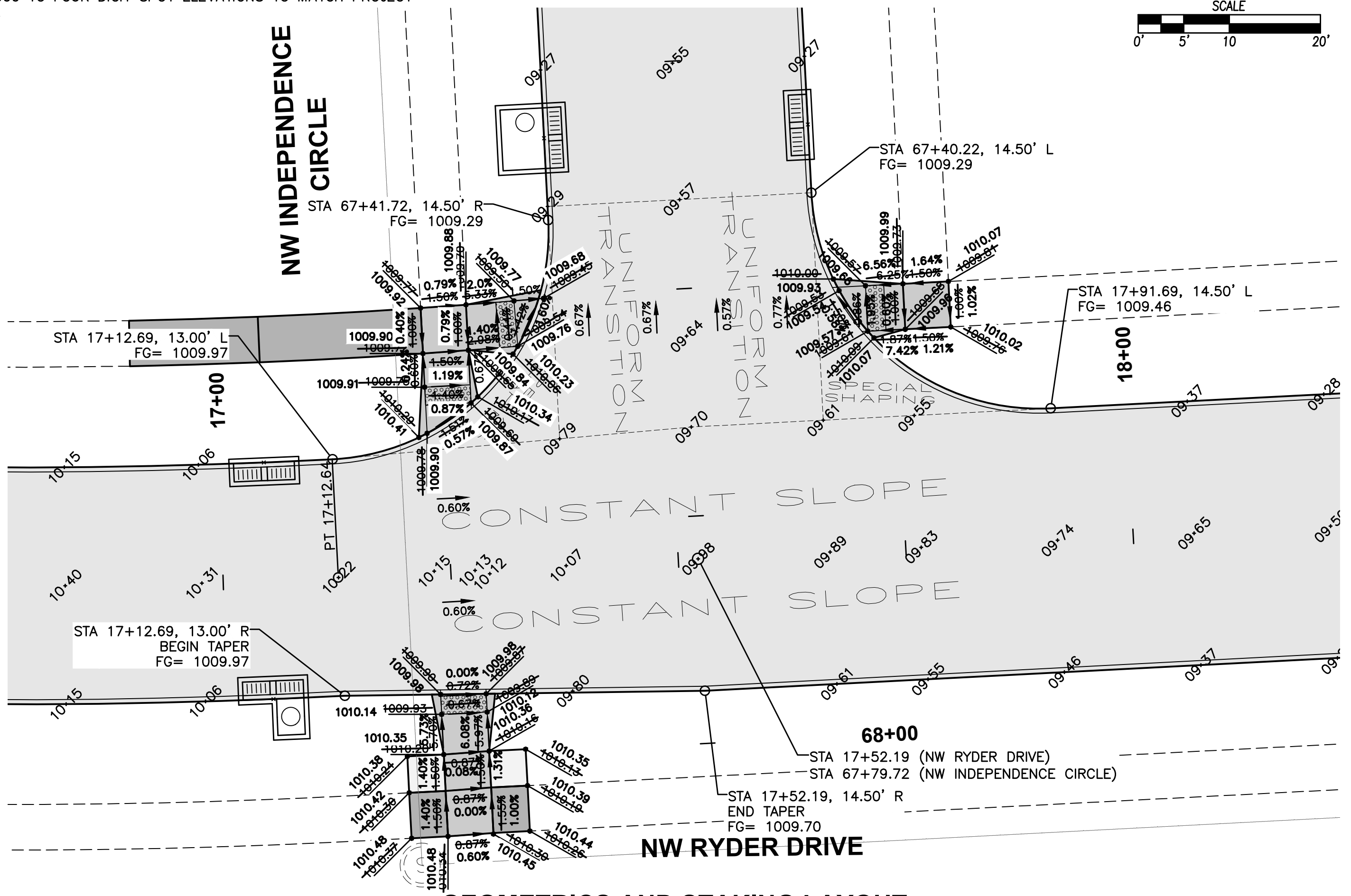


GEOMETRICS AND STAKING LAYOUT

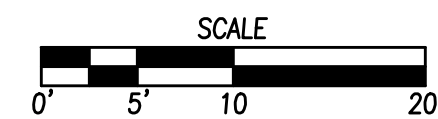
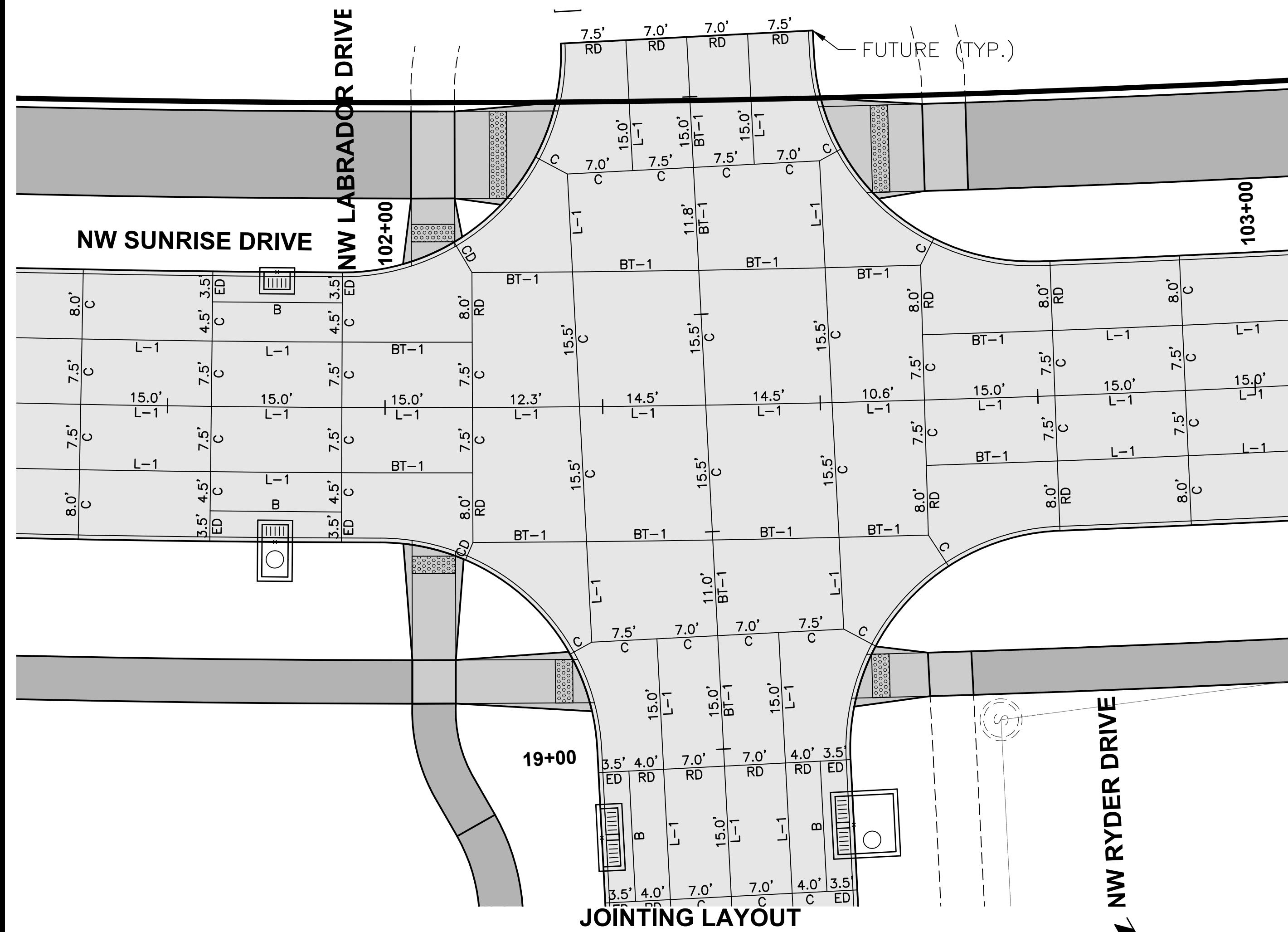
- NOTES:
1. ELEVATIONS SHOWN ARE TOP OF SLAB AND/OR FORM GRADE.
 2. INSTALL ACCESSIBLE CURB RAMPS AT LOCATIONS SHOWN.
 3. REFER TO FIGURE 6010.514 FOR GRATE INTAKE BOXOUT FOR PCC PAVEMENT DETAILS.
 4. ADD 1000 TO FOUR DIGIT SPOT ELEVATIONS TO MATCH PROJECT DATUM.



JOINTING LAYOUT

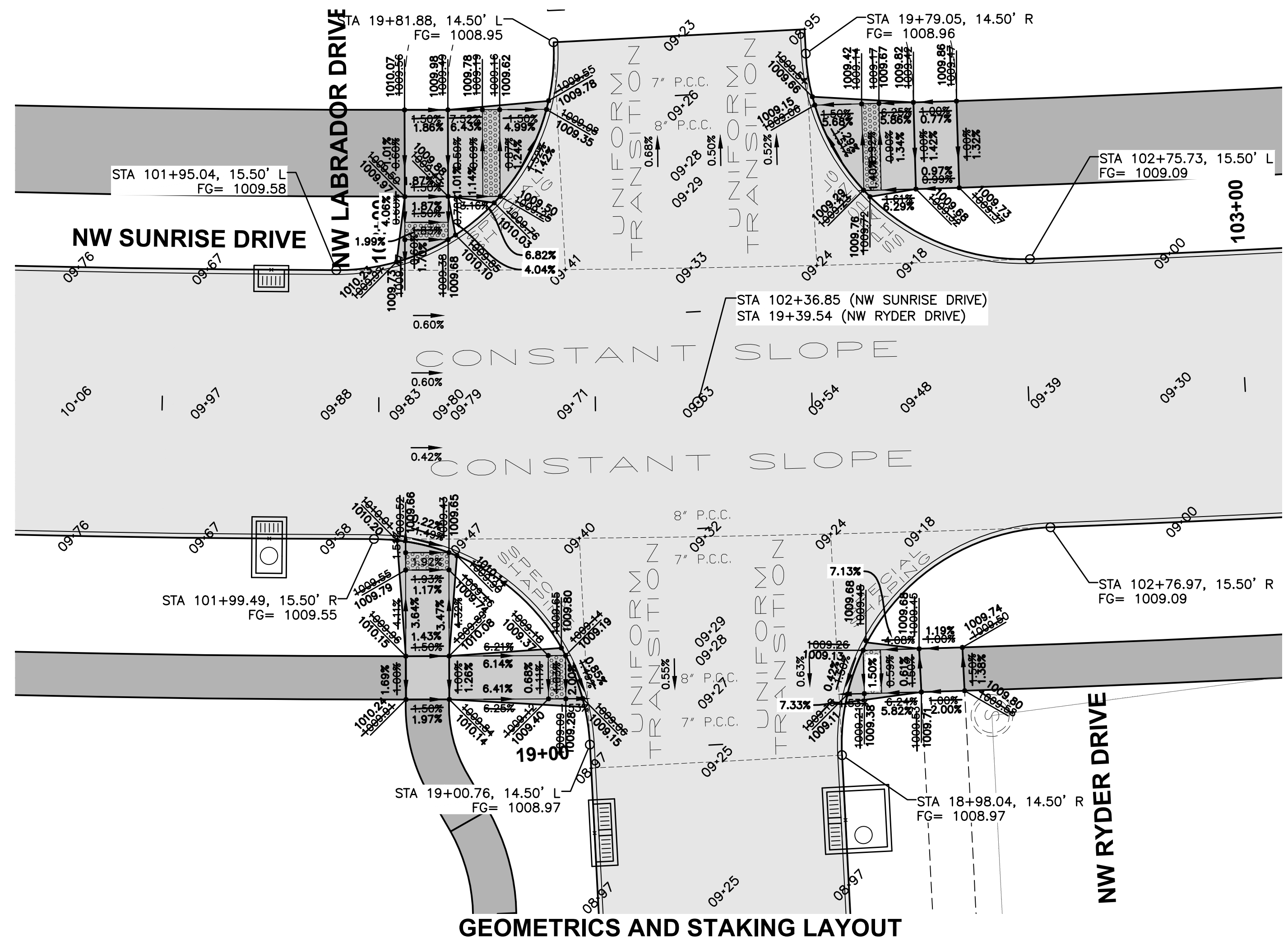


GEOMETRICS AND STAKING LAYOUT



NOTES:

1. ELEVATIONS SHOWN ARE TOP OF SLAB AND/OR FORM GRADE.
2. INSTALL ACCESSIBLE CURB RAMPS AT LOCATIONS SHOWN.
3. REFER TO FIGURE 6010.514 FOR GRATE INTAKE BOXOUT FOR PCC PAVEMENT DETAILS.
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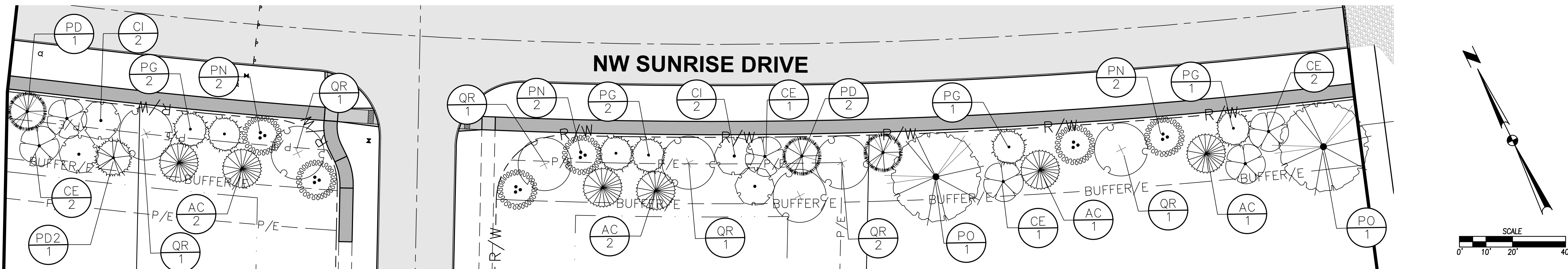
1 OVERSTORY TREE, 2 EVERGREEN TREES AND 2 ORNAMENTAL TREES PER 50 LF. BUFFERS ADJACENT TO DETENTION PONDS MAY HAVE A 2/3 REDUCTION IN PLANTING QUANTITIES.

1. LOCATE ALL UTILITIES BEFORE ANY PLANTING BEGINS.
2. THE 2022 EDITION OF THE SUDAS STANDARD SPECIFICATIONS, AND ALL CITY SUPPLEMENTALS, IF APPLICABLE, SHALL APPLY TO ALL WORK ON THIS PROJECT UNLESS OTHERWISE NOTED.
3. TYPE, SIZE, AND QUALITY OF PLANT MATERIAL SHALL CONFORM TO THE MOST CURRENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.1.
4. ALL PLANT MATERIAL SHALL BE HEALTHY SPECIMENS WITHOUT DEFORMITIES, VOIDS AND OPEN SPACES, WITH WELL DEVELOPED BRANCH AND ROOT SYSTEMS; TRUE TO HEIGHT, SHAPE AND CHARACTER OF GROWTH OF THE SPECIES OR VARIETY.
5. WEED PREVENTER (PRE-EMERGENT) SHALL BE SPREAD OVER SOIL AFTER PLANTING AND BEFORE MULCHING
6. SHREDDED HARDWOOD MULCH SHALL BE PLACED AROUND ALL TREES TO A (MIN) DEPTH OF 3".
7. PLANT QUANTITIES ARE SHOWN FOR INFORMATION ONLY, THE DRAWING SHALL PREVAIL IF ANY CONFLICTS ARISE.
8. ALL DEBRIS SPILLED IN THE PUBLIC R.O.W. SHALL BE PICKED UP BY THE CONTRACTOR AT THE END OF EACH WORK DAY AND PRIOR TO A RAIN EVENT.
9. CONTRACTOR SHALL WARRANTY ALL PLANT MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF INSTALLATION.
10. LANDSCAPE BUFFERS AND RIGHT-OF-WAY AREAS SHALL UTILIZE TYPE 1 SEEDING FOR TEMPORARY STABILIZATION AND ARE TO BE SODDED FOR PERMANENT STABILIZATION AT THE TIME OF ADJOINING LOT DEVELOPMENT.

TREES REQUIRED: TREES PROVIDED:

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PLANT SCHEDULE NW SUNRISE DRIVE				
EVERGREEN TREES	QTY	COMMON NAME	BOTANICAL NAME	CONDITION AND SIZE
AC	6	White Fir	Abies Concolor	B&B, 6' HEIGHT
PD	3	Douglas Fir	Psuedotsuga menziesii	B&B, 6' HEIGHT
PD2	1	Black Hills White Spruce	Picea glauca 'Densata'	B&B, 6' HEIGHT
PG	6	Colorado Blue Spruce	Picea pungens 'Glauca'	B&B, 6' HEIGHT
ORNAMENTAL TREES	QTY	COMMON NAME	BOTANICAL NAME	CONDITION AND SIZE
CE	6	Eastern Redbud Multi-trunk	Cercis canadensis	B&B, 1.5" CALIPER
CI	4	Thornless Cockspur Hawthorn	Crataegus crus-galli inermis	B&B, 1.5" CALIPER
PN	6	Newport Flowing Plum	Prunus cerasifera 'Newport'	B&B, 1.5" CALIPER
OVERSTORY TREES	QTY	COMMON NAME	BOTANICAL NAME	CONDITION AND SIZE
PO	2	American Sycamore	Platanus occidentalis	B&B, 2" CALIPER
QR	7	Red Oak	Quercus rubra	B&B, 2" CALIPER



PLANT SCHEDULE NW 2ND STREET				
EVERGREEN TREES	QTY	COMMON NAME	BOTANICAL NAME	CONDITION AND SIZE
AC	2	White Fir	Abies Concolor	B&B, 6' HEIGHT
PD	7	Douglas Fir	Pseudotsuga menziesii	B&B, 6' HEIGHT
PG	15	Colorado Blue Spruce	Picea pungens 'Glauca'	B&B, 6' HEIGHT
ORNAMENTAL TREES	QTY	COMMON NAME	BOTANICAL NAME	CONDITION AND SIZE
CE	7	Eastern Redbud Multi-trunk	Cercis canadensis	B&B, 1.5" CALIPER
CI	2	Thornless Cockspur Hawthorn	Crataegus crus-galli inermis	B&B, 1.5" CALIPER
PN	14	Newport Flowing Plum	Prenus cerasifera 'Newport'	B&B, 1.5" CALIPER
OVERSTORY TREES	QTY	COMMON NAME	BOTANICAL NAME	CONDITION AND SIZE
AA	8	Autumn Blaze Red Maple	Acer rebrum 'Autumn Blaze'	B&B, 2" CALIPER
GL	3	Greenspire Linden	Tilia cordata 'Greenspire'	B&B, 2" CALIPER
PO	1	American Sycamore	Platanus occidentalis	B&B, 2" CALIPER

TREES REQUIRED: TREES PROVIDED:

