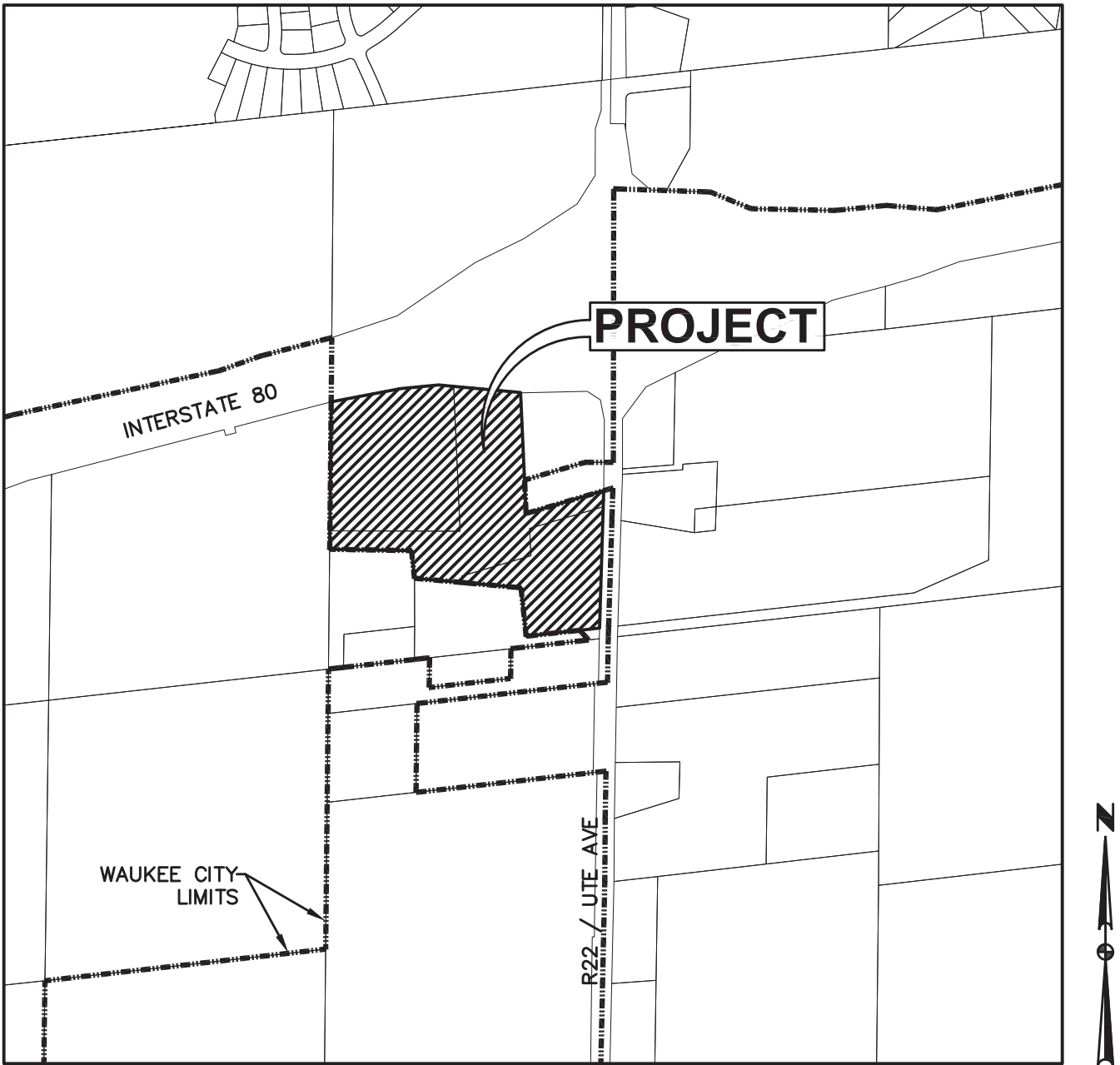


CONSTRUCTION PLANS FOR: I-80 WEST INDUSTRIAL PARK

WAUKEE, IOWA

VICINITY MAP

NOT TO SCALE



WAUKEE, IOWA

OWNER

RACCOON RIVER LAND CO, LLC
33019 370TH CT
VAN METER, IA 50261

DEVELOPER

117 LAND COMPANY, LLC
9550 HICKMAN ROAD, SUITE 101
CLIVE, IA 50325

ENGINEER/ SURVEYOR

CIVIL DESIGN ADVANTAGE
CONTACT: ERIN OLLENDIKE
3405 SE CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PH. (515) 369-4400
FX. (515) 369-4410

DATE OF SURVEY

FEBRUARY 27, 2017

BENCHMARKS

WAUKEE CITY BM#G120, ALUMINUM ROD W/CAP
EAST SIDE OF U PACE, 150 FEET +/- SOUTH OF
300TH STREET.
ELEVATION=1011.76

SUBMITTAL DATES

FIRST SUBMITTAL:	03/07/2017
SECOND SUBMITTAL:	04/04/2017
THIRD SUBMITTAL:	04/21/2017
FOURTH SUBMITTAL:	05/01/2017
FINAL SUBMITTAL:	05/25/2017

NOTES

1. ANY CHANGES PROPOSED TO THE CONSTRUCTION DRAWINGS DURING CONSTRUCTION SHALL BE APPROVED IN WRITING BY THE CITY OF WAUKEE ENGINEERING DEPARTMENT.
2. THE CONTRACTOR IS RESPONSIBLE FOR ANY CHANGES MADE DURING CONSTRUCTION THAT HAVE NOT BEEN GRANTED APPROVAL IN WRITING BY THE CITY OF WAUKEE ENGINEERING DEPARTMENT.
3. DETENTION WILL BE PROVIDED FOR EACH LOT AS THE LOT IS DEVELOPED.

ZONING

M-1 - LIGHT INDUSTRIAL DISTRICT
C-1 - COMMUNITY AND HIGHWAY SERVICE
COMMERCIAL DISTRICT

BULK REGULATIONS

M-1
-30 FT FRONT YARD SETBACK
-30 FT REAR YARD SETBACK
-25 FT SIDEYARD SETBACK WHEN ADJACENT TO 'R' OR 'C-1' DISTRICT, OTHERWISE 0'
-MAXIMUM OF 3 STORIES

C-1
-30 FT FRONT YARD SETBACK
-30 FT REAR YARD SETBACK
-15 FT SIDEYARD SETBACK WHEN ADJACENT TO 'R' DISTRICT, OTHERWISE 0'
-40 FT MAXIMUM BUILDING HEIGHT
-MAXIMUM OF 3 STORIES

UTILITY WARNING

ANY 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.

INDEX OF SHEETS

NO.	DESCRIPTION
1	TITLE SHEET
2-3	TYPICAL SECTIONS AND DETAILS
4	QUANTITIES AND REFERENCE NOTES
5	HYDRANT COVERAGE PLAN
6	GRADING PLAN
7	EROSION & SEDIMENT CONTROL PLAN
8-14	STORM AND SANITARY SEWER PLAN AND PROFILE
15-19	WATERMAIN PLAN AND PROFILE
20	INTERSECTION DETAILS

LEGAL DESCRIPTION

DEED RECORDED IN BOOK 2007 PAGE 7301

PARCEL "A" OF THE SURVEY OF ALL OF LOT FOUR (4) AND PART OF LOT THREE (3) OF THE AUDITOR'S PLAT OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER (NW 1/4 NW 1/4) OF SECTION SEVENTEEN (17), TOWNSHIP SEVENTY-EIGHT (78) NORTH, RANGE TWENTY-SIX (26) WEST OF THE 5TH P.M., ALL BEING IN AND FORMING A PART OF THE CITY OF WAUKEE, DALLAS COUNTY, IOWA, AS SHOWN IN BOOK 748 AT PAGE 5051 IN THE OFFICE OF THE RECORDER OF DALLAS COUNTY, IOWA.

DEED RECORDED IN BOOK 2007 PAGE 11455

LOT THREE (3) OF THE AUDITOR'S PLAT OF THAT PART OF THE NORTHWEST QUARTER (NW1/4) OF THE NORTHWEST QUARTER (NW1/4) OF SECTION 17 IN TOWNSHIP 78 NORTH, OF RANGE 26 WEST OF THE 5TH P.M., DALLAS COUNTY, IOWA, EXCEPT COMMENCING AT THE NW CORNER OF SEC. 17-T78N-R26W OF THE 5TH P.M., DALLAS COUNTY, IOWA, THENCE S 00°00' 658.43 FEET ALONG THE SECTION LINE TO THE POINT OF BEGINNING, THENCE CONTINUING S 00°00' 87.17 FEET, THENCE S 89°12'E 382.70 FEET, THENCE S 06°12'E 130.00 FEET, THENCE S 84°35'E 225.61 FEET, THENCE N 02°55'W 30.62 FEET, THENCE N 73°50'E 338.22 FEET, THENCE N 02°55'W 128.79 FEET, THENCE N 73°50'E 400.92 FEET TO THE CENTERLINE OF A COUNTY ROAD, THENCE N 00°50'E 75.00 FEET ALONG SAID CENTERLINE, THENCE S 73°50'W 423.54 FEET, THENCE N 02°55'W 568.48 FEET TO THE SOUTH RIGHT OF WAY LINE OF INTERSTATE NO. 80, THENCE N 85°04'W 315.13 FEET ALONG SAID RIGHT OF WAY LINE, THENCE S 02°55'E 676.50 FEET, THENCE N 89°50'W 609.02 FEET TO THE POINT OF BEGINNING;

THE FOREGOING DESCRIPTION IS BASED ON THAT CERTAIN PLAT OF SURVEY RECORDED AS AN ATTACHMENT TO THAT CERTAIN AFFIDAVIT BY CHARLES T. VANCE, DATED JANUARY 17, 1980, AND RECORDED FEBRUARY 4, 1980 IN BOOK 562, PAGE 58 OF THE DALLAS COUNTY, IOWA RECORDS.

ALSO DESCRIBED AS:

LOT THREE (3) OF THE AUDITOR'S PLAT OF THAT PART OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 17 IN TOWNSHIP 78 NORTH, RANGE 26 WEST OF THE 5TH P.M., DALLAS COUNTY, IOWA EXCEPT PARCEL "A" OF THE SURVEY OF ALL OF LOT 4 AND PART OF LOT 3 OF SAID AUDITOR'S PLAT, AS SHOWN IN BOOK 748, PAGE 5051 OF THE DALLAS COUNTY, IOWA RECORDS.

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.



CIVIL DESIGN ADVANTAGE

3405 SE CROSSROADS DR. SUITE G GRIMES, IOWA 50111

PH: (515) 369-4400 Fax: (515) 369-4410

PROJECT NO. 1701.018

GENERAL LEGEND

PROPOSED

SECTION LINE	-----
CENTER LINE	-----
RIGHT OF WAY	---R/W---
PERMANENT EASEMENT	---P/E---
TEMPORARY EASEMENT	---T/E---
TYPE SW-501 STORM INTAKE	
TYPE SW-503 STORM INTAKE	
TYPE SW-505 STORM INTAKE	
TYPE SW-506 STORM INTAKE	
TYPE SW-513 STORM INTAKE	
TYPE SW-401 STORM MANHOLE	
TYPE SW-402 STORM MANHOLE	
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 PIPE NO.	
SANITARY SEWER WITH SIZE	
SANITARY SEWER	
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
MINIMUM OPENING ELEVATION	MOE
MINIMUM GRADE AT STRUCTURE	MGS

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 W/ SIZE	
STORM SEWER W/ SIZE	
WATER MAIN W/ SIZE	

THIS PROJECT REQUIRES AN IOWA NPDES PERMIT #2. 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.

THIS DESIGN SPECIFICALLY PREPARED FOR USE AT THE LOCATION SHOWN. USE IN ANY OTHER MANNER EXCEEDS THE INTENDED PURPOSE OF THESE DRAWINGS AND ANY ACCOMPANYING SPECIFICATIONS.

THE MOST RECENT EDITION OF THE CITY OF WAUKEE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND THE 2017 EDITION OF SUDAS STANDARD SPECIFICATIONS SHALL APPLY TO ALL WORK PERFORMED ON THIS PROJECT EXCEPT AS MODIFIED HEREIN.



1-800-292-8989

www.iowaonecall.com



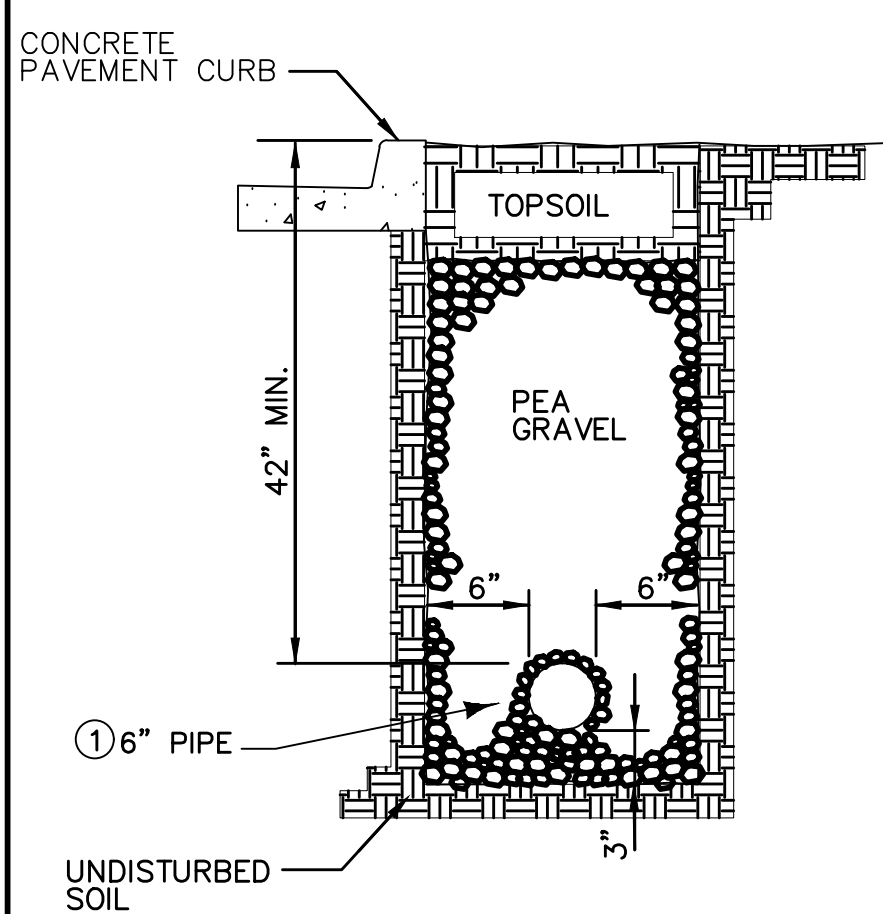
I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

Erin K. Ollendike
ERIN K. OLLENDIKE, P.E.

07-16-18
DATE

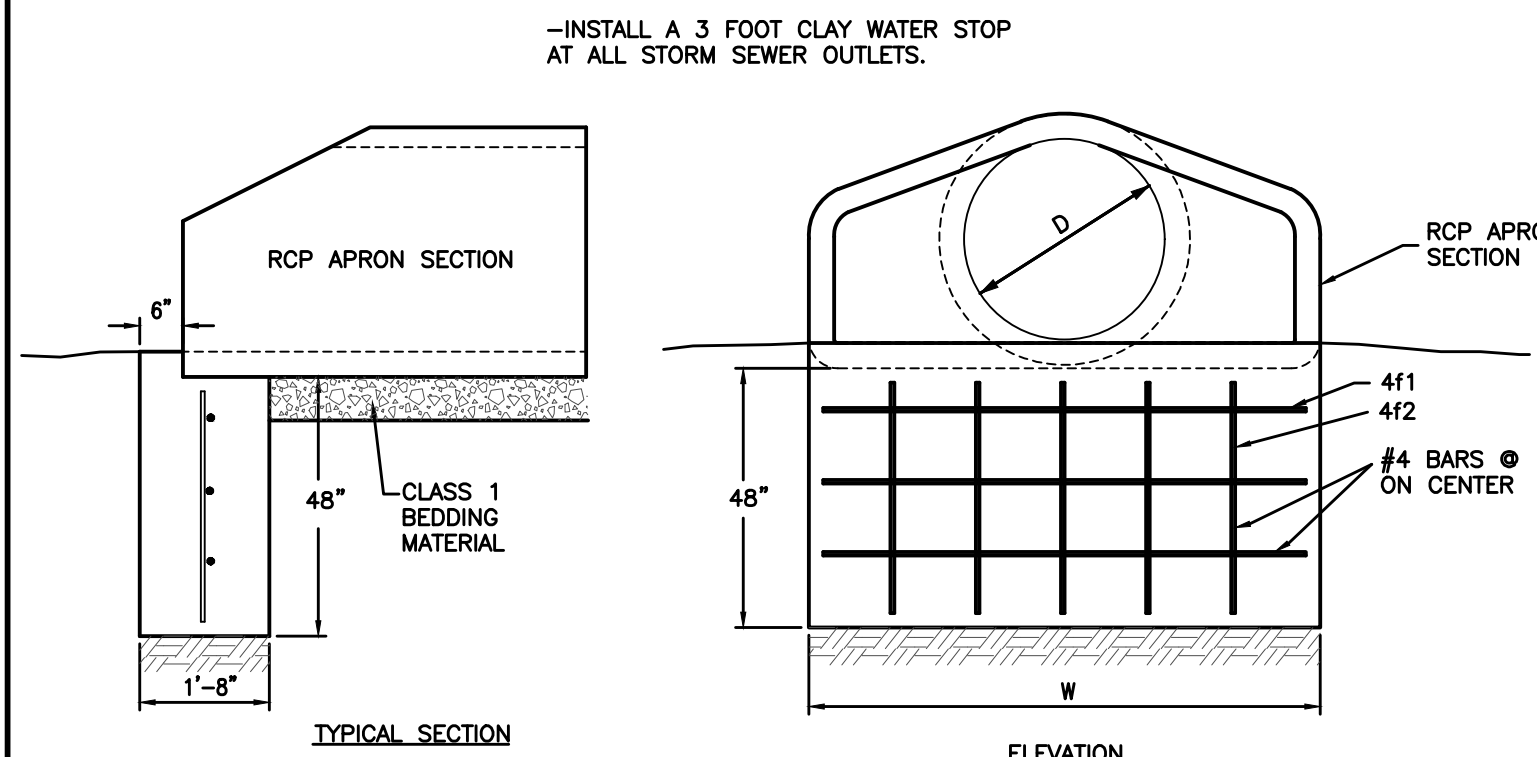
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2017
PAGES OR SHEETS COVERED BY THIS SEAL:

1-20



6" PERFORATED SUBDRAIN
NOT TO SCALE

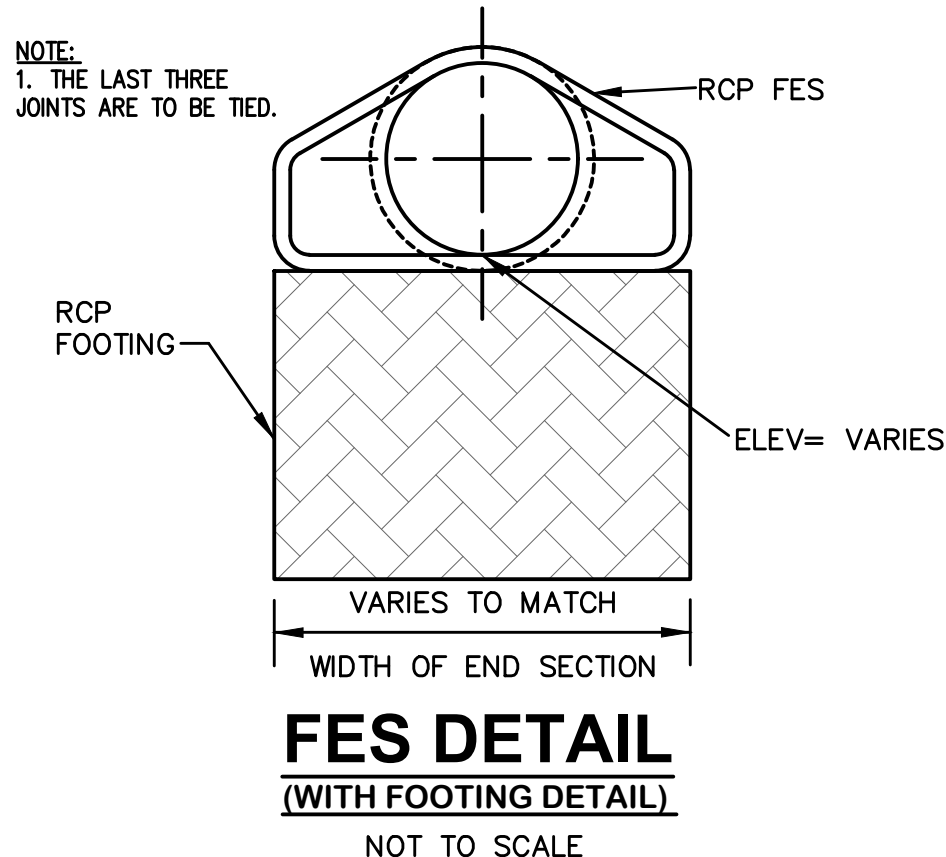
- PLACE PERFORATIONS DOWN FOR ALL INSTALLATIONS.
- ALL SUBDRAINS ARE TO BE TIED INTO STORM SEWER STRUCTURES AND THEIR LOCATIONS ARE TO BE INCLUDED IN THE AS-BUILTS FOR THE SUBDIVISION.
- THE GEOTECHNICAL ENGINEER SHALL BE PRESENT ONSITE DURING SUBGRADE PREPARATION AND PROOF ROLL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE GEOTECHNICAL ENGINEER IS PRESENT ONSITE AND A COPY OF ALL REPORTS AND FINDINGS REQUIRING ALTERATION FROM THE APPROVED PLAN SET BE PROVIDED TO THE WAUKEE ENGINEERING DEPARTMENT FOR REVIEW AND DISCUSSION PRIOR TO COMMENCING WITH PAVING WITHIN THE PROJECT.
- CORE DRILL ALL STORM SEWER AND PLACE NON-SHRINK GROUT COLLAR AT CONNECTION.
- RODENT GUARDS ARE TO BE INSTALLED WHERE THE PIPE TIES INTO THE STRUCTURE.



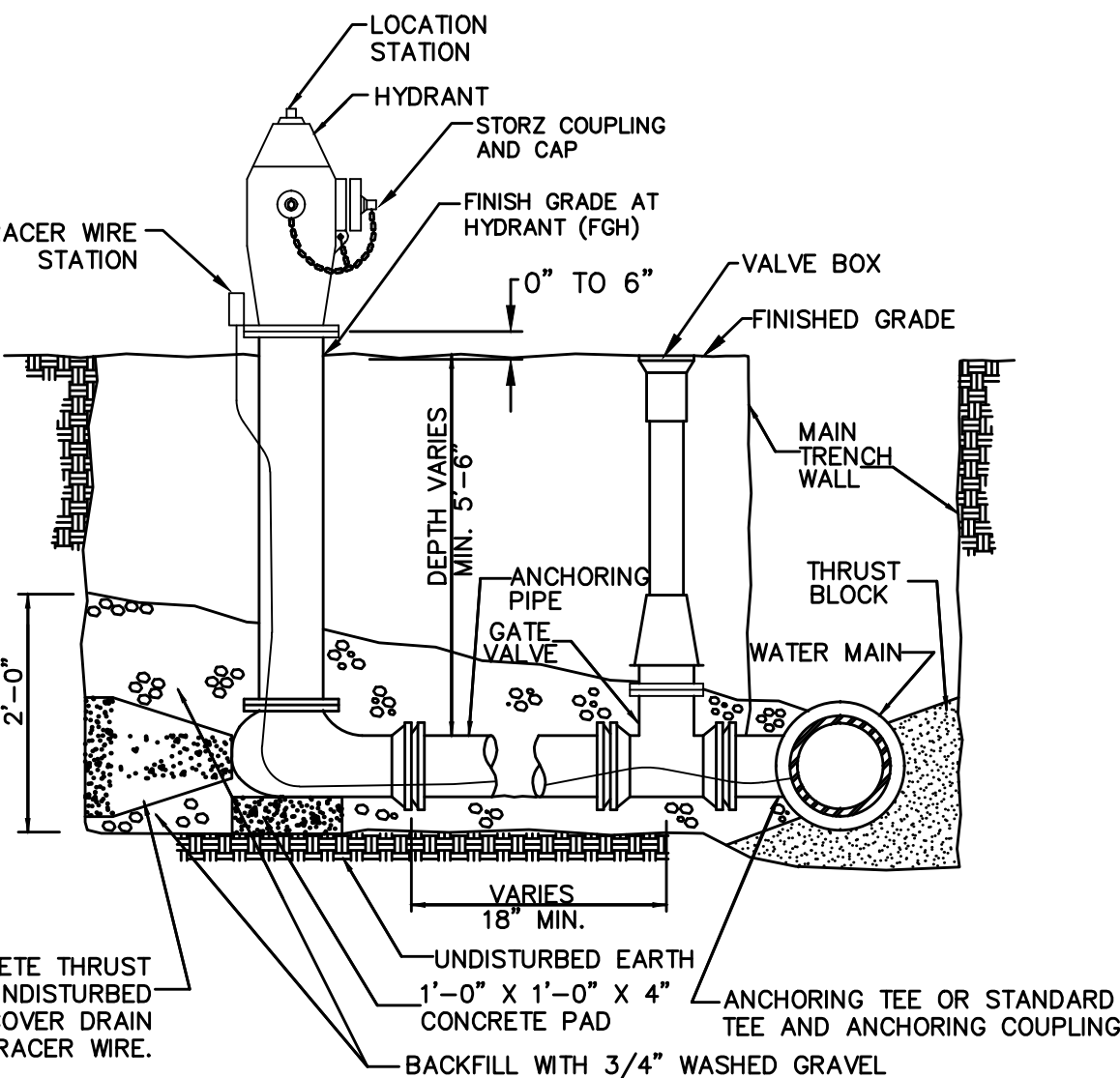
RCP APRON FOOTING DETAIL
NOT TO SCALE

D	W	Mark	Size	Length	Count
12"	2'-4"	4f1	4	2'-0"	3
		4f2	4	3'-8"	2
15"	2'-10"	4f1	4	2'-6"	3
		4f2	4	3'-8"	2
18"	3'-5"	4f1	4	3'-1"	3
		4f2	4	3'-8"	3
24"	4'-6"	4f1	4	4'-2"	3
		4f2	4	3'-8"	3
30"	5'-7"	4f2	4	3'-8"	4
		4f1	4	6'-4"	3
36"	6'-8"	4f2	4	3'-8"	5
		4f1	4	6'-11"	3
42"	7'-3"	4f2	4	3'-8"	5

D	W	Mark	Size	Length	Count
48"	7'-10"	4f1	4	7'-6"	3
		4f2	4	3'-8"	6
54"	8'-5"	4f1	4	8'-1"	3
		4f2	4	3'-8"	6
60"	8'-11"	4f1	4	8'-7"	3
		4f2	4	3'-8"	6
66"	8'-11"	4f1	4	8'-7"	3
		4f2	4	3'-8"	6
72"	10'-0"	4f1	4	9'-8"	3
		4f2	4	3'-8"	7
78"	10'-7"	4f1	4	10'-3"	3
		4f2	4	3'-8"	7
84"	11'-1"	4f1	4	10'-9"	3
		4f2	4	3'-8"	8

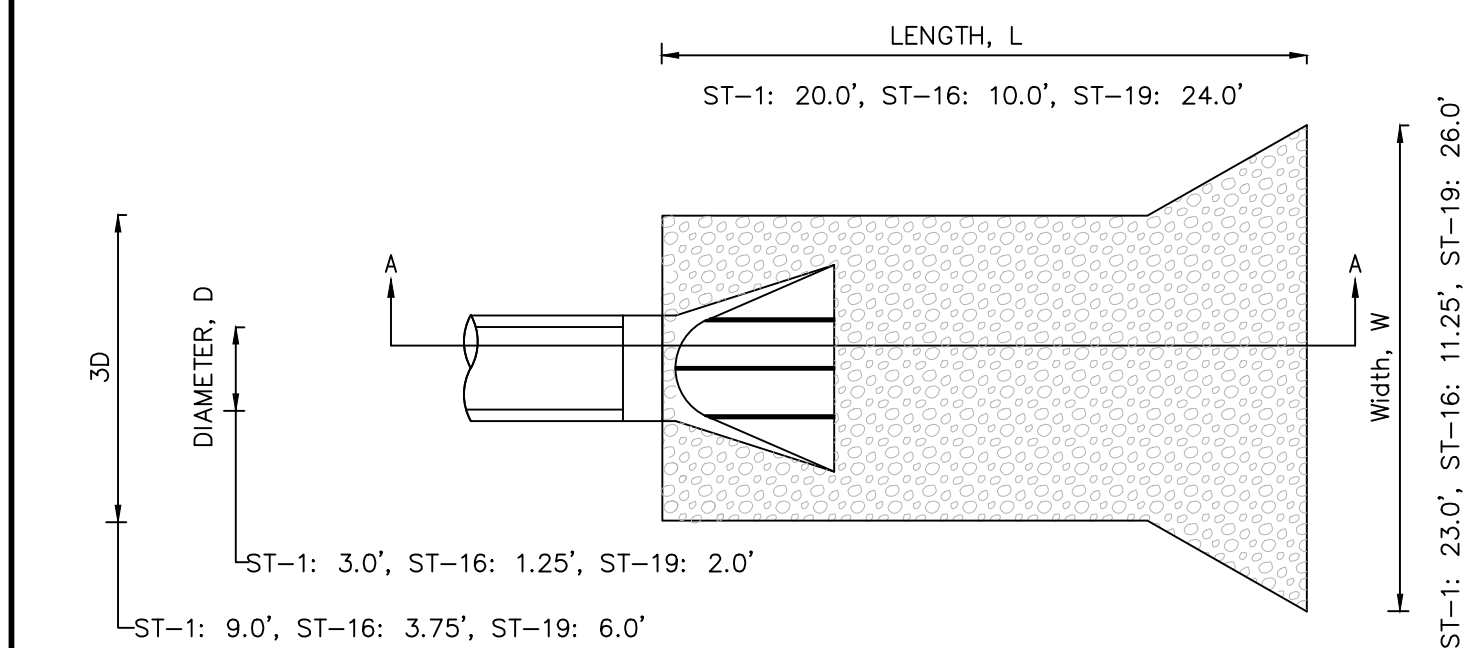


FES DETAIL
(WITH FOOTING DETAIL)



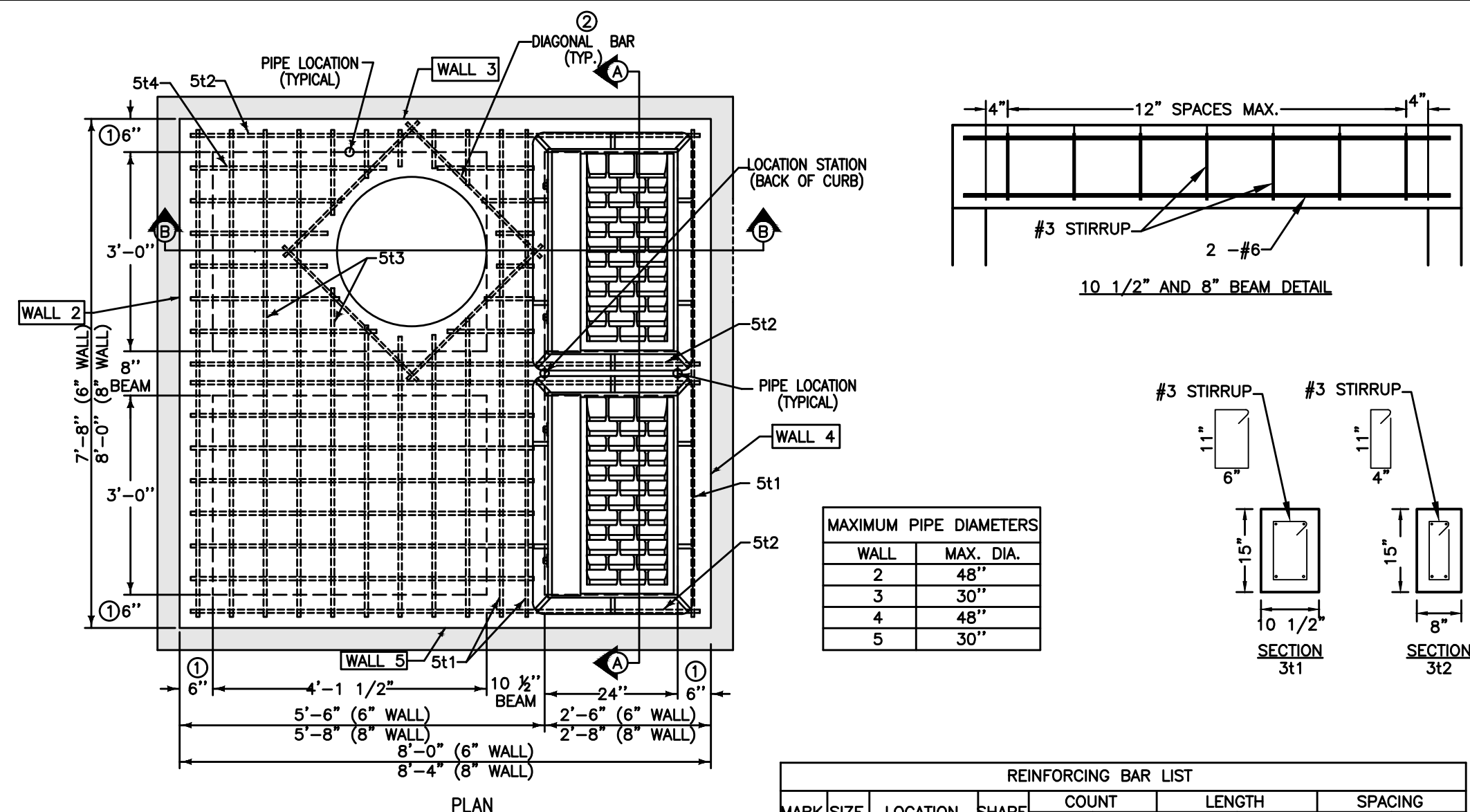
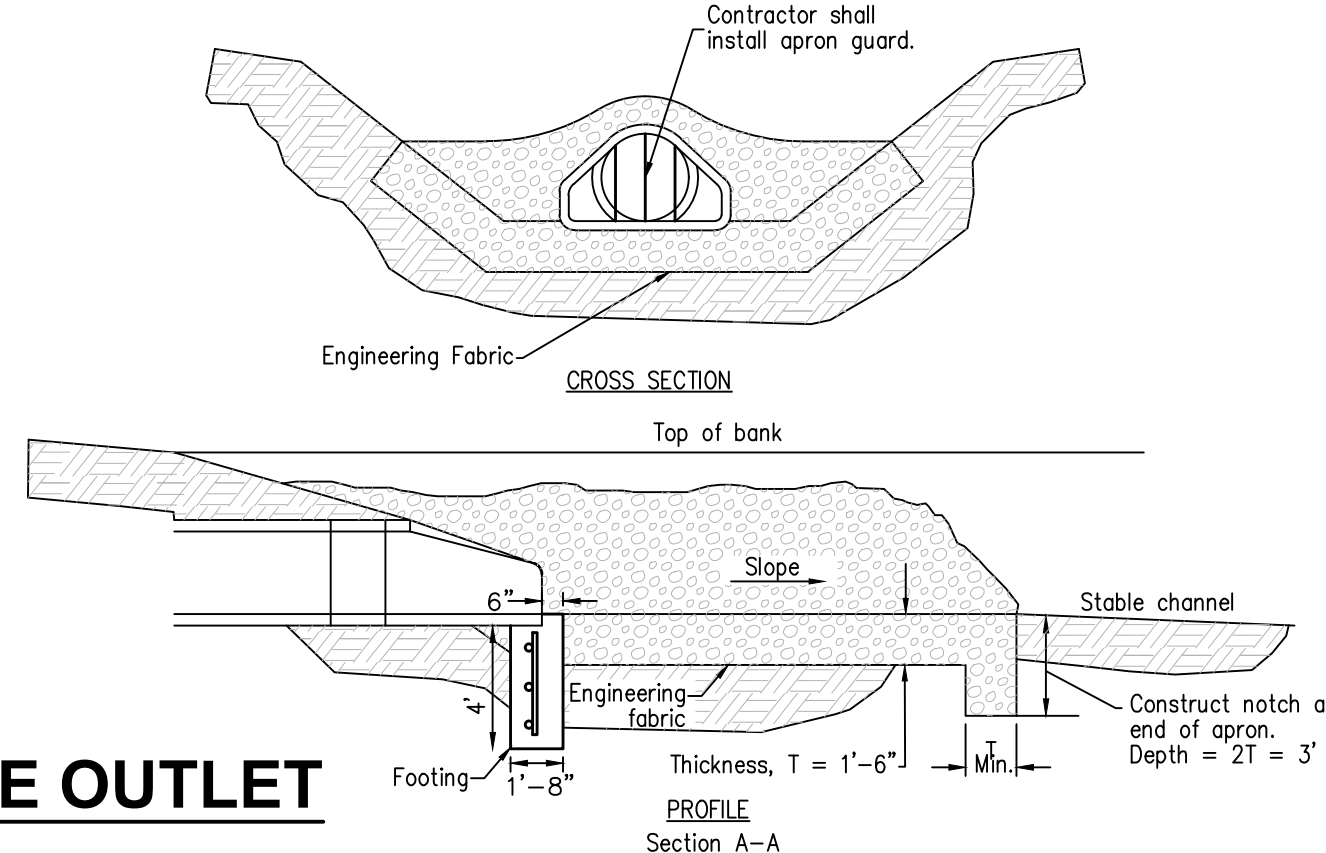
HYDRANT ASSEMBLY DETAIL
NOT TO SCALE

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



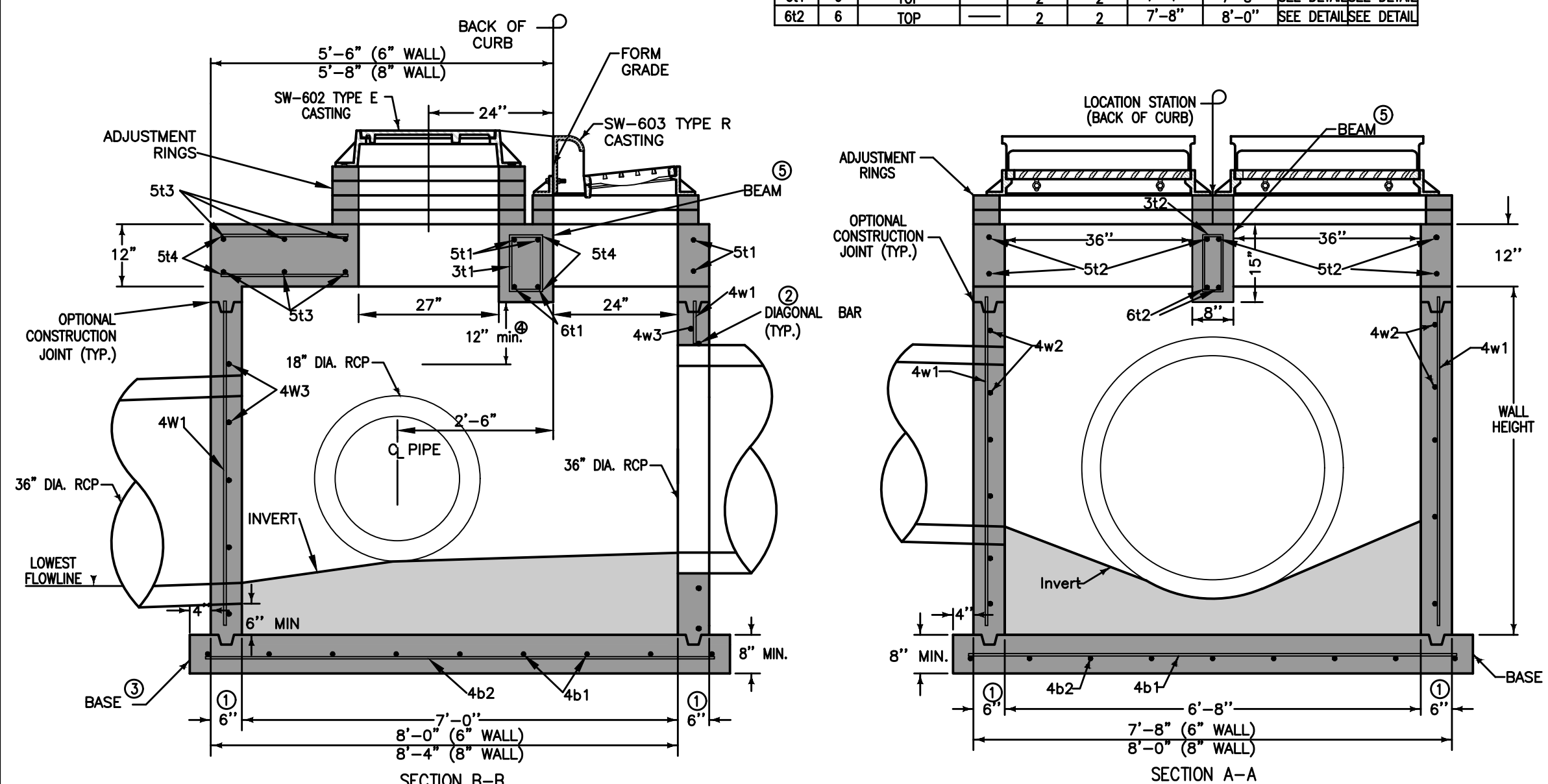
ROCK APRON FOR PIPE OUTLET
NOT TO SCALE

- NOTE:
- THE LAST THREE SECTIONS AND THE APRON SHALL BE CONNECTED WITH PIPE CONNECTIONS PER SECTION 4030.302C OF SUDAS.
 - INSTALL A 3' CLAY WATERSTOP AT ALL STORM SEWER OUTLETS.

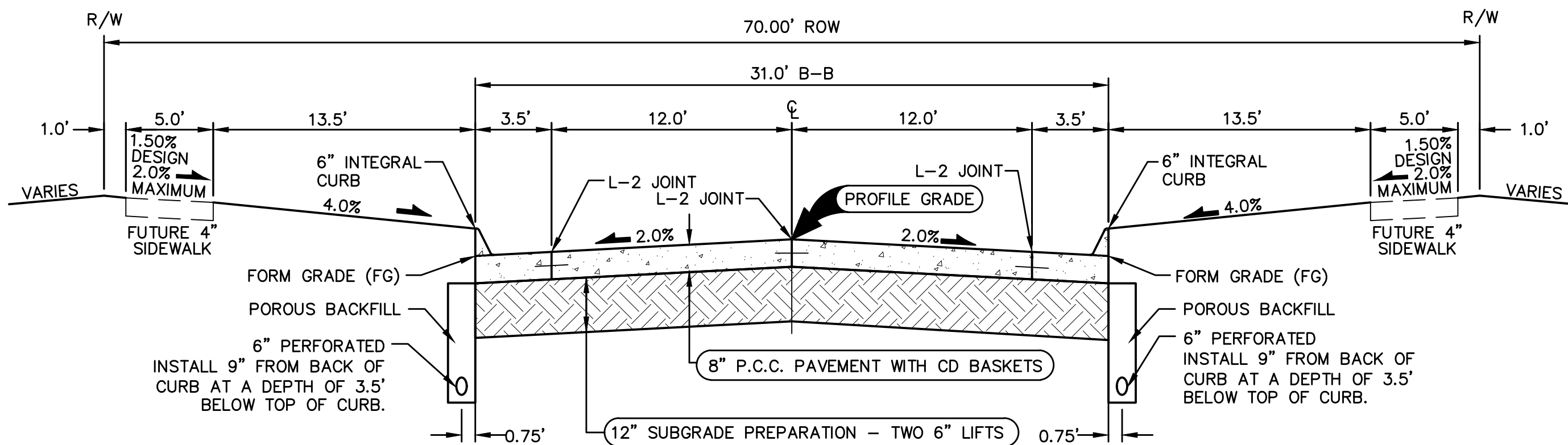


- USE 8" WALL OPTION FOR INTAKE DEPTHS GREATER THAN 7'-0" AND LESS THAN 10'-0".
- INSTALL FOUR #4 DIAGONAL BARS AT MANHOLE OPENING AND AT ALL PIPE OPENINGS.
- CAST-IN-PLACE BASE SHOWN. IF BASE IS PRECAST INTEGRAL WITH WALLS, THE FOOTPRINT OF BASE IS NOT REQUIRED TO EXTEND BEYOND THE OUTER EDGE OF THE WALLS.
- 12 INCH MINIMUM WALL HEIGHT ABOVE ALL PIPES.
- CONSTRUCT 8"x15" AND 10 1/2"x15" P.C. CONCRETE BEAMS INTEGRAL WITH 12" P.C. CONCRETE FLAT TOP.

MARK	SIZE	LOCATION	SHAPE	COUNT	LENGTH	SPACING
311	3	TOP	6" WALL	7	3'-2"	12"
312	3	TOP	6" WALL	8	2'-10"	10 3/4"
4b1	4	BASE	6" WALL	9	7'-10"	12 3/4"
4b2	4	BASE	6" WALL	9	8'-2"	11 3/4"
4w1	4	WALLS	6" WALL	30	WALL HEIGHT MINUS 4"	12"
4w2	4	WALLS	6" WALL	VARIES	7'-8"	12"
4w3	4	WALLS	6" WALL	VARIES	7'-4"	12"
511	5	TOP	6" WALL	4	7'-4"	SEE DETAILSEE DETAIL
512	5	TOP	6" WALL	6	7'-8"	SEE DETAILSEE DETAIL
513	5	TOP	6" WALL	18	7'-4"	6 3/4"
514	5	TOP	6" WALL	24	5'-2"	5 3/4"
611	6	TOP	6" WALL	2	7'-4"	SEE DETAILSEE DETAIL
612	6	TOP	6" WALL	2	7'-8"	SEE DETAILSEE DETAIL



SW-506 MODIFIED DOUBLE GRATE INTAKE WITH MANHOLE (ST-3)
NOT TO SCALE



31' B/B P.C.C. ROADWAY WITH 60' R.O.W.
NOT TO SCALE

- NOTES:
- PREPARE SUBGRADE IN 2 - 6" LIFTS.
 - MAXIMUM C JOINT SPACING IS 15'.

**INTEGRAL 6" STANDARD
SPOT ELEVATION REFERENCE
DETAIL**
NOT TO SCALE

WATER SERVICE CONNECTION

CITY OF WAUKEE UTILITY SERVICE LOCATIONS

NOT TO SCALE

CURB RAMP FOR
CLASS B OR C SIDEWALK

DETECTABLE WARNING STRIP DETAIL

NOT TO SCALE

PLAN

SECTION

- 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.
- SECTION**
- WYE BRANCH
(SIZE AS SPECIFIED)

SANITARY SEWER SERVICE RISER
NOT TO SCALE

		DATE
REVISIONS		
FINAL SUBMITTAL		05/25/17
FOURTH SUBMITTAL		05/01/17
THIRD SUBMITTAL		04/21/17
SECOND SUBMITTAL		04/04/17
FIRST SUBMITTAL		03/07/17

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410

ENGINEER: EKO	EI: GH
---------------	--------

ENGINEER: EKO

FILE: H:\2017\701018\DWG\701018-COV-DET-TAB.DWG
DATE: 6/17/2018 8:02 AM
DRAWN BY: J. HANNAH
CHECKED BY: J. HANNAH
PLOT: 7/16/2018 8:02 AM
CADD: ENG.

ESTIMATED PROJECT QUANTITIES			
ITEM NO.	ITEM DESCRIPTION	UNIT QUANTITY	
1	COMBINED CLEARING AND GRUBBING	AC	23.1
2	STRIPPING, SALVAGING AND SPREAD TOPSOIL	LS	1
3	CLASS 10 EXCAVATION	LS	1
4	SUBGRADE PREPARATION	SY	6432
5	SANITARY SEWER GRAVITY MAIN, 8" DIA	LF	2888
6	SANITARY SEWER SERVICE STUB, 6" DIA	EA	6
7	SUBDRAIN, 6" PERFORATED PVC	LF	2233
8	STORM SEWER, 15" RCP	LF	991
9	STORM SEWER, 18" RCP	LF	38
10	STORM SEWER, 24" HDPE	LF	23
11	STORM SEWER, 30" RCP	LF	39
12	STORM SEWER, 36" RCP	LF	137
13	STORM SEWER, 15" RCP APRON W/FOOTING & APRON GUARD	EA	3
14	STORM SEWER, 18" RCP APRON W/FOOTING & APRON GUARD	EA	1
15	STORM SEWER, 24" CMP APRON W/APRON GUARD	EA	1
16	STORM SEWER, 30" RCP APRON W/FOOTING & APRON GUARD	EA	1
17	STORM SEWER, 36" RCP APRON W/FOOTING & APRON GUARD	EA	1
18	WATER MAIN, 12" DIA	LF	3097
19	WATER SERVICE STUB, 6" DIA	EA	6
20	PRIVATE WATER, 1" DIA	LF	346
21	VALVE, 6" DIA	EA	6
22	VALVE, 12" DIA	EA	8
23	FIRE HYDRANT ASSEMBLY	EA	8
24	TEMPORARY FIRE HYDRANT ASSEMBLY	EA	9
25	MANHOLE, SW-301, 48" (SANITARY SEWER)	EA	13
26	MANHOLE, SW-401, 48" (STORM SEWER)	EA	2
27	MANHOLE, SW-401, 60" (STORM SEWER)	EA	2
28	MANHOLE, SW-401, 72" (STORM SEWER)	EA	1
29	STORM SEWER CLEANOUT	EA	4
30	INTAKE, SW-501	EA	3
31	INTAKE, SW-503	EA	2
32	INTAKE, SW-505	EA	1
33	INTAKE, MODIFIED SW-506	EA	1
34	PAVEMENT, 8" P.C.C. WITH CD BASKETS	SY	5721
35	PAVEMENT, SIDEWALK RAMPS, PCC, 6 IN.	SY	20
36	DETECTABLE WARNING PANELS	SF	20
37	SEEDING, FERTILIZING, AND MULCHING	AC	21.8
38	TRAFFIC CONTROL	LS	1
39	EROSION CONTROL	LS	1
40	ROCK OUTLET PROTECTION, CLASS 'E' RIP RAP	TON	60
41	8-INCH CIRCULAR TURNAROUND	SY	563
42	PERMANENT ROAD CLOSURE SIGNS URBAN, SI-182	EA	5
43	PAVEMENT MARKINGS	LS	1

GENERAL NOTES

1.

ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF WAUKEE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND TO THE 2017 EDITION OF SUDAS STANDARD SPECIFICATIONS. THE WAUKEE STANDARD SPECIFICATIONS SHALL GOVERN IF ANY DISCREPANCIES.
2.

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.
3.

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.
4.

THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY AREAS OF PAVEMENT OR SIDEWALK NOT TO BE REMOVED THAT IS DAMAGED DUE TO OPERATING HIS EQUIPMENT ON THE PAVEMENT OR SIDEWALK.
5.

THE PROJECT MANAGER 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 CONFINE HIS GRADING OPERATIONS TO WITHIN THE PROPOSED AND EXISTING RIGHT OF WAY, CONSTRUCTION LIMITS AND EASEMENTS SHOWN ON THE PLANS. ANY DAMAGE TO PROPERTIES OUTSIDE THE SITE BOUNDARY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
7.

PRIOR TO CONSTRUCTION, CONTRACTOR SHALL NOTIFY (48 HRS NOTICE) THE FOLLOWING:

A. CITY OF WAUKEE ENGINEERING DEPARTMENT

B. APPROPRIATE UTILITY COMPANIES

C. OWNER

D. CIVIL DESIGN ADVANTAGE

* 48 HOUR NOTICE SHALL BE GIVEN TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT PRIOR TO WEEKEND AND HOLIDAY WORK.
8.

PRIOR TO CONSTRUCTION, THE PROJECT MANAGER SHALL CONTACT THE WAUKEE ENGINEERING DEPARTMENT AND SCHEDULE A PRE--CONSTRUCTION MEETING AT LEAST ONE WEEK PRIOR TO THE ANTICIPATED START OF CONSTRUCTION.
9.

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.

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
	THE MOST RECENT EDITION OF THE CITY OF WAUKEE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND THE 2017 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. INCLUDED REMOVAL OF EXISTING CROPS FOR CONSTRUCTION OF TEMPORARY ACCESS. DO NOT DISTURB CROPS OUTSIDE OF THE PROJECT LIMITS.
2	STRIP, SALVAGE AND RE--SPREAD TOPSOIL PER SECTION 2010 OF SUDAS STANDARD SPECIFICATIONS OR PROVIDE THE CITY WITH A TOPSOIL PRESERVATION PLAN. 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.
4	REFER TO SHEET 2 FOR TYPICAL LOCATIONS AND THICKNESS.
5	SANITARY SEWER FOR 8" SHALL BE PVC TRUSS PIPE. ANY CONNECTIONS TO EXISTING SANITARY SEWER SHALL BE CONSIDERED INCIDENTAL. REFER TO FIG. 3010.101 AND 3010.103 FOR PIPE EMBEDMENT DETAILS. GRANULAR PIPE BEDDING SHALL BE CONSIDERED INCIDENTAL. EXISTING SANITARY SEWER WILL NEED TO BE RETESTED AFTER SADDLE WYE INSTALLATION.
6, 19	REFER TO SHEET 3 FOR TYPICAL DETAIL SECTION. ALL SERVICES TO BE MARKED WITH A PAINTED STEEL POST.
7--12	REFER TO FIGURE 3010.102 FOR TRENCH BEDDING AND BACKFILL ZONE DETAILS. GRANULAR PIPE BEDDING SHALL BE CONSIDERED INCIDENTAL. CONNECTIONS TO EXISTING STORM SEWER PIPE AND STRUCTURES SHALL BE CONSIDERED INCIDENTAL. WRAP ALL PIPE JOINTS IN ENGINEERING FABRIC. CLEAN AND TELEWISE STORM SEWER PRIOR TO PAVING AND PROVIDE TELEVISIONING REPORT TO CITY IN HARD COPY AND DISC FORMAT. TELEVISIONING SHALL BE CONSIDERED INCIDENTAL. IF STORM SEWER CROSSES ABOVE A WATER MAIN OR CROSSES LESS THAN 18 INCHES BELOW A WATER MAIN THEN STORM SEWER SHALL BE CONSTRUCTED OF REINFORCED CONCRETE WITH A FLEXIBLE O--RING GASKET JOINT RATED AT 13 PSI OR GREATER. O--RING GASKET JOINTS SHALL BE INSTALLED ON EACH SIDE OF THE CROSSING UNTIL THE NORMAL DISTANCE FROM THE WATER TO THE SEWER IS AT LEAST TEN FEET.
13--17	THE LAST THREE SECTIONS AND APRON SHALL BE CONNECTED WITH PIPE CONNECTORS. REFER TO FIG. 4030.221 -- RCP APRON SECTION FOOTING FOR FOOTING CONSTRUCTION DETAILS. APRON GUARD REQUIRED ON ALL APRONS. RCP APRON FOOTING, PIPE APRON GUARD AND PIPE CONNECTORS TO BE CONSIDERED INCIDENTAL. INSTALL CLAY WATERSTOPS AT ALL RCP APRONS, MIN. 3' LONG.
18--20	REFER TO FIG. 3010.101 AND FIG. 3010.104 FOR TRENCH BEDDING AND BACKFILL ZONE DETAILS. GRANULAR PIPE BEDDING SHALL BE CONSIDERED INCIDENTAL. REFER TO FIG. 5010.101 FOR THRUST BLOCK DETAILS. REFER TO FIG. 5010.102 FOR TRACER SYSTEM DETAILS. ALL FITTINGS, POLYETHYLENE WRAP, THRUST BLOCKS, AND TRACER WIRE SYSTEM SHALL BE CONSIDERED INCIDENTAL.
23--24	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, STORZ FITTINGS, POLYETHYLENE WRAP, THRUST BLOCK AND TRACER WIRE SYSTEM AND FIRE HYDRANT.
25	REFER TO FIG. 6010.301 -- CIRCULAR SANITARY SEWER MANHOLE (SW-301) FOR CONSTRUCTION DETAILS. CASTINGS IN PAVEMENT SHALL BE TYPE B RING AND COVER. WHEN CASTINGS ARE NOT IN PAVEMENT, INSTALL MANHOLE CONE SECTION, MANHOLE STEPS, AND RING/COVER CASTING SUCH THAT SEPARATION IS MAINTAINED BETWEEN MANHOLE COVERS AND PAVED AREAS (BACK OF CURB, SIDEWALK PAVEMENT, SIDEWALK APPROACHES/RAMPS). ALL SANITARY SEWER MANHOLES SHALL BE VACUUM TESTED.

10.

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.
11.

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. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ROAD BARRICADES AT END OF EXISTING PAVEMENTS UNTIL THE PROJECT IS ACCEPTED.
12.

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.
13.

THE CONTRACTOR SHALL APPLY NECESSARY MOISTURE TO THE CONSTRUCTION AREA AND HAUL ROADS TO PREVENT THE SPREAD OF DUST.
14.

THE CONTRACTOR IS REQUIRED TO BE FAMILIAR WITH AND COMPLY WITH OSHA STANDARDS. NOTHING WITHIN THESE PLANS SHALL RELIEVE THE CONTRACTOR OF THIS REQUIREMENT.
15.

ALL MATERIAL TESTING SHALL BE CONSIDERED INCIDENTAL TO OTHER CONSTRUCTION.
16.

PRIOR TO ANY WORK AT THE SITE, CONTRACTOR SHALL EXAMINE ANY APPLICABLE DRAWINGS AVAILABLE FROM THE OWNER, ENGINEER, AND/OR ARCHITECT, AND CONSULT WITH OWNER'S PERSONNEL AND UTILITY COMPANY REPRESENTATIVES. NO COMPENSATION WILL BE ALLOWED FOR DAMAGE FROM FAILURE TO COMPLY WITH THIS REQUIREMENT.
17.

ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. (MUTCD)
18.

ALL SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING.
19.

SIDEWALKS, ACCESSIBLE CURB RAMPS AND SIDEWALK RAMPS INCLUDING RAISED TRUNCATED DOME AND DETECTABLE WARNINGS AND WARNING PANELS SHALL BE DESIGNED AND INSTALLED TO THE LATEST P.R.O.W.A.G. AND A.D.A. REQUIREMENTS.
20.

PLACE 3/4" EXPANSION JOINT BETWEEN ALL P.C.C. PAVEMENT/SIDEWALKS AND BUILDINGS. PLACE 1/2" EXPANSION JOINT BETWEEN SIDEWALKS AND P.C.C PAVEMENT. THE PCC RAMP JOINT LOCATED AT THE BACK OF CURB AND ALL EXPANSION JOINTS SHALL BE SEALED.
21.

REMOVE DEBRIS AND MUD SPILLED INTO R.O.W. AT THE END OF EACH WORK DAY AND BEFORE RAIN EVENTS.
22.

DO NOT STORE CONSTRUCTION MATERIALS AND EQUIPMENT IN THE R.O.W.
23.

ALL PROPERTY PINS SHALL BE PROTECTED FROM GRADING OR OTHER OPERATIONS. ANY PINS DISTURBED SHALL BE RESET AT THE CONTRACTOR'S EXPENSE.

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
26--28	REFER TO FIG. 6010.401 -- CIRCULAR STORM SEWER MANHOLE (SW-401) FOR CONSTRUCTION DETAILS. MANHOLE INSIDE DIAMETERS GREATER THAN 48" SHALL BE CONSIDERED INCIDENTAL.
29	REFER TO FIG. 4040.232 -- SUBDRAIN CLEANOUTS FOR CONSTRUCTION DETAILS.
30--33	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 6". THE MAXIMUM HEIGHT OF ADJUSTING RINGS ALLOWED FOR MANHOLE CASTINGS IS 12".
30	REFER TO FIG 6010.501 -- SINGLE GRATE INTAKE (SW-501) FOR CONSTRUCTION DETAILS.
31	REFER TO FIG 6010.503 -- SINGLE GRATE INTAKE WITH MANHOLE (SW-503) FOR CONSTRUCTION DETAILS.
32	REFER TO FIG 6010.505 -- DOUBLE GRATE INTAKE (SW-505) FOR CONSTRUCTION DETAILS.
33	REFER TO SHEET 2 FOR CONSTRUCTION DETAILS.
34	REFER TO FIG. 7010.101 -- JOINTS (PV-101) FOR JOINT DETAILS. MAXIMUM CD AND C JOINT SPACING IS 15 FEET.
35--36	REFER TO INTERSECTION DETAILS FOR SIDEWALK GRADES. REFER TO SHEET 3 FOR CART PATH TYPICAL SECTION. SIDEWALK SLOPES SHALL NOT EXCEED A CROSS SLOPE OF 1.50%. REFER TO FIG. 7030.204 -- GENERAL FEATURES OF AN ACCESSIBLE SIDEWALK, FIG. 7030.205 -- GENERAL SIDEWALK AND CURB RAMP DETAILS AND FIG. 7030.207 -- CURB RAMP FOR CLASS B OR C SIDEWALK FOR SIDEWALK CURB RAMP AND DETECTABLE WARNING CONSTRUCTION DETAILS. DETECTABLE WARNING PANELS TO BE ARMOR TILE ADA SOLUTIONS OR APPROVED EQUAL, RED IN COLOR. ACCESSIBLE RAMPS SHALL BE 6" THICK P.C.C. AND CROSS SLOPES SHALL NOT EXCEED 1.50%.
37	THE SITE SEEDING SHALL CONFORM TO THE SPECIFICATION FOR TYPE (1) PERMANENT LAWN MIXTURE AND TYPE (4) URBAN TEMPORARY EROSION CONTROL SEED MIXTURE. <u>SEEDING QUANTITIES</u> --TYPE 1 PERMANENT LAWN MIXTURE = 1.45 AC (PUBLIC ROW) --TYPE 4 URBAN TEMPORARY EROSION CONTROL MIXTURE = 20.35 AC
38	ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ROAD BARRICADES AT END OF EXISTING PAVEMENTS UNTIL THE PROJECT IS ACCEPTED..
39	REFER TO SHEET 7 OF THE CONSTRUCTION DRAWINGS FOR EROSION AND SEDIMENT CONTROLS. REFER TO SEPARATE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR SPECIFIC DETAILS. <u>EROSION CONTROL QUANTITIES</u> -- (1) CONCRETE WASH PIT -- 7,155 LF OF SILT FENCE -- 21.8 ACRES OF SEEDING, FERTILIZING AND MULCHING. -- (6) INLET PROTECTION DEVICES -- (1) 15" HDPE OR CMP TEMPORARY STANDPIPE -- (2) 24" HDPE OR CMP TEMPORARY STANDPIPE
40	INSTALL ENGINEERING FABRIC UNDER ALL RIP--RAP. ENGINEERING FABRIC SHALL BE CONSIDERED INCIDENTAL.
41	8-INCH TURNAROUND SHALL BE 4-INCHES OF 3-INCH ROCK AND 4-INCHES OF GRANULAR SURFACING. REFER TO SHEET 5 FOR LOCATION OF TEMPORARY TURNAROUND.
42	REFER TO PLAN AND PROFILE SHEETS FOR LOCATION. REFER TO IDOT STANDARD ROAD PLAN SI-182 FOR CONSTRUCTION DETAILS. EACH LOCATION CONSISTS OF FIVE SIGNS WITH POSTS PER SI-182.
43	ALL PAVEMENT MARKINGS SHALL BE DURABLE PAINT.

24.

IN THE EVENT OF A DISCREPANCY BETWEEN DETAILED PLANS AND QUANTITIES, THE DETAILED PLANS SHALL GOVERN.
25.

ALL FIELD TILES ENCOUNTERED SHALL BE REPAIRED AND CONNECTED TO STORM SEWERS WHERE POSSIBLE. LOCATIONS SHALL BE PROVIDED TO THE ENGINEER FOR NOTATION ON AS--BUILTS.
26.

ALL CONSTRUCTION STAKING TO BE COMPLETED UNDER THE DIRECTION OF A LICENSED ENGINEER OR LAND SURVEYOR. ALL CURB DROPS AND SIDEWALK/SHARED USE PATH SHALL ALSO BE STAKED UNDER THE DIRECTION OF A LICENSED ENGINEER OR LAND SURVEYOR
27.

THE CONTRACTOR SHALL SUBMIT A LIST OF CONSTRUCTION MATERIALS TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT PRIOR TO CONSTRUCTION.
28.

A GEOTECHNICAL ENGINEER SHALL BE ONSITE DURING CONSTRUCTION AND FOR PROOF ROLLING TO INSPECT SOILS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THE GEOTECHNICAL ENGINEER IS PRESENT. A COPY OF ALL REPORTS AND FINDINGS REQUIRING ALTERATION FROM THE APPROVED PLAN SET IS TO BE PROVIDED TO THE WAUKEE ENGINEERING DEPARTMENT FOR REVIEW AND DISCUSSION PRIOR TO COMMENCING WITH PAVING WITHIN THE PROJECT.
29.

THE CONTRACTOR SHALL COORDINATE ALL EXISTING PUBLIC UTILITY CONNECTIONS WITH THE CITY OF WAUKEE ENGINEERING DEPARTMENT.
30.

ALL TESTING SHALL BE COMPLETED ACCORDING TO THE CITY OF WAUKEE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND THE WAUKEE ENGINEERING DEPARTMENT SHALL BE PRESENT TO WITNESS ALL TESTING.
31.

AS--BUILTS SHALL BE PROVIDED TO THE WAUKEE ENGINEERING DEPARTMENT INCLUDING ALL UTILITIES AND AS--BUILT GRADES FOR DRAINAGE SWALES, OVERFLOWS, ACCESSIBLE RAMPS AND DETENTION FACILITIES. THE CONTRACTOR SHALL PROVIDE INFORMATION TO THE DESIGN ENGINEER FOR INCLUSION ON THE RECORD AS--BUILT DRAWINGS.
32.

THE CONTRACTOR IS RESPONSIBLE FOR CLEANING AND TELEVISIONING ALL STORM AND SANITARY SEWERS. ALL CLEANING AND TELEVISIONING SHALL BE APPROVED BY THE CITY OF WAUKEE ENGINEERING DEPARTMENT PRIOR TO PAVING. A COPY OF THE VIDEOS AND A HARD COPY OF THE INSPECTION REPORT SHALL BE PROVIDED TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT. A COPY OF THE VIDEO IS TO BE PROVIDED TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT AS WELL. ALL SANITARY MANHOLES SHALL BE VACUUM TESTED.
33.

ALL FIRE HYDRANTS INCLUDING ANY RELOCATED HYDRANTS SHALL HAVE STORZ FITTINGS.
34.

ALL PROPOSED PEDESTRIAN CROSSINGS SHALL BE INSTALLED AS PART OF THE PLAT IMPROVEMENTS.
35.

ALL CONNECTIONS TO EXISTING MANHOLES ARE TO BE CORE DRILLED AND USE A LINK SEAL.
36.

ALL MANHOLES SHALL HAVE A MINIMUM OF 1 -- 4" ADJUSTING RING TO ALLOW FOR FUTURE ADJUSTMENT SHOULD THE STRUCTURE END UP IN A DRIVEWAY.

DATE

05/25/17

05/01/17

04/21/17

04/04/17

03/07/17

REVISIONS

FINAL SUBMITTAL

FOURTH SUBMITTAL

THIRD SUBMITTAL

SECOND SUBMITTAL

FIRST SUBMITTAL

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EI: GH

ENGINEER: EKO

I-80 WEST INDUSTRIAL PARK

4

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1701.018

QUANTITIES AND REFERENCE NOTES

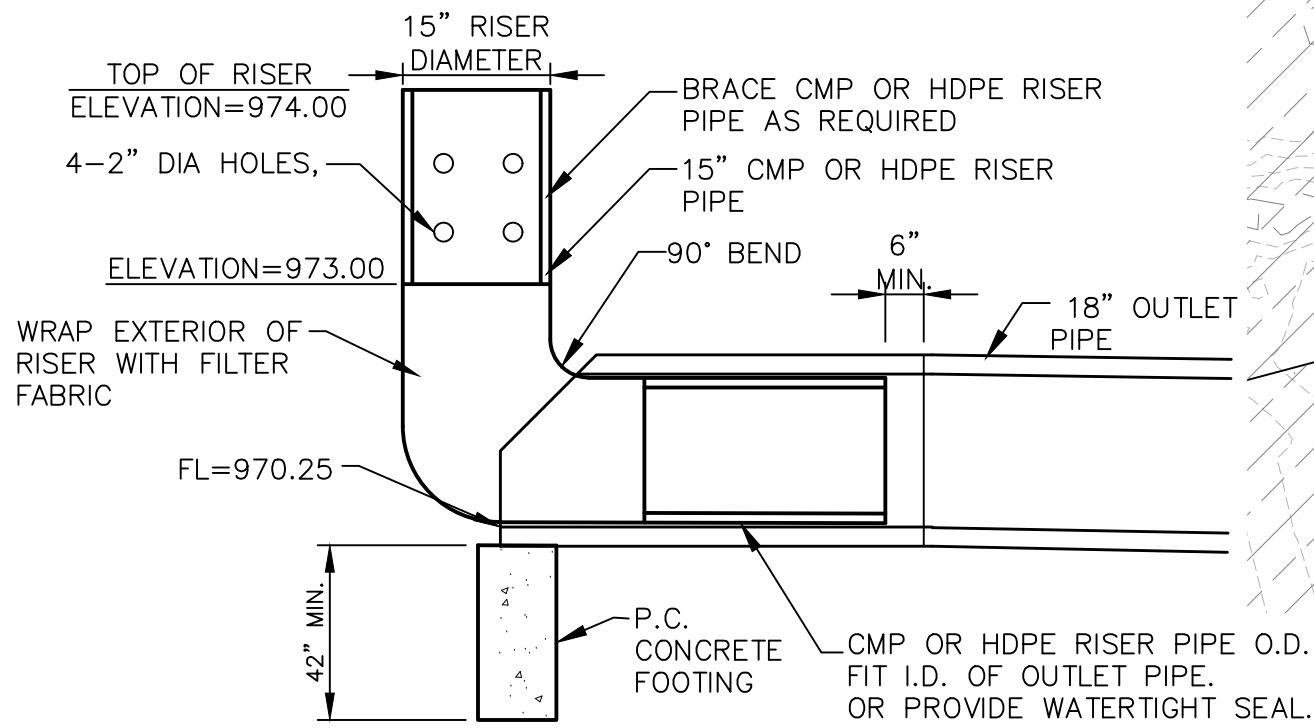
WAUKEE, IOWA

CIVIL DESIGN ADVANTAGE

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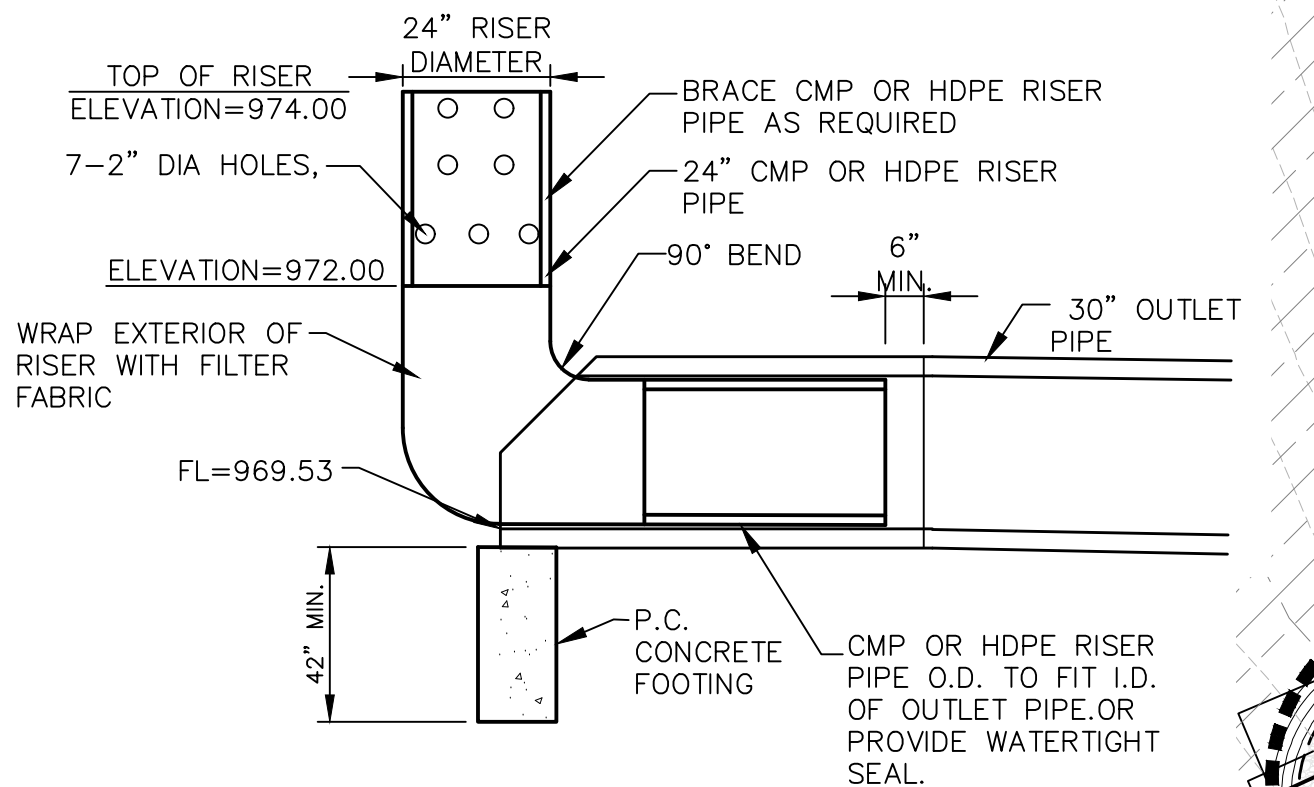
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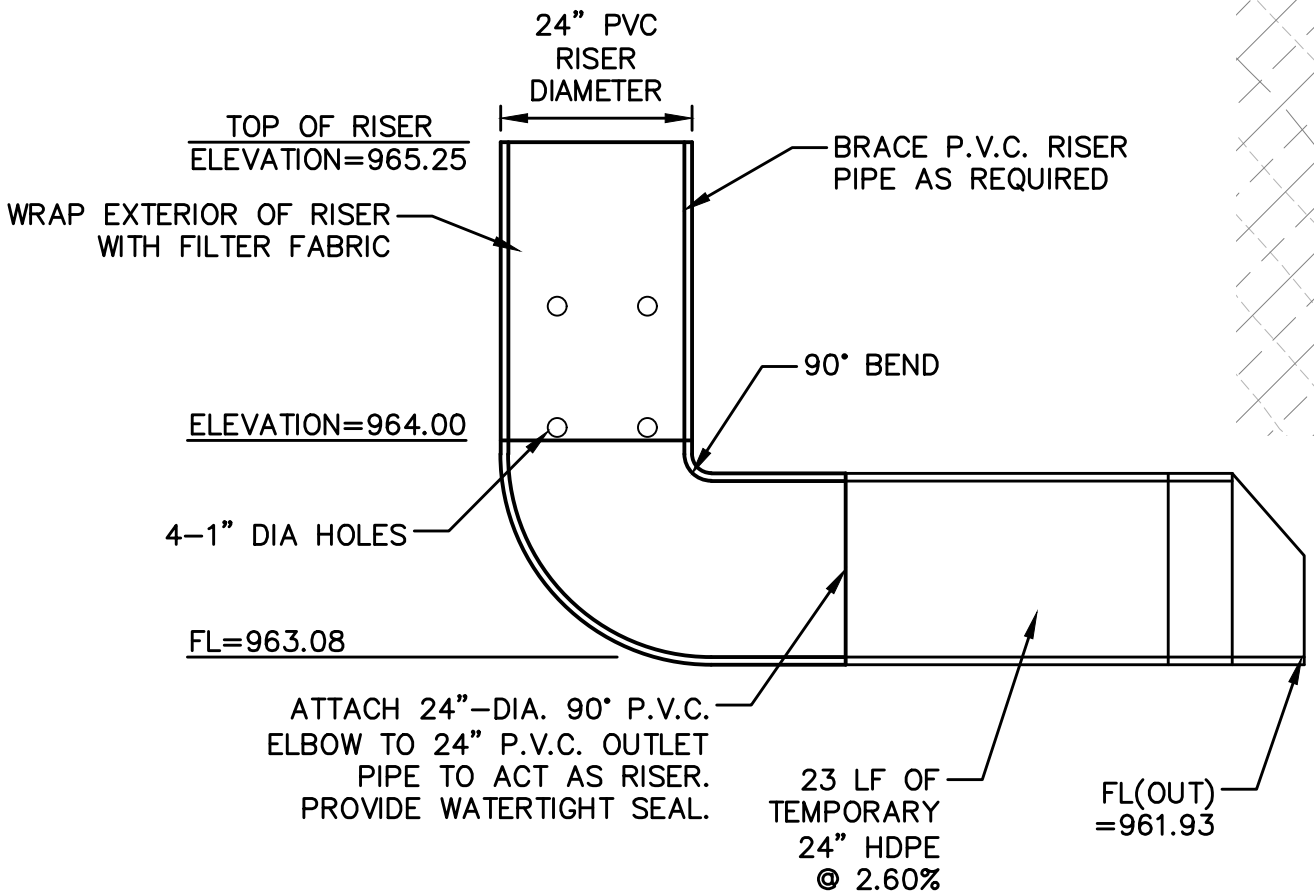
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TEMPORARY STAND PIPE DETAIL (TSB #3)

NOT TO SCALE



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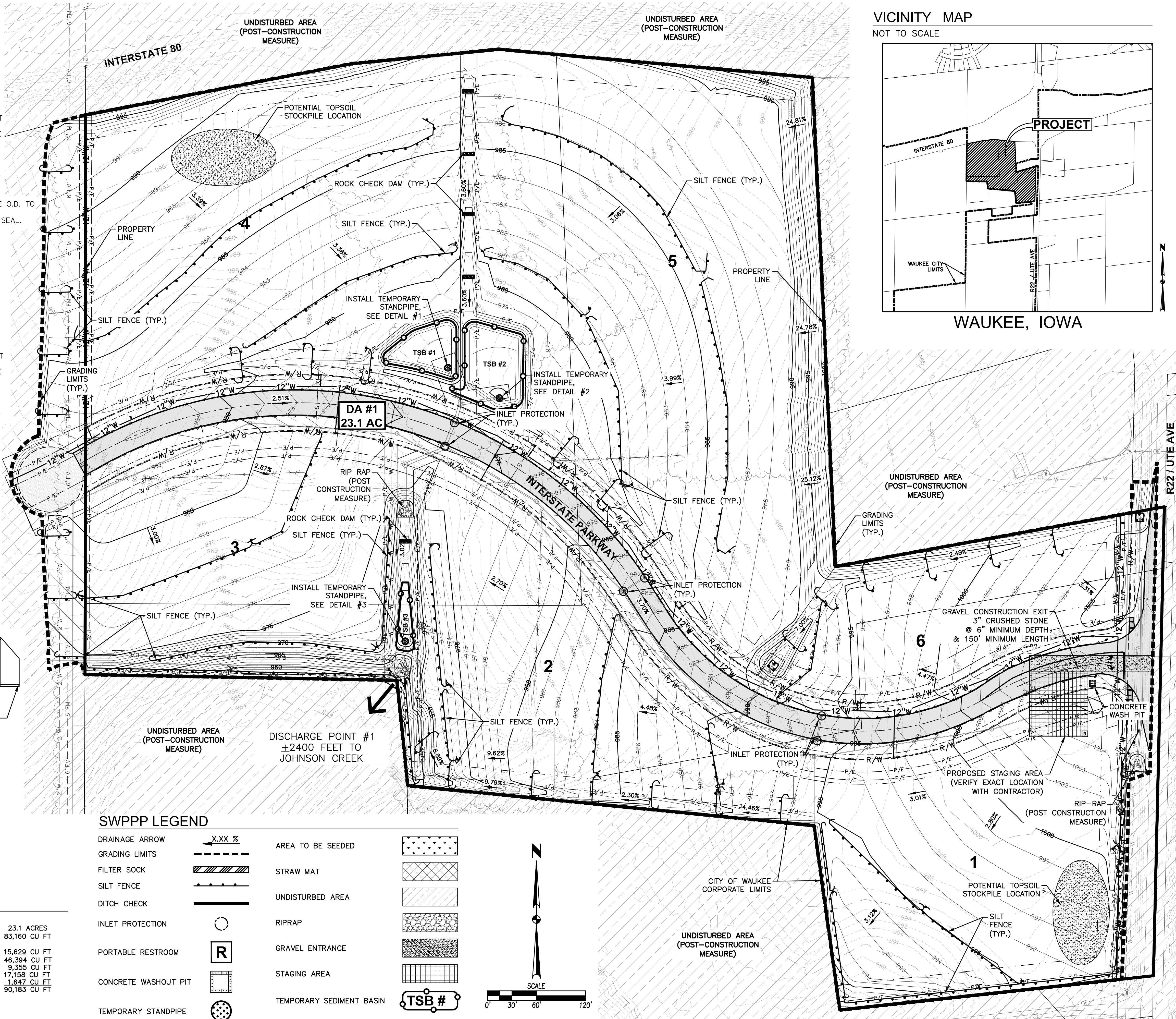
ITEM NO.	ITEM	UNIT	TOTAL
1	SILT FENCE	LF	7,155
2	SEEDING, FERTILIZING, AND MULCHING	AC	21.8
3	INLET PROTECTION DEVICES	EA	6
4	CONCRETE WASHOUT PIT	EA	1
5	15" CMP OR HDPE TEMPORARY STANDPIPE	EA	1
6	24" CMP OR HDPE TEMPORARY STANDPIPE	EA	2

DISCHARGE POINT SUMMARY

DISCHARGE POINT #1 TO JOHNSON CREEK ±2400 FT.		23.1 ACRES
TOTAL AREA DISTURBED TO DISCHARGE POINT		83,160 CU FT
STORAGE VOLUME REQUIRED (# OF ACRES*3600 CU FT)		
VOLUME PROVIDED IN SILT FENCE (3,473 LF @ 4.5 CU FT/LF OF FENCE)	15,629 CU FT	
VOLUME PROVIDED IN SILT FENCE (3,682 LF @ AVG. 12.6 CU FT/LF OF FENCE)	46,394 CU FT	
VOLUME PROVIDED IN TSB #1	9,355 CU FT	
VOLUME PROVIDED IN TSB #2	17,158 CU FT	
VOLUME PROVIDED IN TSB #3	1,647 CU FT	
TOTAL VOLUME PROVIDED	90,183 CU FT	

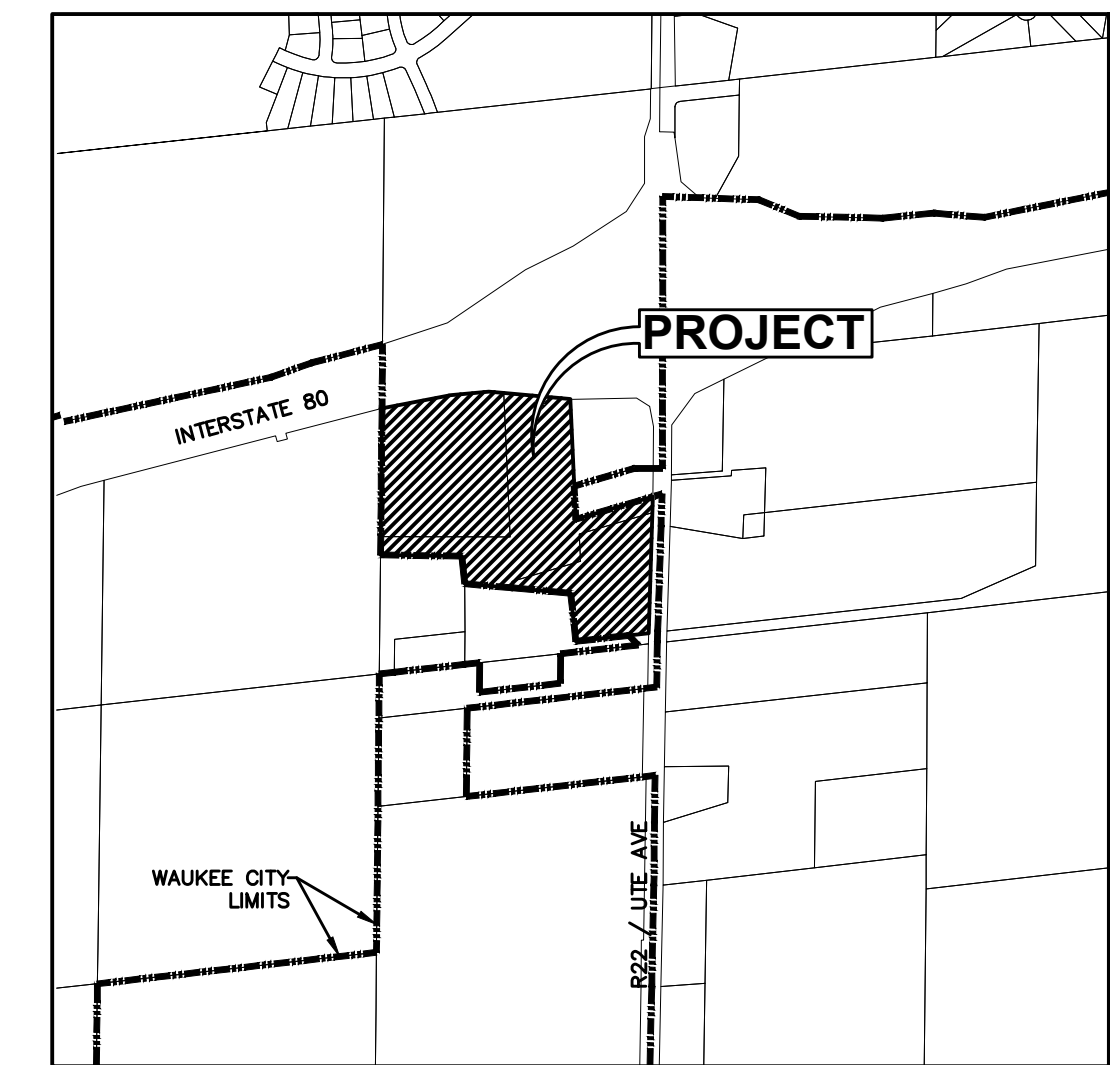
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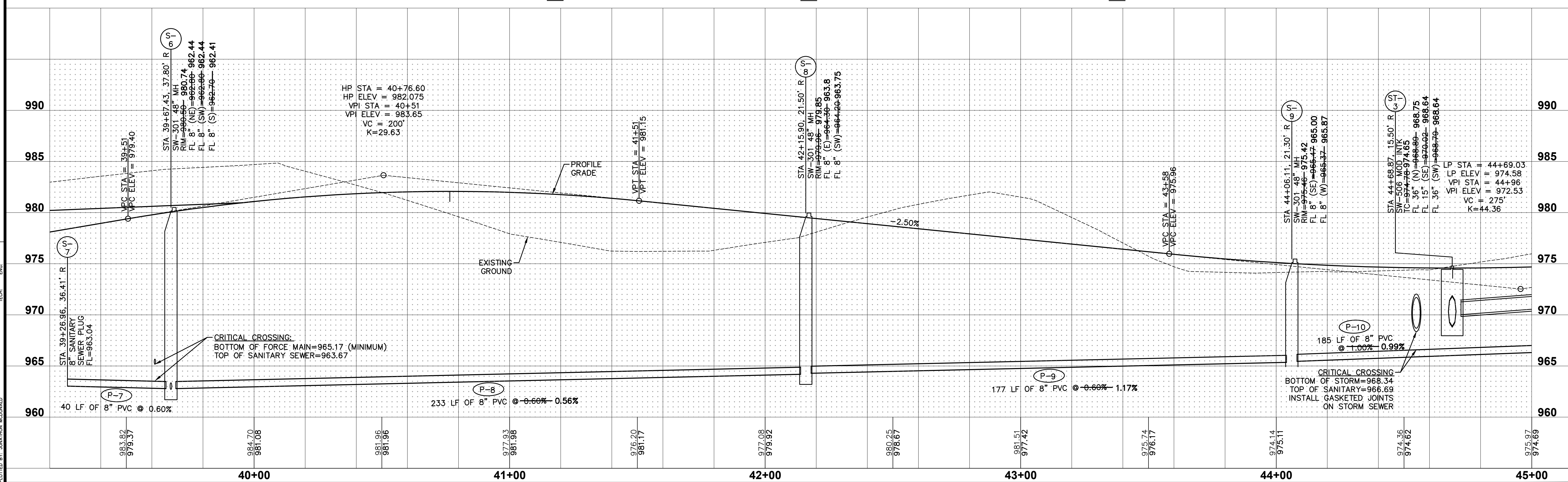
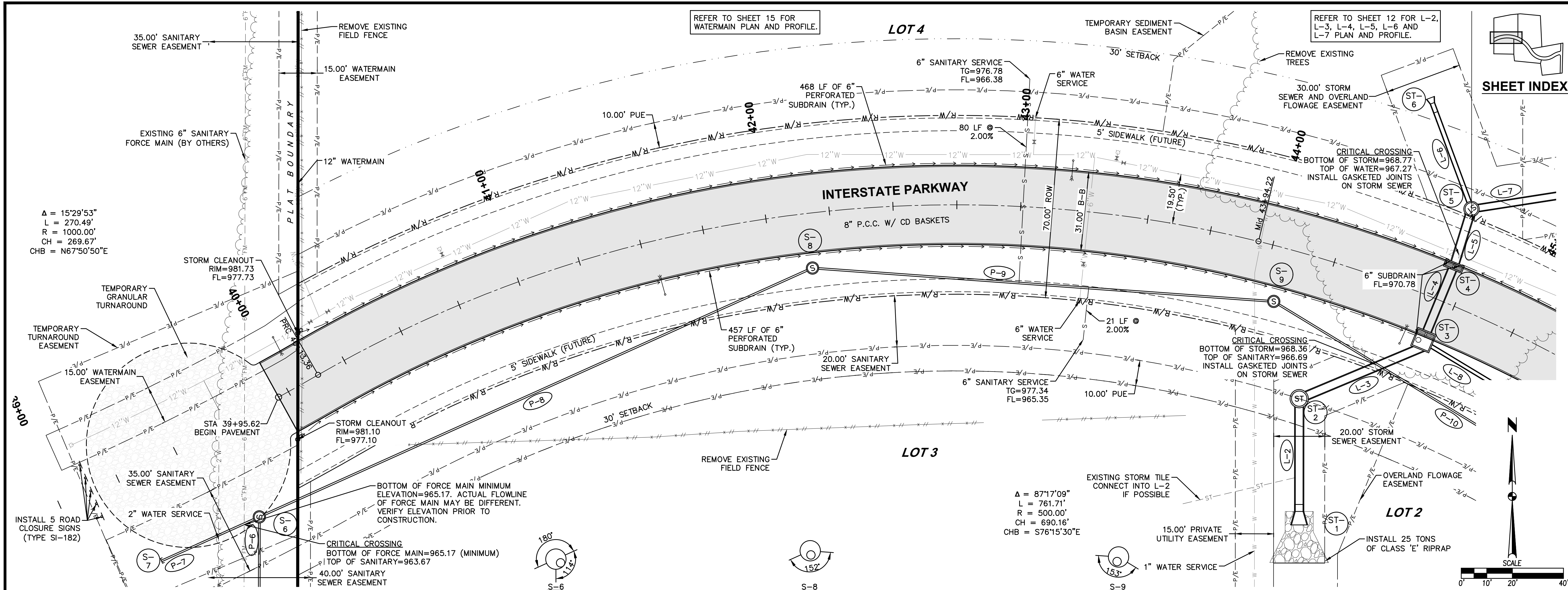
DRAINAGE ARROW	X.XX %	AREA TO BE SEEDED
GRADING LIMITS	---	STRAW MAT
FILTER SOCK		UNDISTURBED AREA
SILT FENCE	----	RIPRAP
DITCH CHECK	----	GRAVEL ENTRANCE
INLET PROTECTION	○	STAGING AREA
PORTABLE RESTROOM	R	TEMPORARY SEDIMENT BASIN
CONCRETE WASHOUT PIT	□	
TEMPORARY STANDPIPE	●	



VICINITY MAP

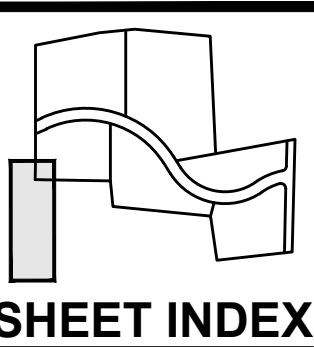
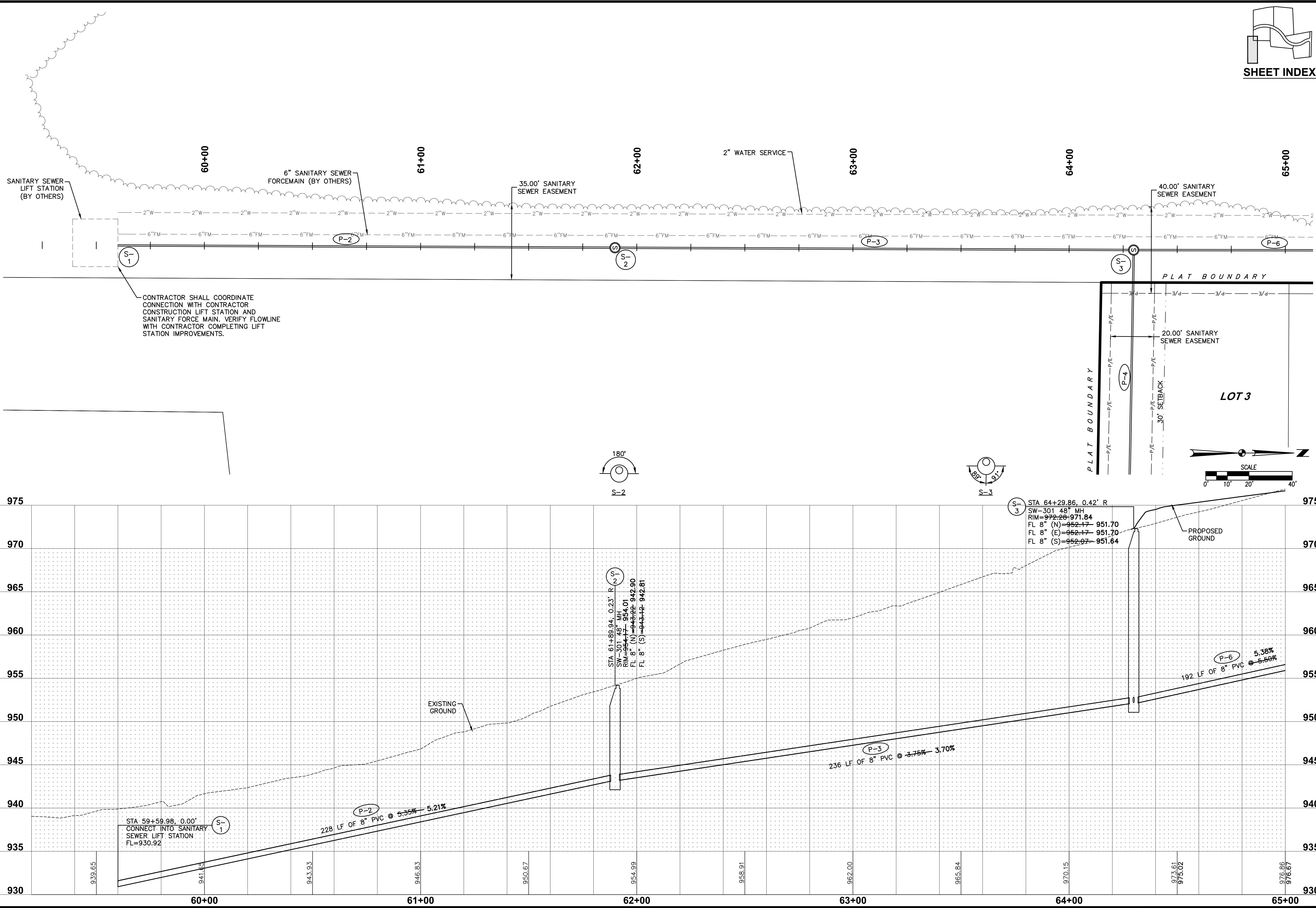
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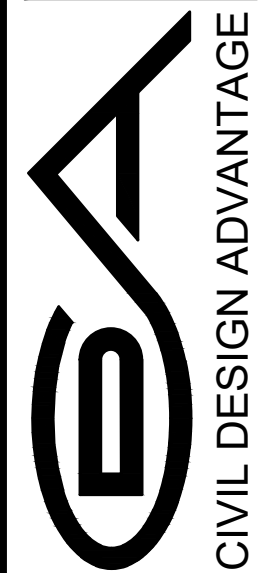
	CIVIL DESIGN ADVANTAGE
I-80 WEST INDUSTRIAL PARK	
SANITARY AND STORM PLAN AND PROFILE	
WAUKEE, IOWA	
3405 S.E. CROSSROADS DRIVE, SUITE G GRIMES, IOWA 50111 PHONE: (515) 369-4400 FAX: (515) 369-4410	
ENGINEER: EKO EI: GH	
REVISIONS	DATE
FINAL SUBMITTAL	05/25/17
FOURTH SUBMITTAL	05/01/17
THIRD SUBMITTAL	04/21/17
SECOND SUBMITTAL	04/04/17
FIRST SUBMITTAL	03/07/17

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PLOT BY: ANTHONY MCDONALD
REVISION: ENG



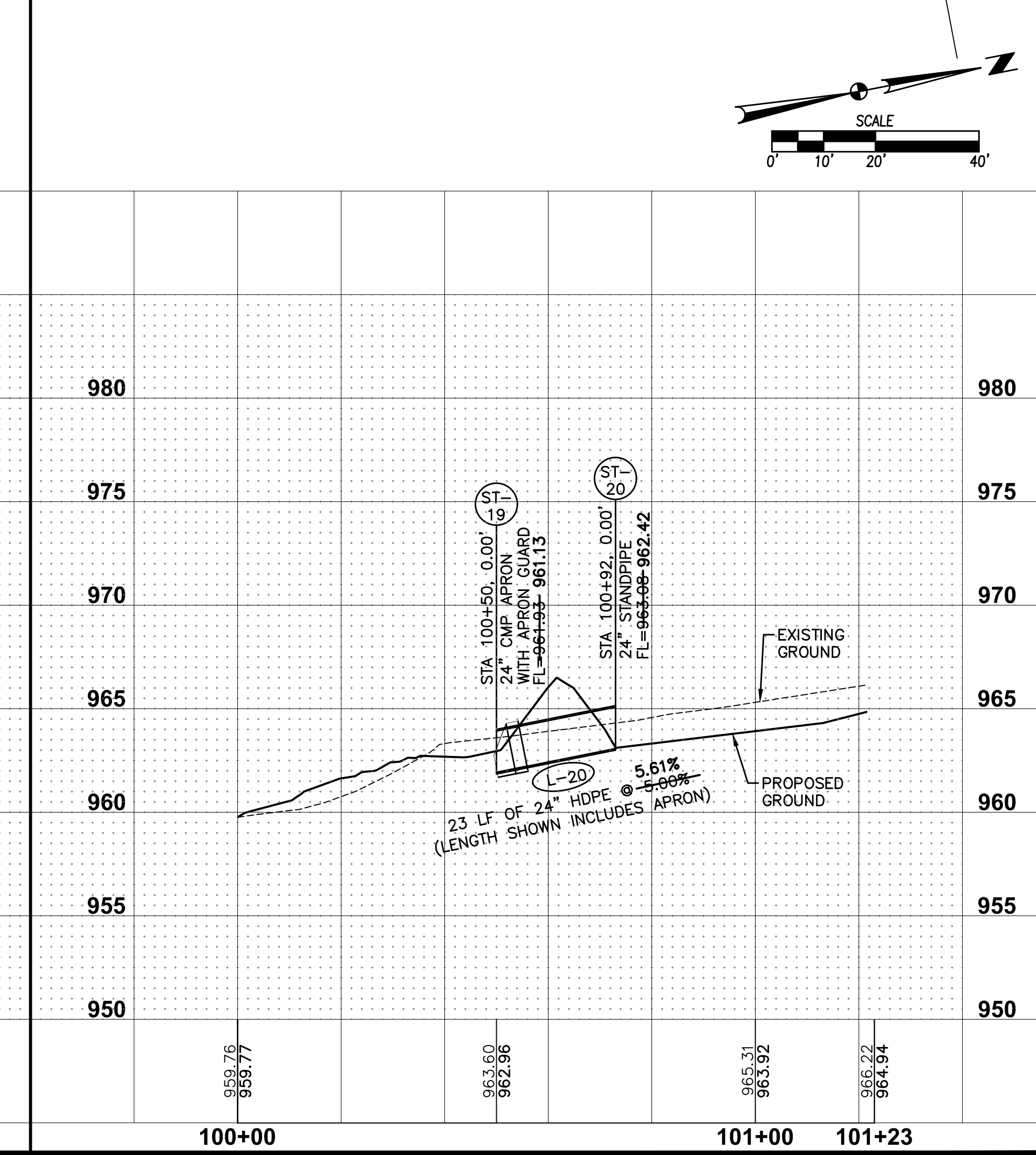
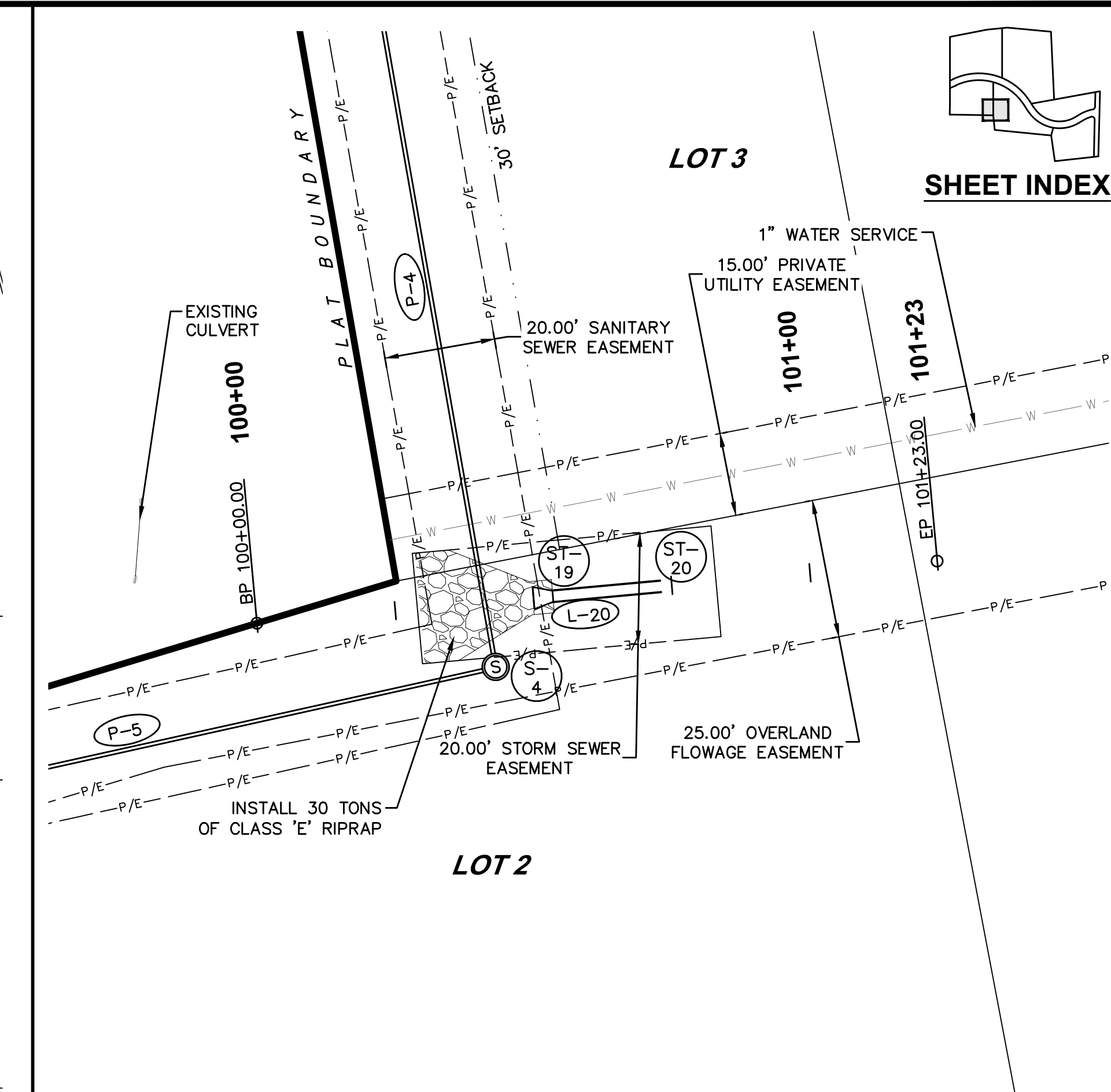
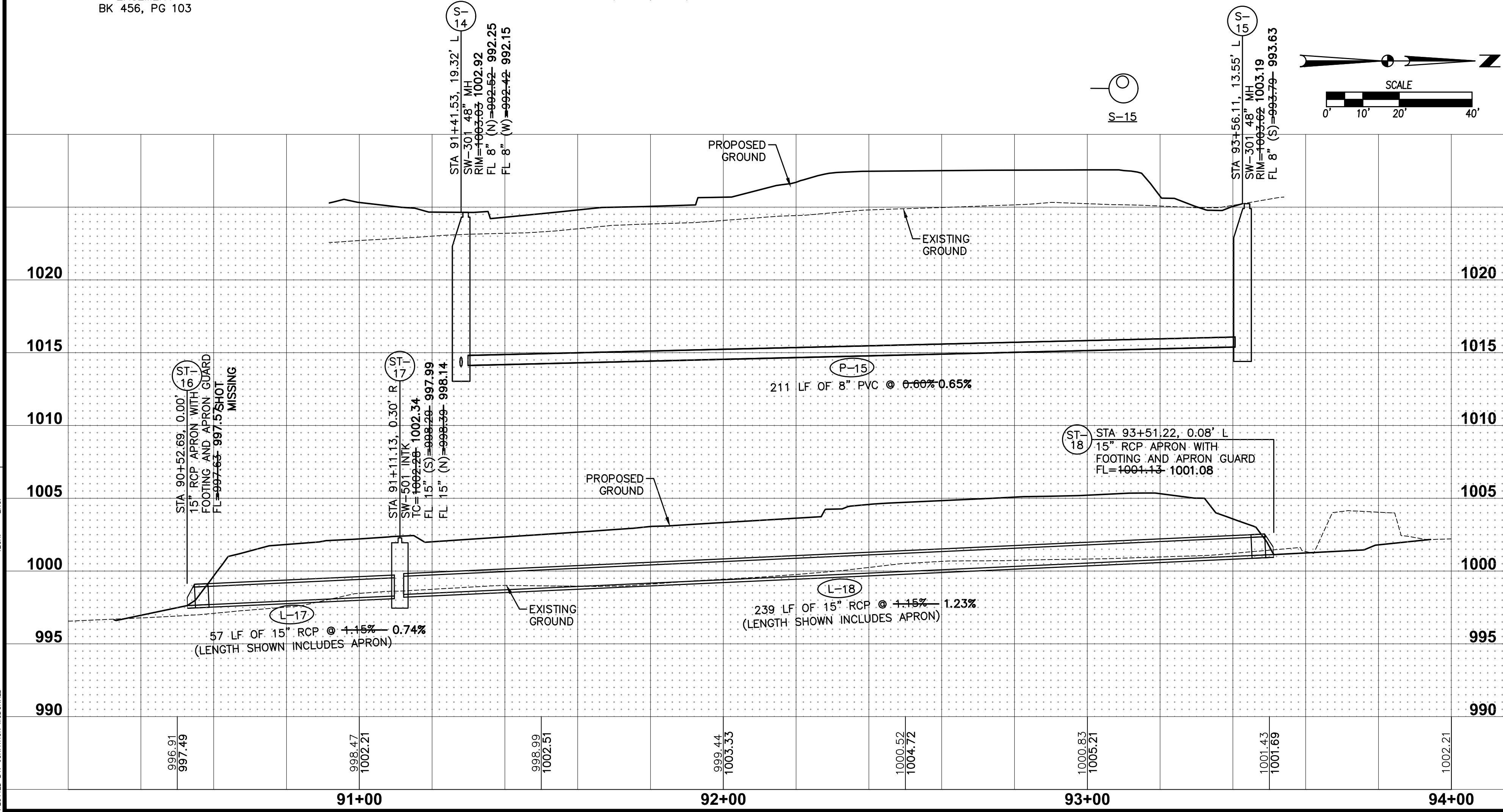
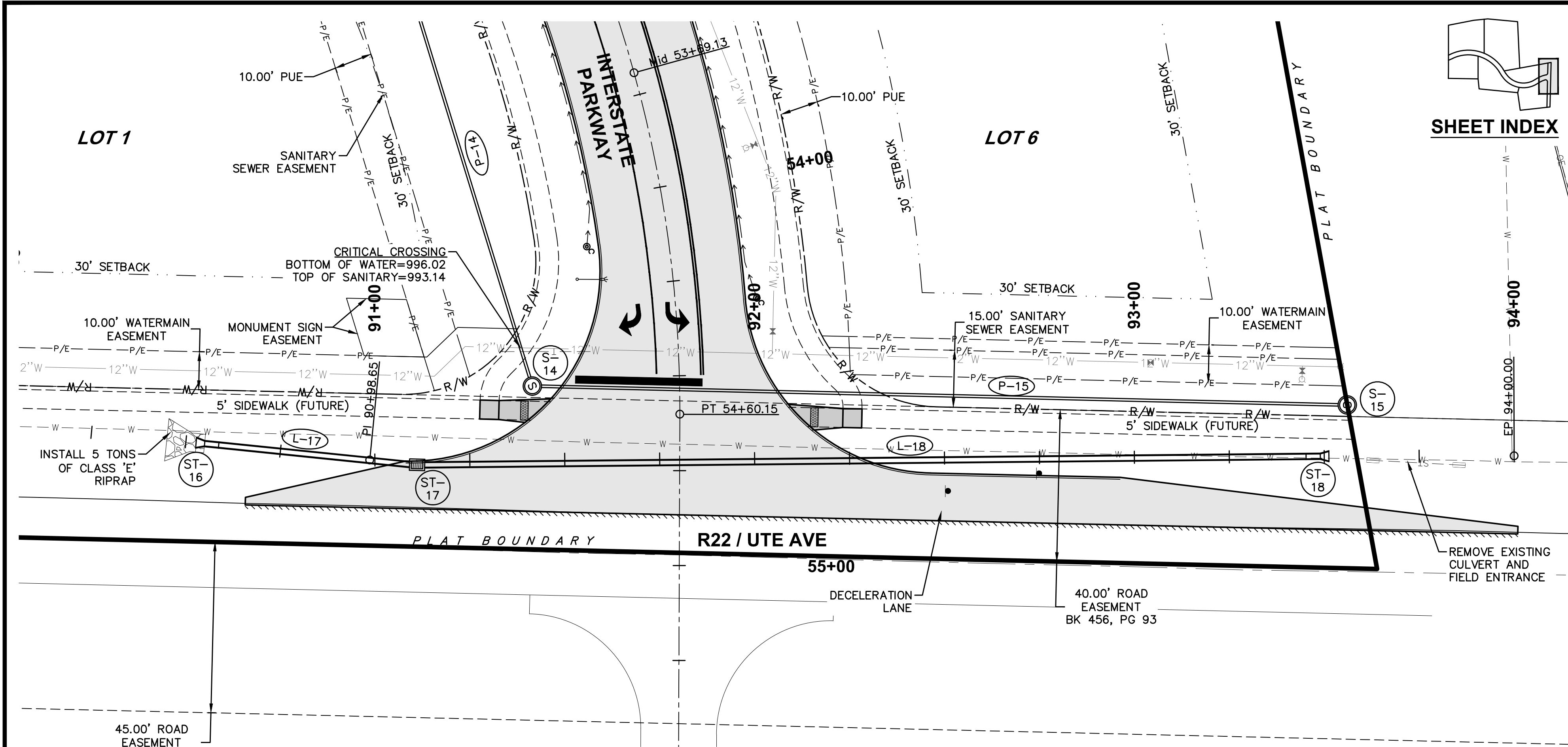
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EI: GH



I-80 WEST INDUSTRIAL PARK
SANITARY AND STORM PLAN AND PROFILE
WAUKEE, IOWA

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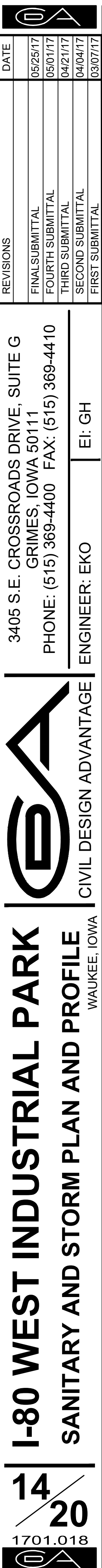


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04/04/17	SECOND SUBMITTAL
03/07/17	FIRST SUBMITTAL

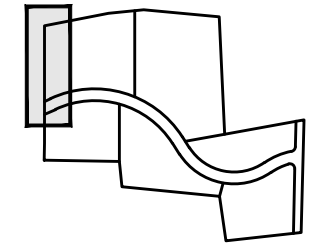
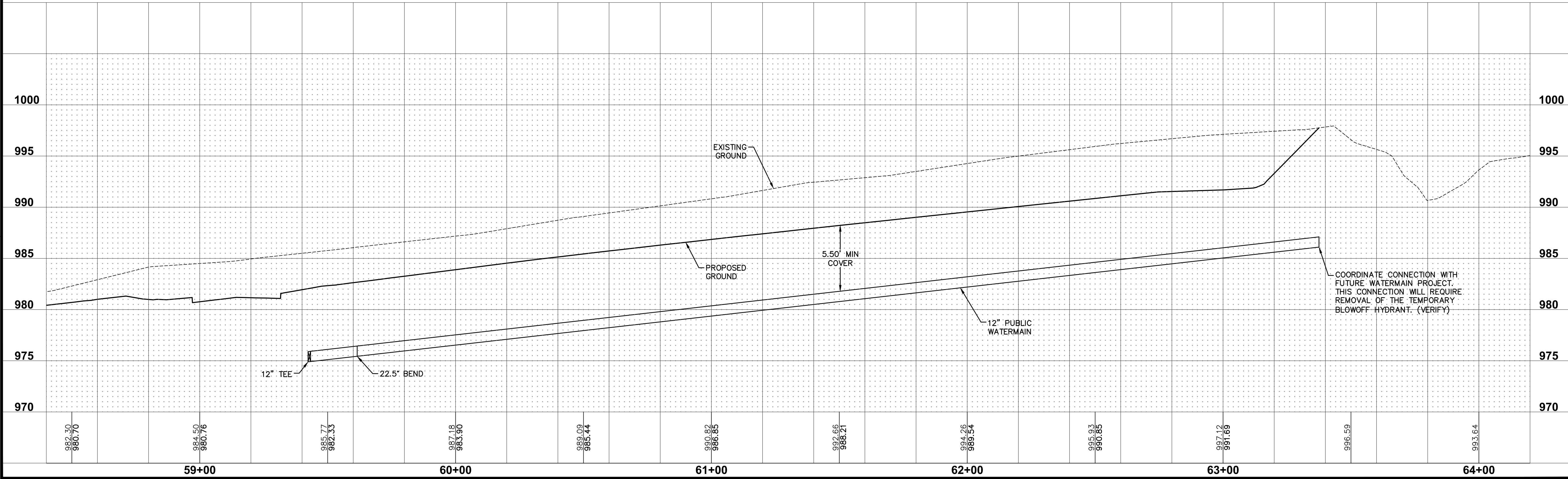
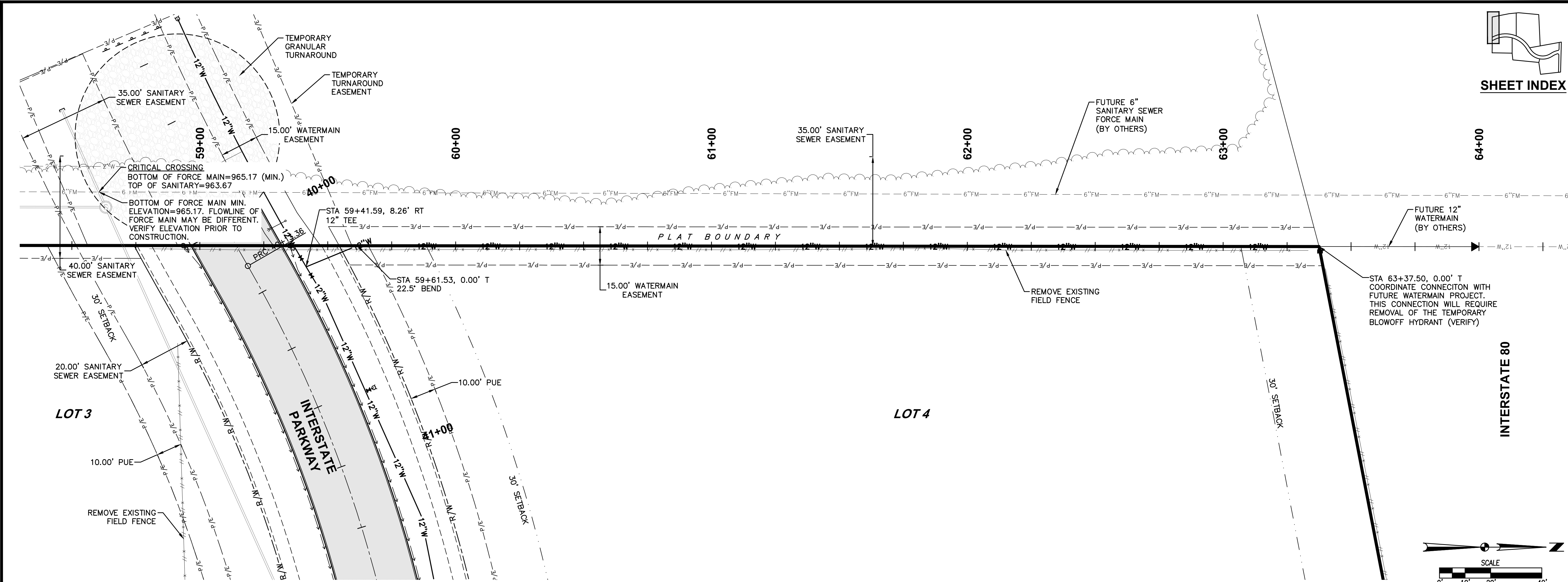
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I-80 WEST INDUSTRIAL PARK
SANITARY AND STORM PLAN AND PROFILE
WAUKEE, IOWA

13/20
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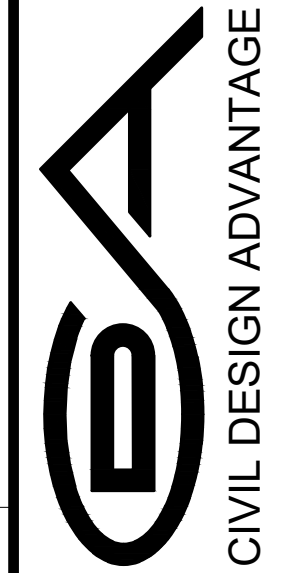
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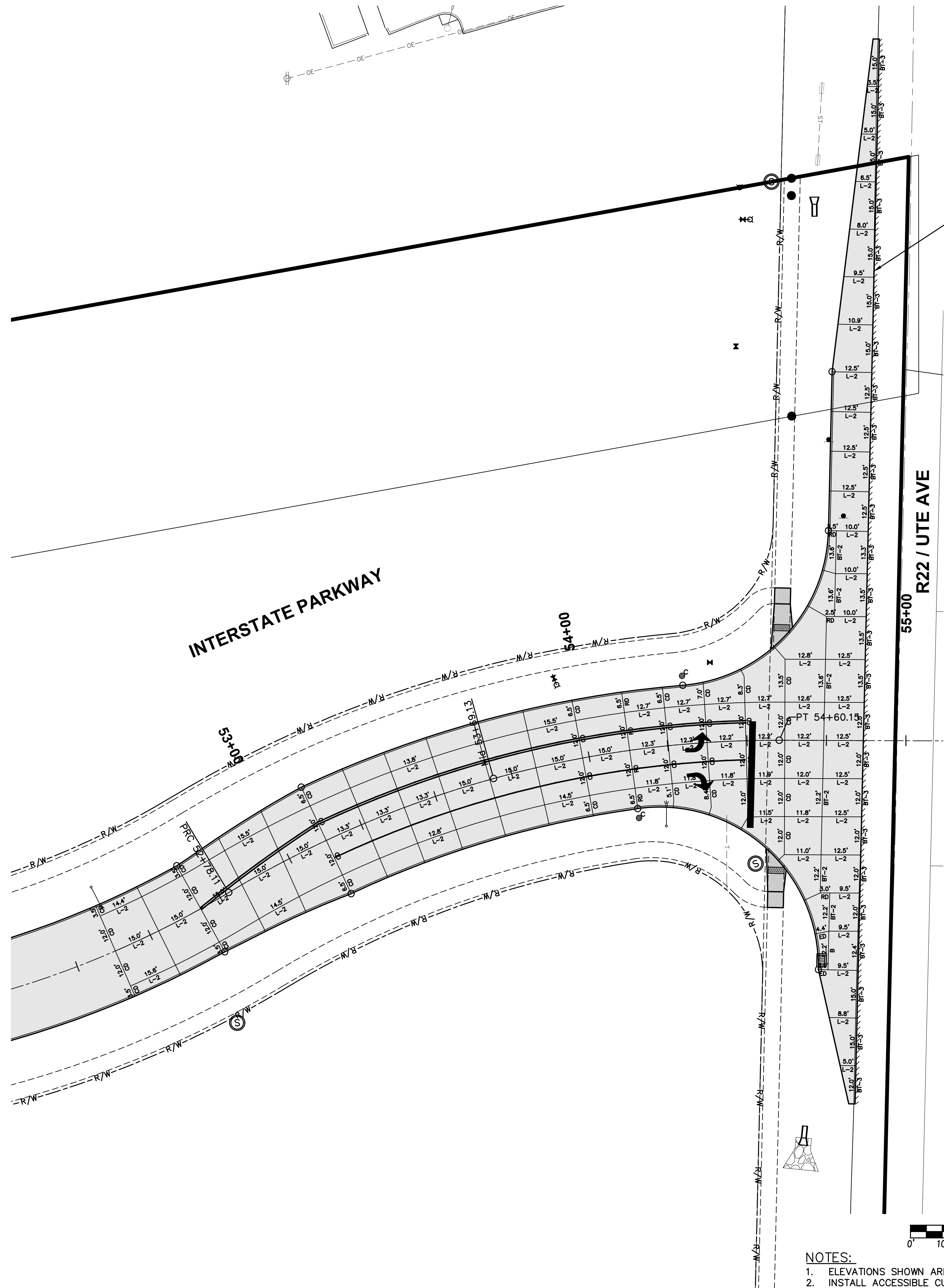
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I-80 WEST INDUSTRIAL PARK
WATERMAIN PLAN AND PROFILE
WAUKEE, IOWA

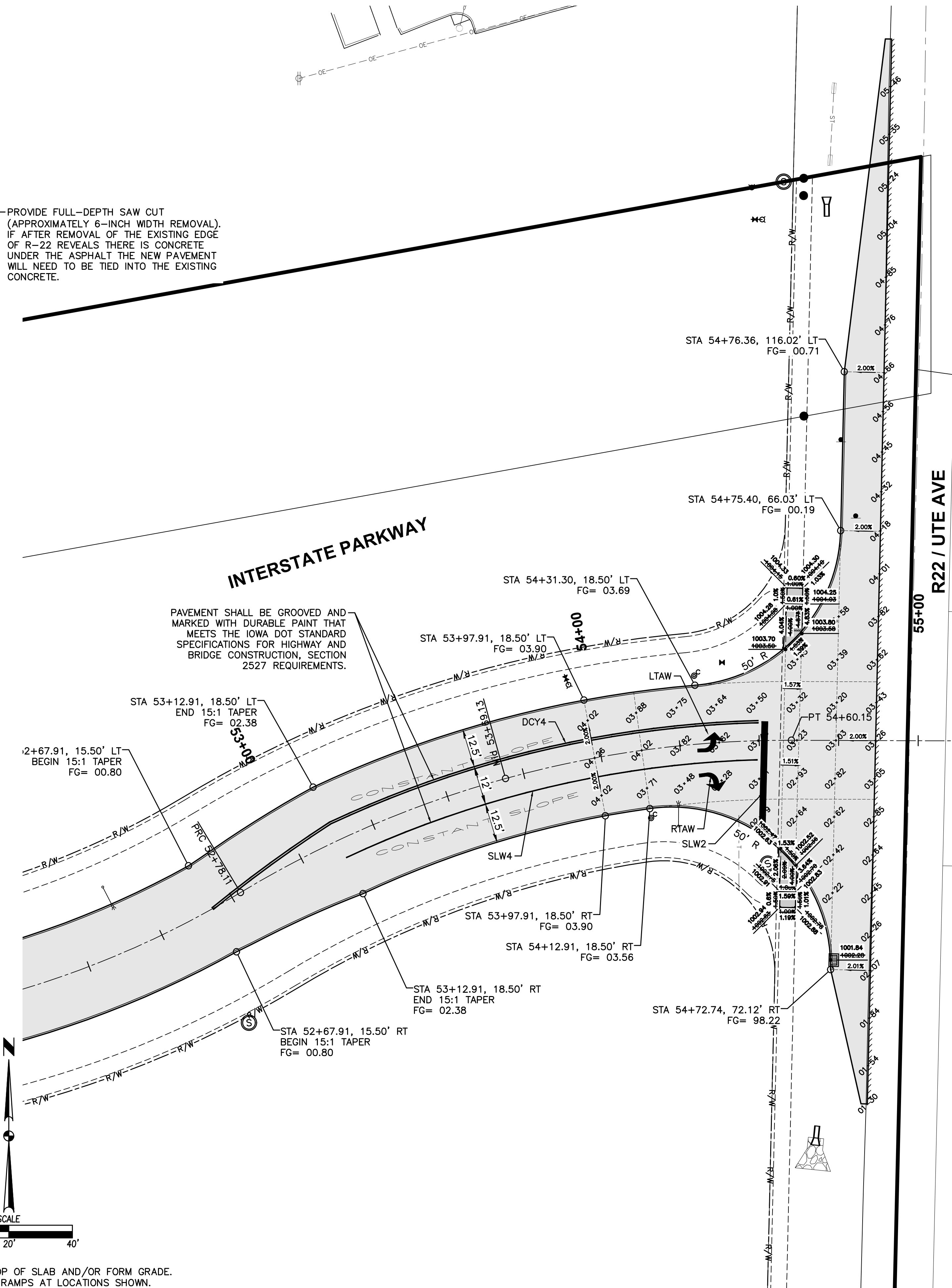
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PLOT BY: JAWAHAN MISHRA
COMMENT: ENG.



JOINTING 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.



GEOMETRICS AND STAKING LAYOUT

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WAUKEE, IOWA

I-80 WEST INDUSTRIAL PARK
INTERSECTION DETAILS

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