

PAINTED WOODS WEST - PLAT 2

DETAILED CONSTRUCTION PLANS

SHEET INDEX:

C0.1	COVER SHEET
C1.1	HYDRANT COVERAGE
C2.1	GRADING PLAN
C3.1 - C3.5	SANITARY & WATER MAIN
C4.1 - C4.6	STORM & PAVING
C5.1 - C5.2	INTERSECTION DETAILS
C6.1 - C6.2	DETAILS SHEET
C7.1	SWPPP

OWNER:

PAINTED WOODS DEVELOPMENT LC
ATTN: BILL KIMBERLY
2785 N ANKENY BLVD SUITE 22
ANKENY, IA 50023

DEVELOPER:

KIMBERLEY DEVELOPMENT
ATTN: BILL KIMBERLY
2785 N ANKENY BLVD SUITE 22
ANKENY, IA 50023
PH: (515) 963-8335

ENGINEER:

BISHOP ENGINEERING
ATTN: DAVID BENTZ
3501 104TH ST
URBANDALE, IA 50322
PH: (515) 276-0467

ZONING:

R-2: ONE AND TWO FAMILY RESIDENTIAL DISTRICT
BULK REGULATIONS
MINIMUM LOT SIZE: 8,000 SF
MINIMUM LOT WIDTH: 65'
FRONT YARD SETBACK: 30'
REAR YARD SETBACK: 30'
TOTAL SIDE YARD SETBACK: 15' (7' MIN PER SIDE)

DISTURBED AREA:

TOTAL DISTURBED AREA = 6 ACRES MORE OR LESS

BENCHMARKS:

ARROW ON HYDRANT LOCATED AT THE DEAD END OF
COTTONWOOD DRIVE
ELEVATION = 993.18 (USGS DATUM)

PROJECT MANAGER:

BISHOP ENGINEERING
ATTN: DAVID BENTZ
3501 104TH ST
URBANDALE, IA 50322
PH: (515) 276-0467

ABBREVIATIONS:

AC	ACRES
ASPH	ASPHALT
BK	BOOK
CONC	CONCRETE
D	DEEDED DISTANCE
EX	EXISTING
ENCL	ENCLOSURE
FF	FINISHED FLOOR
FL	FLOW LINE
FRAC	FRACTIONAL
M	MEASURED DISTANCE
MH	MANHOLE
OPC	ORANGE PLASTIC CAP
P	PLATTED DISTANCE
PG	PAGE
POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
PRA	PREVIOUSLY RECORDED AS
PUE	PUBLIC UTILITY EASEMENT
ROW	RIGHT OF WAY
SF	SQUARE FEET
SAN	SANITARY
TYP	TYPICAL
YPC	YELLOW PLASTIC CAP
N	NORTH
S	SOUTH
E	EAST
W	WEST

UTILITY NOTE:

THE LOCATION OF THE UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS AND ARE APPROXIMATE LOCATIONS. THE EXACT LOCATIONS OF ALL UTILITIES MUST BE ASCERTAINED IN THE FIELD. IT SHALL BE THE DUTY OF THE CONTRACTOR TO DETERMINE WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

GENERAL NOTES:

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH CITY OF WAUKEE STANDARD SPECIFICATIONS. THE CITY OF WAUKEE MUST BE NOTIFIED BY ALL CONTRACTORS 48 HOURS PRIOR TO COMMENCING WORK AND AT LEAST 48 HOURS PRIOR TO ANY PLANNED WEEKEND OR HOLIDAY WORK.
- IN EVENT OF A DISCREPANCY BETWEEN THE QUANTITY ESTIMATES AND THE DETAILED PLANS, THE DETAILED PLANS SHALL GOVERN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL UTILITIES. ANY DAMAGE TO SAID UTILITIES SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT O.S.H.A. CODES AND STANDARDS. NOTHING INDICATED ON THESE PLANS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE APPROPRIATE SAFETY REGULATIONS.
- ALL NECESSARY CONSTRUCTION SIGNS, BARRICADES AND OTHER TRAFFIC CONTROL DEVICES REQUIRED DURING CONSTRUCTION WILL BE FURNISHED BY THE CONTRACTOR. SIGNS, BARRICADES AND OTHER TRAFFIC CONTROL DEVICES MUST BE IN CONFORMANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS."
- BISHOP ENGINEERING SHALL NOT BE LIABLE FOR ANY INJURIES THAT HAPPEN ON SITE. THIS SHALL INCLUDE BUT NOT BE LIMITED TO TRENCH COLLAPSES FROM VARYING SOIL CONDITIONS OR INJURIES CAUSED BY UNDERGROUND UTILITIES INCLUDING UTILITIES THAT ARE NOT SHOWN ON PLAN.
- THE CONTRACTOR IS LIABLE FOR ALL DAMAGES TO PUBLIC OR PRIVATE PROPERTY CAUSED BY THEIR ACTION OR INACTION IN PROVIDING FOR STORM WATER FLOW DURING CONSTRUCTION. DO NOT RESTRICT FLOWS IN EXISTING DRAINAGE CHANNELS, STORM SEWER, OR FACILITIES.
- THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A SCHEDULE FOR PERFORMANCE OF WORK ITEMS. THIS SCHEDULE SHALL BE PROVIDED BY THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. NO WORK SHALL BEGIN UNTIL A SCHEDULE HAS BEEN SUBMITTED AND ACCEPTED. THE CONTRACTOR SHALL THEN PERFORM WORK TO CONFORM TO THE ACCEPTED SCHEDULE.
- LABORATORY TESTS SHALL BE PERFORMED BY THE OWNER UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL PROVIDE SAMPLES OF MATERIAL REQUIRED FOR LABORATORY TESTS AND TESTING IN ACCORDANCE WITH THE URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS.
- SOIL IMPORT OR EXPORT ON THIS PROJECT SHALL BE CONSIDERED INCIDENTAL AND WILL NOT BE MEASURED OR PAID FOR SEPARATELY.
- THE CONTRACTOR SHALL PROTECT ALL STRUCTURES NOT SHOWN AS REMOVALS ON THE PLANS.
- THE CONTRACTOR SHALL OBTAIN ANY AND ALL NECESSARY PERMITS PRIOR TO ANY CONSTRUCTION. CONTRACTOR SHALL WORK WITH OWNER OR OWNERS REPRESENTATIVE ON ALL REQUIRED STORM WATER DISCHARGE PERMITS FROM THE IOWA DEPARTMENT OF NATURAL RESOURCES AND THE CITY OF WAUKEE.
- GRADING AND EROSION CONTROL SHALL BE DONE IN ACCORDANCE WITH THE APPROVED GRADING PLAN, SWPPP, NPDES DOCUMENTS, AND IOWA DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS.
- THE CONTRACTOR SHALL PICK UP ANY DEBRIS SPILLED ONTO THE ADJACENT RIGHT OF WAY OR ABUTTING PROPERTIES AS THE RESULT OF CONSTRUCTION, PRIOR TO A RAIN EVENT, AND AT THE END OF EACH WORK DAY.
- THE CONTRACTOR IS RESPONSIBLE FOR THE PROMPT REMOVAL OF ALL MUD THAT HAS BEEN TRACKED OR WASHED UNTO ADJACENT PROPERTY OR RIGHT OF WAY UNTIL SUCH TIME THAT PERMANENT VEGETATION HAS BEEN ESTABLISHED.
- DISPOSE OF ALL EXCESS MATERIALS AND TRASH IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REQUIREMENTS. PROVIDE WASTE AREAS OR DISPOSAL SITES FOR EXCESS MATERIALS NOT DESIRABLE FOR INCORPORATION INTO THE PROJECT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING PROJECT MANAGER CONTACT INFORMATION TO THE CITY OF WAUKEE AFTER BID LETTING.
- ANY PROPOSED CHANGES TO THE APPROVED PLAN SET DURING CONSTRUCTION MUST RECEIVE WRITTEN APPROVAL FROM THE CITY OF WAUKEE ENGINEERING DEPARTMENT AND DESIGN ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CHANGES MADE DURING CONSTRUCTION THAT HAVE NOT RECEIVED WRITTEN APPROVAL FROM THE CITY OF WAUKEE ENGINEERING DEPARTMENT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING WAUKEE ENGINEERING DEPARTMENT AT LEAST 1 WEEK PRIOR TO ANY PLANNED WORK TO SCHEDULE A PRE-CONSTRUCTION MEETING.
- ANY ESTABLISHED LAWNS THAT ARE DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE REPLACED WITH SOD AND BE WATERED UNTIL ESTABLISHED. SAID WORK SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
- PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL SUBMIT THE MANUFACTURER'S SPECIFICATION SHEETS FOR ALL MATERIALS BEING USED IN THE CONSTRUCTION OF THE IMPROVEMENTS TO THE WAUKEE ENGINEERING DEPARTMENT.

PAVING NOTES:

- THE PAVING/ GRADING CONTRACTOR SHALL BACKFILL THE PAVING SLAB AND FINE GRADE THE RIGHT OF WAY AS SOON AFTER THE PAVING AS POSSIBLE. ALL AREAS SHALL BE SEEDED IN ACCORDANCE WITH CITY OF WAUKEE STANDARD SPECIFICATIONS AND THE CURRENT VERSION OF SUDAS.
- SUBGRADE PREPARATION AND PAVEMENTS WILL BE CONSTRUCTED FOLLOWING RECOMMENDATIONS IN THE SOILS REPORT. APPROVED SOILS ENGINEER MUST SIGN OFF ON SUBBASE PRIOR TO ANY PAVEMENT BEING PLACED.
- SEE DETAILS FOR ALL PAVEMENT THICKNESS.
- ALL PEDESTRIAN WALKWAYS THAT UNLOAD INTO A VEHICLES TRAVELED PATH MUST HAVE A D.A. DETECTABLE WARNING PANEL(S) AS PER A.D.A. REGULATIONS. PANEL TYPE & COLOR SHALL BE PER CITY STANDARD.
- ALL WALKS, RAMPS, ETC. SHALL COMPLY WITH ALL A.D.A. AND PROWAG REQUIREMENTS. IN EVENT OF A DISCREPANCY BETWEEN THE PLANS AND THE A.D.A / PROWAG REQUIREMENTS THE A.D.A / PROWAG REQUIREMENTS SHALL GOVERN. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL A.D.A. & PROWAG CODES ARE MET.

UTILITY NOTES:

- QUANTITY CALLOUTS ON PIPE LENGTHS ARE APPROXIMATE AND SHOULD BE USED FOR REFERENCE ONLY.
- THE CONTRACTOR SHALL COORDINATE THE ADJUSTMENT OF ANY AND ALL EXISTING AND PROPOSED UTILITIES TO PROPOSED GRADES. UTILITIES SHALL BE RAISED OR LOWERED IN ACCORDANCE WITH THE UTILITY OWNER REQUIREMENTS. ANY NECESSARY ADJUSTMENTS SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
- ALL EXISTING FIELD TILES ENCOUNTERED DURING CONSTRUCTION SHALL BE REPAIRED, REROUTED, OR CONNECTED TO PUBLIC OR PRIVATE STORM SEWER TO REMAIN IN SERVICE. ANY AND ALL FIELD TILES ENCOUNTERED SHALL BE INCLUDED ON THE AS-BUILT PLANS.
- ALL PROPOSED RCP STORM SEWER PIPE JOINTS SHALL BE FABRIC WRAPPED AND THE LAST 3 PIPE SECTIONS ON THE APRON SHALL BE TIED WITH RF-14 TYPE II CONNECTORS. ALL APRONS SHALL HAVE A STANDARD FOOTING AND TRASH GUARD. ALL APRONS SHALL HAVE A 3-FOOT CLAY WATER STOP.
- ALL RIP RAP CALLED OUT ON PLANS SHALL BE UNDERLAIN WITH ENGINEERING FABRIC.
- SANITARY SEWER SERVICE CONNECTIONS SHALL BE PLACED AT A SLOPE OF NO LESS THAN 2%. SERVICES SHALL MAINTAIN 18" OF VERTICAL SEPARATION FROM THE WATERMAIN WITH 18" OF COMPACTED LOW PERMEABILITY SOIL BETWEEN THE UTILITIES WITHIN 10' OF THE CROSSING.
- MANDREL AND PRESSURE TESTS SHALL BE REQUIRED FOR ALL PROPOSED SANITARY LINES AND MANHOLES SHALL BE VACUUM TESTED.
- CLEANING AND TELEVISION OF THE SANITARY AND STORM SEWER SYSTEMS SHALL BE COMPLETED PRIOR TO PAVING. THE CITY OF WAUKEE ENGINEERING DEPARTMENT IS TO WITNESS ALL CLEANING AND TELEVISIONING AND TO BE PROVIDED COPIES AT ALL REPORTS AND VIDEOS.
- WATERMAINS SHALL BE C-900. SIZE OF WATERMAIN AS SHOWN ON PLANS.
- THRUST BLOCKS SHALL BE INSTALLED AS REQUIRED AND SHALL BE CONSIDERED INCIDENTAL TO WATERMAIN CONSTRUCTION.
- PROPOSED WATERMAIN SHALL BE PRESSURE TESTED, BACTERIA TESTED AND CHLORINATED. THE FILLING OF THE WATER MAIN SHALL BE DONE BY THE CITY OF WAUKEE.
- TRACER WIRE SHALL BE ADDED TO ALL WATER MAIN, AND BROUGHT TO THE SURFACE AT EVERY HYDRANT.
- ALL HYDRANTS WILL IMMEDIATELY BE COVERED WITH A BLACK PLASTIC BAG (OR EQUIVALENT) ONCE THE HYDRANT IS INSTALLED. THE CITY OF WAUKEE WILL NOTIFY THE CONTRACTOR WHEN THE BAGS CAN BE REMOVED.
- THE MINIMUM HYDRANT LEAD SHALL BE 3.5 FEET.
- FIRE HYDRANT ASSEMBLY SHALL INCLUDE THE TEE, BRANCH, VALVE, HYDRANT AND A STORZ FITTING, INCLUDING ANY RELOCATED HYDRANTS. ANY HYDRANT EXTENSIONS DUE TO EXTRA DEPTH SHALL BE CONSIDERED INCIDENTAL.
- ANY AND ALL BENDS SHALL BE CONSIDERED INCIDENTAL.
- ALL UTILITIES SHALL BE TESTED TO ANY AND ALL CITY STANDARDS. THE CITY OF WAUKEE ENGINEERING DEPARTMENT IS TO WITNESS ALL TESTING.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE TIE-IN OF ALL EXISTING UTILITIES WITH THE CITY OF WAUKEE ENGINEERING DEPARTMENT.
- ALL STRUCTURES CALLED OUT AS "MODIFIED" SHALL BE ENGINEERED BY PRECASTER TO ENSURE STRUCTURAL STABILITY. APPROVAL BY THE PROJECT ENGINEER WILL BE REQUIRED FOR MODIFIED STRUCTURES. MODIFICATIONS TO STANDARD STRUCTURES SHALL BE CONSIDERED INCIDENTAL.
- ALL STRUCTURES SIZES CALLED OUT ON PLANS ARE INSIDE WALL DIMENSIONS.

SOILS REPORT NOTES:

- REFERENCE SOILS REPORT AND ALL ADDENDUMS PREPARED BY CONSTRUCTION MATERIALS TESTING FOR ADDITIONAL SOILS INFORMATION INCLUDING, BUT NOT LIMITED TO, SUBGRADE INFORMATION, PAVEMENT THICKNESS RECOMMENDATIONS, TESTING REQUIREMENTS, SUBDRAIN, AND ANY POSSIBLE OVER EXCAVATION DUE TO POOR SOILS.

COPYRIGHT 2015 BISHOP ENGINEERING. THIS DOCUMENT AND THE INFORMATION CONTAINED MAY NOT BE REPRODUCED OR EXCERPTED WITHOUT THE EXPRESS WRITTEN PERMISSION OF BISHOP ENGINEERING. UNAUTHORIZED COPYING OR DISCLOSURE OF CONSTRUCTION USE ARE PROHIBITED BY COPYRIGHT LAW.

ESTIMATED PROJECT QUANTITIES			
ITEM NO.	ITEM	UNITS	QUANTITY
1	DEMOLITION	LS	1
2	STRIP & RE-SPREAD TOPSOIL, ON SITE	LS	1
3	CLASS 10 EXCAVATION	LS	1
4	SUBGRADE PREPARATION	CY	8325
5	SANITARY SEWER GRAVITY MAIN, TRENCHED, 8"	LF	2228
6	SANITARY SEWER SERVICE STUB, 4"	EA	36
7	STORM SEWER, TRENCHED, RCP, 15"	LF	629
8	STORM SEWER, TRENCHED, RCP, 18"	LF	261
9	STORM SEWER, TRENCHED, RCP, 24"	LF	935
10	STORM SEWER, TRENCHED, RCP, 30"	LF	179
11	STORM SEWER, TRENCHED, RCP, 36"	LF	201
12	STORM SEWER, TRENCHED, RCP, 18"	LF	195
13	SUBDRAIN, 6"	LF	735
14	SUBDRAIN CLEANOUT	EA	1
15	STORM SEWER SERVICE STUB, 4"	EA	36
16	TEMPORARY CMP	LS	1
17	PIPE APRON W/ FOOTING & TRASH GUARD, RCP, 18"	EA	1
18	WATER MAIN, TRENCHED, C900, 8"	LF	1927
19	WATER MAIN, TRENCHED, C900, 12"	LF	300
20	WATER SERVICE STUB, 1"	EA	36
21	FITTING, CROSS, 12"x8"	EA	1
22	FITTING, 11.25 DEGREE BEND, 8"	EA	1
23	FITTING, 45 DEGREE BEND, 8"	EA	3
24	VALVE, 8"	EA	4
25	VALVE, 12"	EA	1
26	FIRE HYDRANT ASSEMBLY, 6"	EA	7
27	BLOWOFF HYDRANT	EA	2
28	FIRE HYDRANT RELOCATION	EA	1
29	MANHOLE, SANITARY SEWER, SW-301, 48"	EA	10
30	MANHOLE, STORM SEWER, SW-401, 48"	EA	4
31	MANHOLE, STORM SEWER, SW-401, 60"	EA	1
32	MANHOLE, STORM SEWER, SW-401, 84"	EA	2
33	INTAKE, SW-501	EA	4
34	INTAKE, SW-503	EA	3
35	INTAKE, SW-505	EA	4
36	INTAKE, SW-506	EA	4
37	PAVEMENT, 8" PCC W/ CD BASKETS	SY	1240
38	PAVEMENT, 7" PCC	SY	5442
39	PAVEMENT, 6" PCC TRAIL	SY	565
40	PAVEMENT, 8" PCC MAILBOX PAD	SY	12
41	PAVEMENT, 5" PCC MAILBOX PAD WALKWAY	SY	22
42	DETECTABLE WARNING PANELS	SF	125
43	PERMANENT ROAD CLOSURE, URBAN, SI-182	EA	1
44	SEEDING	LS	1
45	EROSION CONTROL	LS	1
46	TRAFFIC CONTROL	LS	1
47	TESTING	LS	1

UTILITY CONFLICT NOTES:

- UTILITY CONFLICTS MAY EXIST ACROSS THE SITE WITH NEW UTILITIES, GRADING, PAVING ETC. MOST UTILITY CONFLICTS HAVE BEEN CALLED OUT FOR CONTRACTOR CONVENIENCE.
- CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY CONFLICTS THAT ARE EITHER CALLED OUT ON THE PLANS OR THAT CAN BE SEEN ON THE PLANS BETWEEN AND EXISTING UTILITY AND PROPOSED CONSTRUCTION.
- CONTRACTOR SHALL USE O-RING GASKET JOINTS FOR STORM SEWER AND SANITARY SEWER AT CROSSINGS WITH WATER MAIN WHERE STORM OR SANITARY SEWER CROSSES OVER OR LESS THAN 18 INCHES BELOW WATER MAIN. O-RING GASKET JOINTS SHALL BE EXTENDED UNTIL WATER AND SEWER ARE AT LEAST 10 FEET APART.

WETLAND NOTES:

- A WETLAND INVESTIGATION REPORT WAS PREPARED BY IMPACT7G, INC (PROJECT #2014240.2). SAID REPORT DID NOT FIND ANY POTENTIAL WETLAND AREAS LOCATED WITHIN THE SUBJECT PROPERTY.
- THE WETLAND INVESTIGATION REPORT WAS SUBMITTED TO THE ARMY CORPS OF ENGINEERS. AFTER REVIEW, THE ARMY CORPS OF ENGINEERS ROCK ISLAND DISTRICT FOUND THAT THE PROPOSED PROJECT DOES NOT REQUIRE A DEPARTMENT OF THE ARMY SECTION 404 PERMIT.

AS-BUILT NOTES:

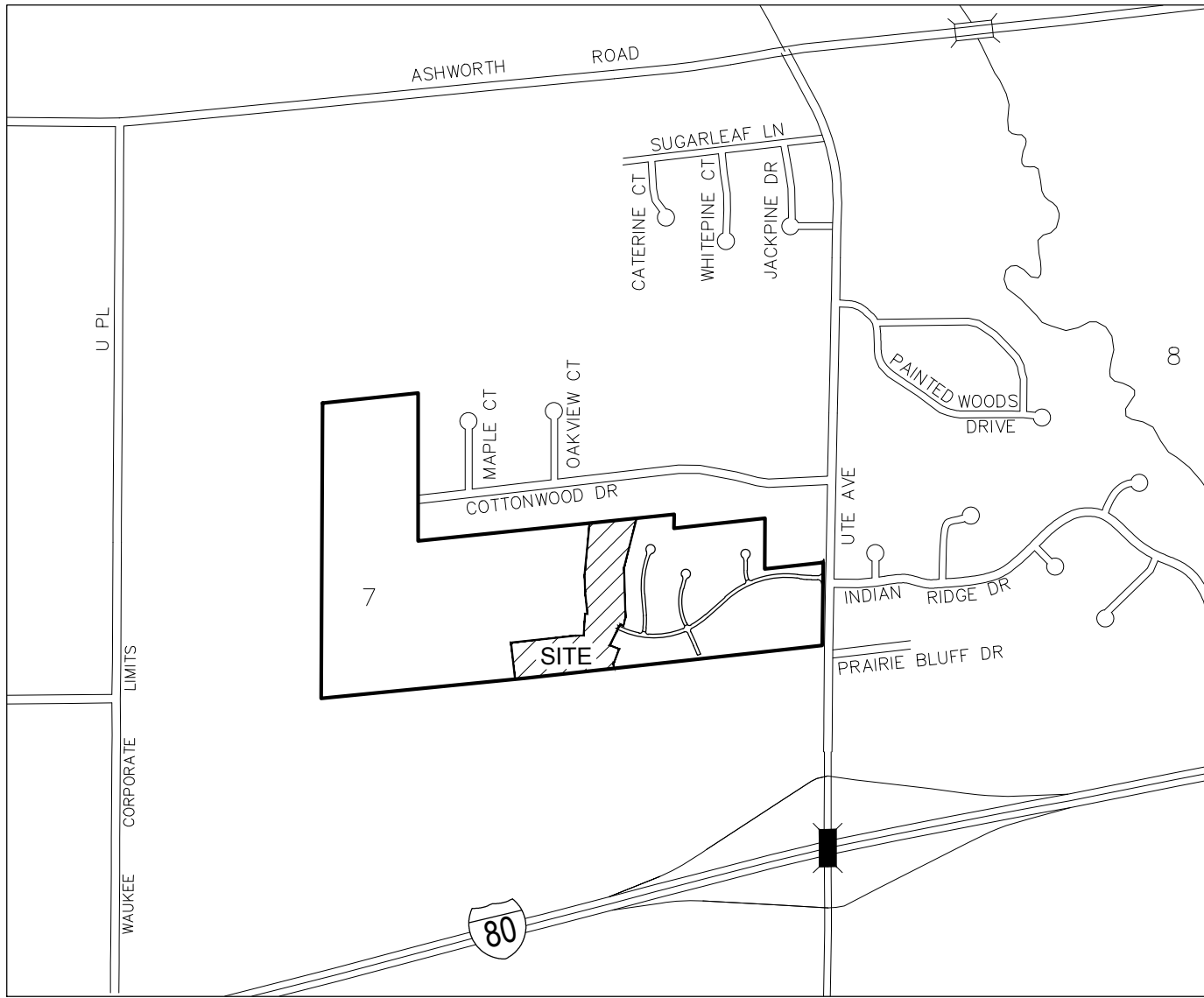
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INVOLVED WITH AS-BUILTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING BISHOP ENGINEERING WITH AS-BUILTS OF ALL UTILITIES, INCLUDING THE DEPTH AND LOCATION OF SERVICES.
- CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PROVIDING BISHOP ENGINEERING WITH A PROFESSIONALLY CERTIFIED AS-BUILT GRADING PLAN UPON COMPLETION OF ALL PROPOSED IMPROVEMENTS, INCLUDING ALL GRADING ACTIVITY.
- BISHOP ENGINEERING SHALL PROVIDE ALL SAID AS-BUILTS TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT, AS PROVIDED BY CONTRACTOR.

STAKING NOTES:

- CONTRACTOR IS REQUIRED TO HAVE ALL CONSTRUCTION STAKING DONE UNDER THE DIRECTION OF A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER, INCLUDING PEDESTRIAN FACILITIES.
- STAKING DOES NOT RELIEVE CONTRACTOR OF ULTIMATE RESPONSIBILITY TO CONSTRUCT THE PROJECT PER PLAN.

AS-BUILT DRAWINGS

AS-BUILT PLANS ARE COMPLETED FROM SURVEYED RIM AND INVERT/LOWLINE ELEVATIONS COMBINED WITH INFORMATION FROM THE CONTRACTOR. BISHOP ENGINEERING SHALL NOT BE HELD LIABLE FOR ANY CHANGES TO STRUCTURES SINCE THE DATE OF FIELD WORK OR CHANGES TO THE AS-BUILT DRAWINGS WITHOUT WRITTEN KNOWLEDGE. FURTHER SURVEY WORK AND FIELD VERIFICATION IS RECOMMENDED FOR ANY WORK TYING INTO AS-BUILT UTILITIES.



VICINITY MAP
SCALE: 1" = 1,500'

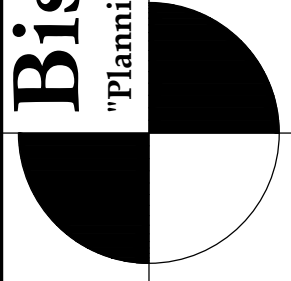
LEGEND:

— SAN —	SANITARY SEWER	⎓	ELECTRIC VAULT
— ST —	STORM SEWER	⚡	POWER POLE
— W —	WATER LINE	⚡	TRANSFORMER POLE
— G —	GAS LINE	☆	LIGHT POLE
— UE —	UNDERGROUND ELECTRIC	⎓	ELECTRIC JUNCTION BOX
— OE —	OVERHEAD ELECTRIC	⎓	ELECTRIC PANEL
— TELE —	TELEPHONE LINE	⎓	TRANSFORMER
— F/O —	FIBER OPTIC	⎓	GROUND LIGHT
— CATV —	CABLE TV	⎓	GUY WIRE
⎓	STORM MANHOLE	⎓	ELECTRIC HANDHOLE
⎓	CURB INTAKE	⎓	GAS METER
⎓	SURFACE INTAKE	⎓	GAS VALVE
⎓	FLARED END SECTION	⎓	AIR CONDITIONING UNIT
⎓	SANITARY MANHOLE	⎓	TELEPHONE RISER
⎓	CLEANOUT	⎓	TELEPHONE VAULT
⎓	FIRE HYDRANT	⎓	TELEPHONE MANHOLE
⎓	SPRINKLER	⎓	TRAFFIC SIGNAL MANHOLE
⎓	IRRIGATION CONTROL VALVE	⎓	FIBER OPTIC RISER
⎓	WATER MANHOLE	⎓	FIBER OPTIC FAULT
⎓	WELL	⎓	CABLE TV RISER
⎓	WATER VALVE	⎓	SIGN
⎓	WATER SHUT OFF	⎓	DENOTES NUMBER OF PARKING STALLS
⎓	YARD HYDRANT	⎓	PROPERTY CORNER - FOUND AS NOTED
⎓	ELECTRIC MANHOLE	⎓	PROPERTY CORNER- PLACED 3/4" IRON PIPE WITH YELLOW PLASTIC CAP ID #14775
⎓	ELECTRIC METER	⎓	SECTION CORNER - FOUND AS NOTED
⎓	ELECTRIC RISER		

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.

SIGNED: DAVID B. BENTZ, PE. 17143 DATE: DEC. 31, 2015
LICENSE RENEWAL DATE: DEC. 31, 2015
PAGES OR SHEETS COVERED BY THIS SEAL: C0.1 - C7.1

Bishop Engineering
"Planning Your Successful Development"



3501 104th Street
Des Moines, Iowa 50322-3825
Phone: (515) 276-0467 Fax: (515) 276-0217

Established 1959
Civil Engineering & Land Surveying

PAINTED WOODS WEST PLAT 2
WAUKEE, IA

COVER SHEET

REFERENCE NUMBER:

DRAWN BY:

JMR

CHECKED BY:

DB

REVISION DATE:

7/18/15 1ST CITY SET
10/7/15 2ND CITY SET
10/26/15 BID SET
2/29/16 FINAL PLANS
9/1/16 AS-BUILT

PROJECT NUMBER:

130444-2

SHEET NUMBER:

C0.1

M/LAND PROJECTS 2013130444.2 ABDWGC1 HYDRANT COVERAGE.DWT 2016 1:56:53 PM



PAINTED WOODS WEST PLAT 2

WAUKEE, IA

Bishop Engineering
"Planning Your Successful Development"

3501 104th Street
Des Moines, Iowa 50322-3825
Phone: (515)276-0467 Fax: (515)276-0217
Civil Engineering & Land Surveying Established 1959

REFERENCE NUMBER:

DRAWN BY:
JMR

CHECKED BY:
DB

REVISION DATE:
7/18/15 1ST CITY SET
10/7/15 2ND CITY SET
10/26/15 BID SET
2/29/16 FINAL PLANS

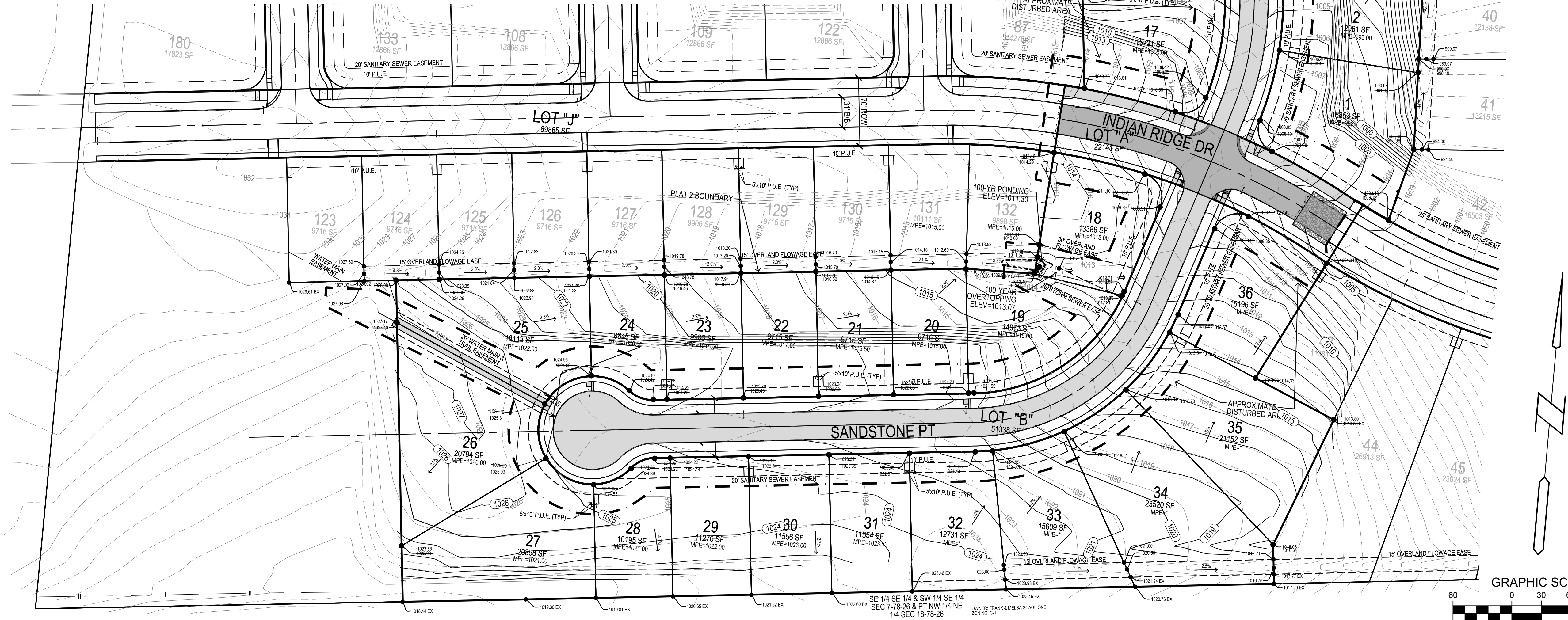
PROJECT NUMBER:

130444-2

SHEET NUMBER:

C1.1

HYDRANT COVERAGE



GRADING NOTES:

- EXISTING CONTOURS SHOWN ON PLANS ARE TAKEN FROM THE PROPOSED CONTOURS FROM PAINTED WOODS WEST PLAT 1. NO SURVEY WORK WAS COMPLETED PRIOR TO THIS PLAN SET.
- CONTRACTOR SHALL STRIP TOPSOIL AND GRADE ROADWAYS TO PROPOSED PROFILE ELEVATIONS.
- ALL FARM FENCING ON THE PROPERTY IS TO BE REMOVED BY THE CONTRACTOR.

TOPSOIL NOTES:

- STRIP AND STOCKPILE THE TOP 6" OF SOIL ON ALL DISTURBED AREAS.
- RESPREAD TOPSOIL TO A MINIMUM DEPTH OF 6" ON ALL GREEN (NON PAVED) AREAS. IMPORT TOPSOIL AS NECESSARY TO ACHIEVE A MINIMUM DEPTH OF 6".
- TOPSOIL SHALL BE FREE OF ALL ROCK AND DEBRIS LARGER THAN 3/4" IN SIZE.**
- TOPSOIL IS DEFINED AS: FERTILE, FRIABLE LOAM, CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH, FROM WELL DRAINED SITE FREE FROM FLOODING, NOT IN FROZEN OR MUDDY CONDITIONS, REASONABLE FREE FROM SUBSOIL, CLAY LUMPS, ROOTS, GRASS, WEEDS, STONES LARGER THAN 3/4 INCH IN DIAMETER, AND FOREIGN MATTER; ACIDITY RANGE (PH) OF 5.5 TO 7.5; CONTAINING MINIMUM 4 PERCENT AND MAXIMUM 20 PERCENT ORGANIC MATTER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL TOPSOIL REQUIREMENTS OF NPDES GENERAL PERMIT NO. 2 ARE MET.

MINIMUM PROTECTION ELEVATION NOTES:

- MINIMUM PROTECTION ELEVATIONS (MPE) ARE FOR REFERENCE ONLY. ALL LOTS, WITH OR WITHOUT MPE'S, SHALL BE REVIEWED FOR CONFORMANCE WITH THE STORMWATER MANAGEMENT PLAN AND GRADING PLAN.
- THE HOME BUILDER SHALL ENSURE ALL DRAINAGE SWALES ARE MAINTAINED AND/OR PROTECTED AS DESIGNED DURING HOME CONSTRUCTION AS INTENDED IN THE ORIGINAL DESIGN AND APPROVED BY THE CITY.
- HOME BUILDERS SHALL BE RESPONSIBLE FOR ENSURING POSITIVE DRAINAGE AWAY FROM HOUSE.
- LOTS WITH MPE'S NOTED WITH AN ASTERISK (*) DRAIN FROM REAR TO FRONT. HOME BUILDER SHALL BE RESPONSIBLE FOR THE CONVEYANCE OF ALL STORM WATER ACROSS SUBJECT LOT. DRAINAGE SHALL BE CONVEYED AROUND THE SIDES OF THE HOUSE AND TO THE STREET.
- MPE'S LISTED DO NOT ACCOUNT FOR DRAINAGE THROUGH SIDE YARDS INCLUDING THE OVERTOPPING OF STREET LOW POINTS. THE HOME BUILDER SHALL BE RESPONSIBLE FOR GRADING THE SIDE YARD TO ACCOUNT FOR THE VARYING DEPTH OF FLOW AND ENSURING FLOOD PROTECTION AND POSITIVE DRAINAGE AWAY FROM THE HOUSE.
- MPE'S PROVIDED ARE BASED ON PROPOSED CONTOURS AND NOT ACTUAL AS-BUILT GRADES. HOME BUILDERS MUST ADJUST MPE'S ACCORDINGLY AND GRADE LOT TO HAVE POSITIVE DRAINAGE TO PROPERTY LINES AND PUBLIC WAYS.
- LOTS LEFT LOW ON GRADING PLAN ARE INTENDED FOR BASEMENT DIRT TO BE USED AS FILL AROUND HOUSE TO ASSURE POSITIVE DRAINAGE AWAY FROM HOUSE.
- MPE'S LISTED DO NOT ACCOUNT FOR DEPTH OF SANITARY SERVICE. THE HOME BUILDER SHALL BE RESPONSIBLE FOR VERIFYING THE DEPTH OF THE SERVICES AND SET THE BASEMENT ELEVATION ACCORDINGLY.
- LOTS WITH MULTIPLE MPE'S ARE NOTED WITH THE DIRECTION THE MPE APPLIES IN BRACKETS. FOR EXAMPLE [N] APPLIES TO THE NORTH SIDE OF THE LOT AND [S] APPLIES TO THE SOUTH SIDE OF THE LOT.

GRADING LEGEND:

- | | |
|---------------------------|---------------|
| EXISTING CONTOUR | --- |
| PROPOSED CONTOUR | --- |
| AS-BUILT CONTOUR | --- |
| FINISHED GROUND ELEVATION | 150.50 |
| TOP OF CURB ELEVATION | 150.50T/C |
| GUTTER ELEVATION | 150.50G |
| AS-BUILT ELEVATION | 150.50-150.55 |
| OVERFLOW DRAINAGE PATH | → |

PAINTED WOODS WEST PLAT 2
WAUKEE, IA

REFERENCE NUMBER:

DRAWN BY:

JMR

CHECKED BY:

DB

REVISION DATE:

7/18/15 1ST CITY SET
10/7/15 2ND CITY SET
10/26/15 BID SET
2/29/16 FINAL PLANS
9/1/16 AS-BUILT

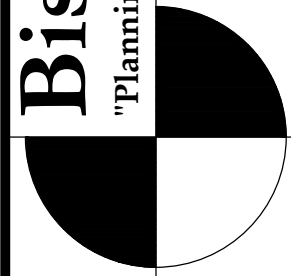
PROJECT NUMBER:

130444-2

SHEET NUMBER:

C2.1

Bishop Engineering
"Planning Your Successful Development"



3501 104th Street

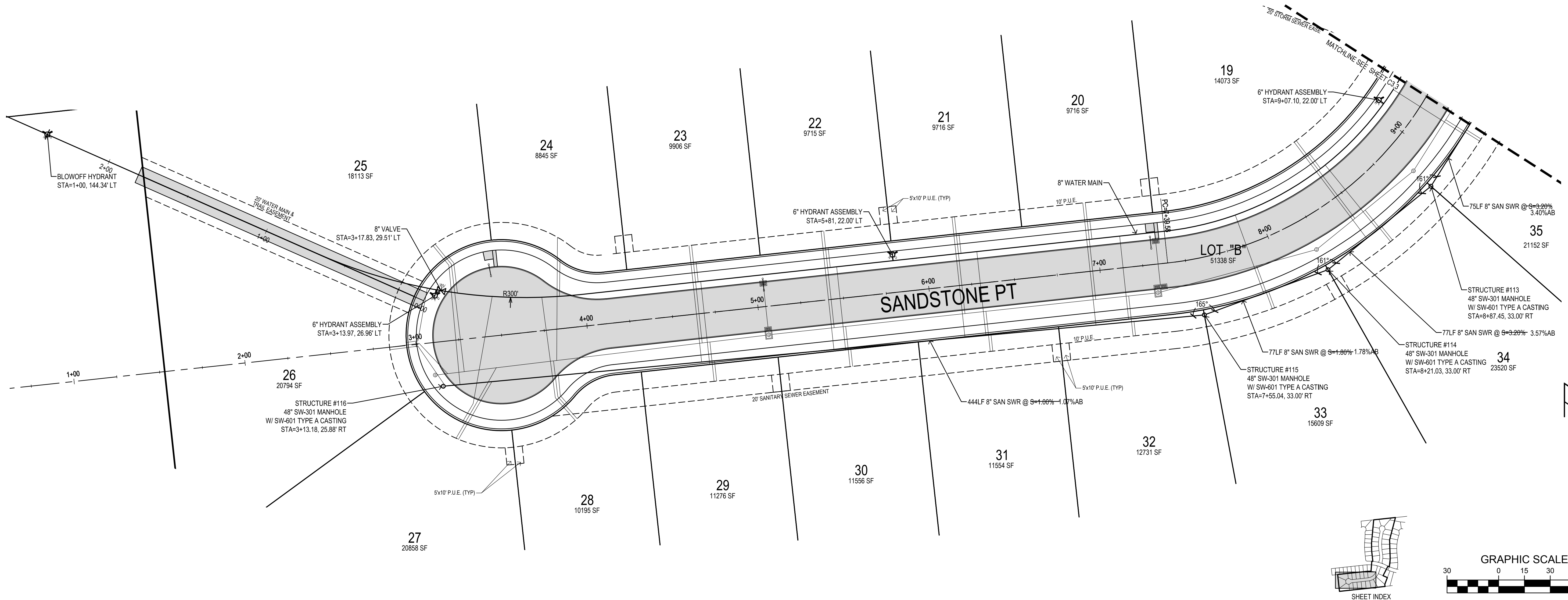
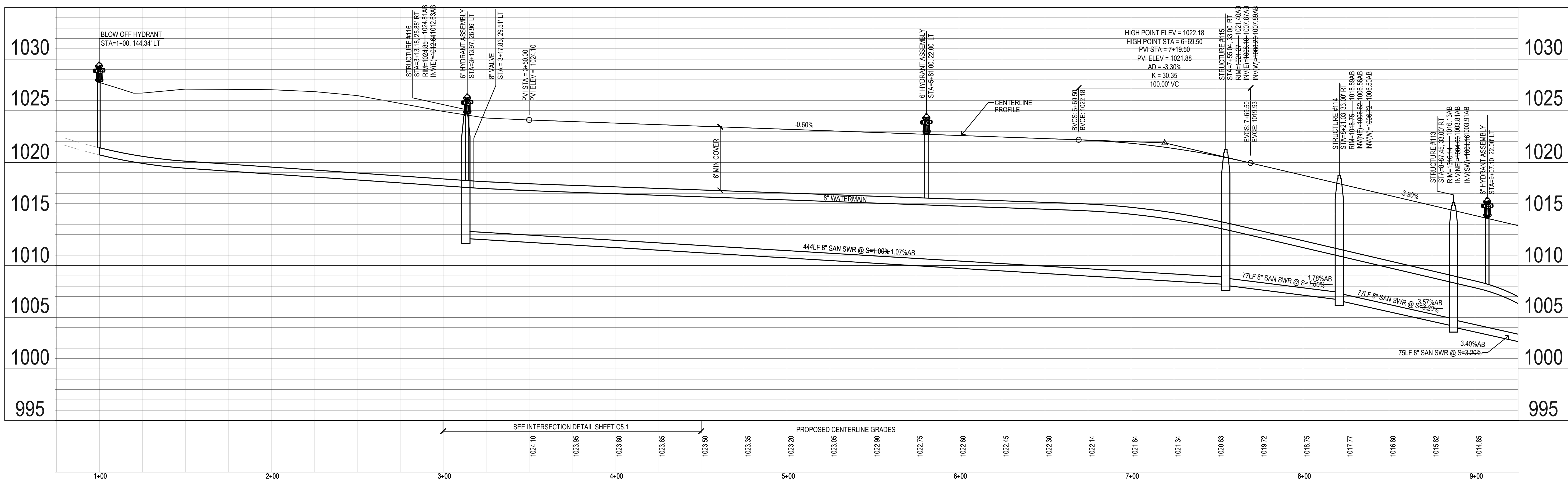
Des Moines, Iowa 50322-3825

Phone: (515)276-0467 Fax: (515)276-0217

Civil Engineering & Land Surveying

Established 1959

GRADING PLAN



PAINTED WOODS WEST PLAT 2

WAUKEE, IA

SANITARY & WATER MAIN

Bishop Engineering
"Planning Your Successful Development"

3501 104th Street
Des Moines, Iowa 50322-3825
Phone: (515)276-0467 Fax: (515)276-0217
Civil Engineering & Land Surveying Established 1959

REFERENCE NUMBER:

DRAWN BY:
JMR

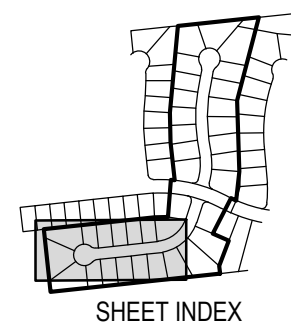
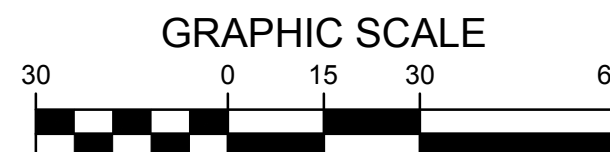
CHECKED BY:
DB

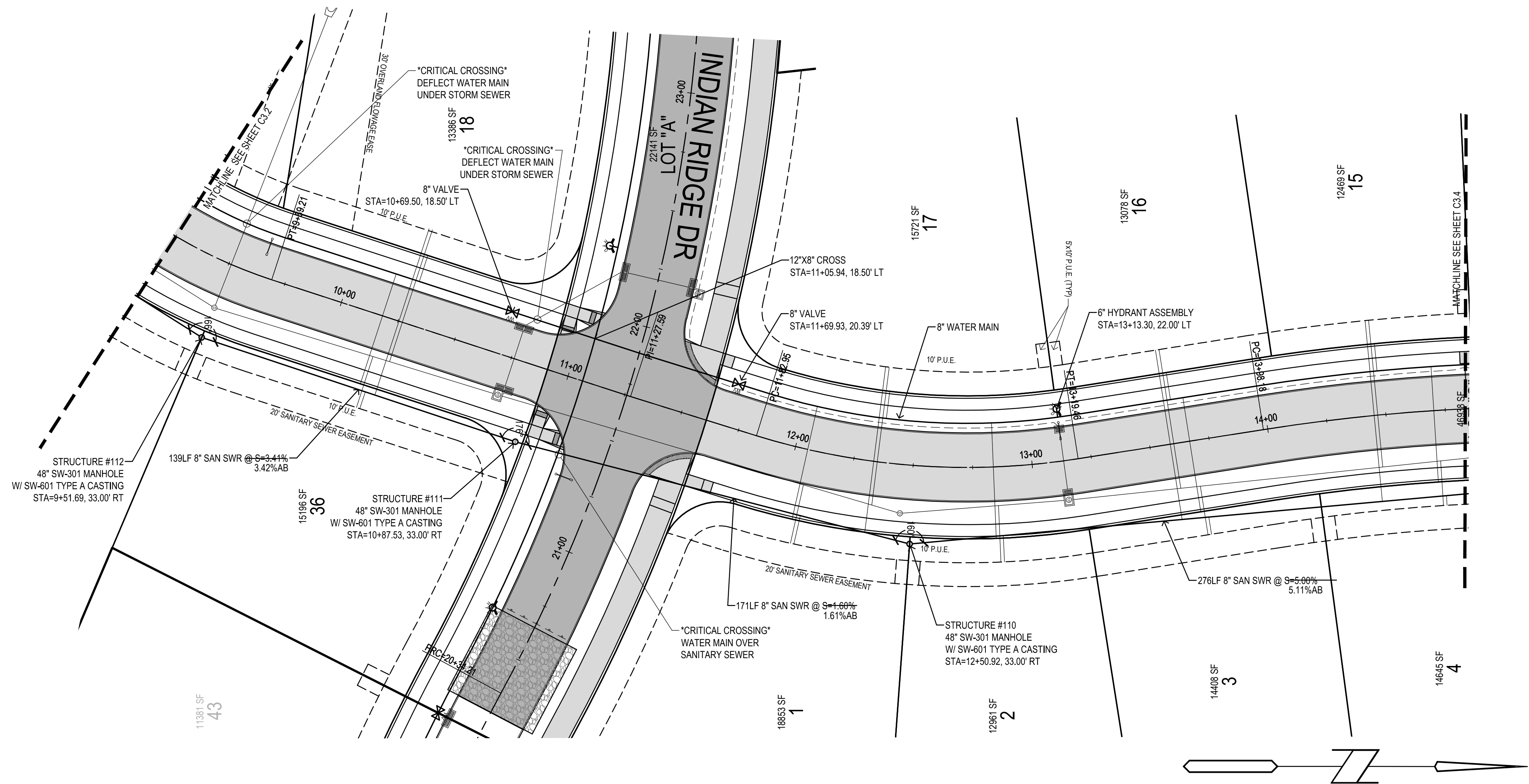
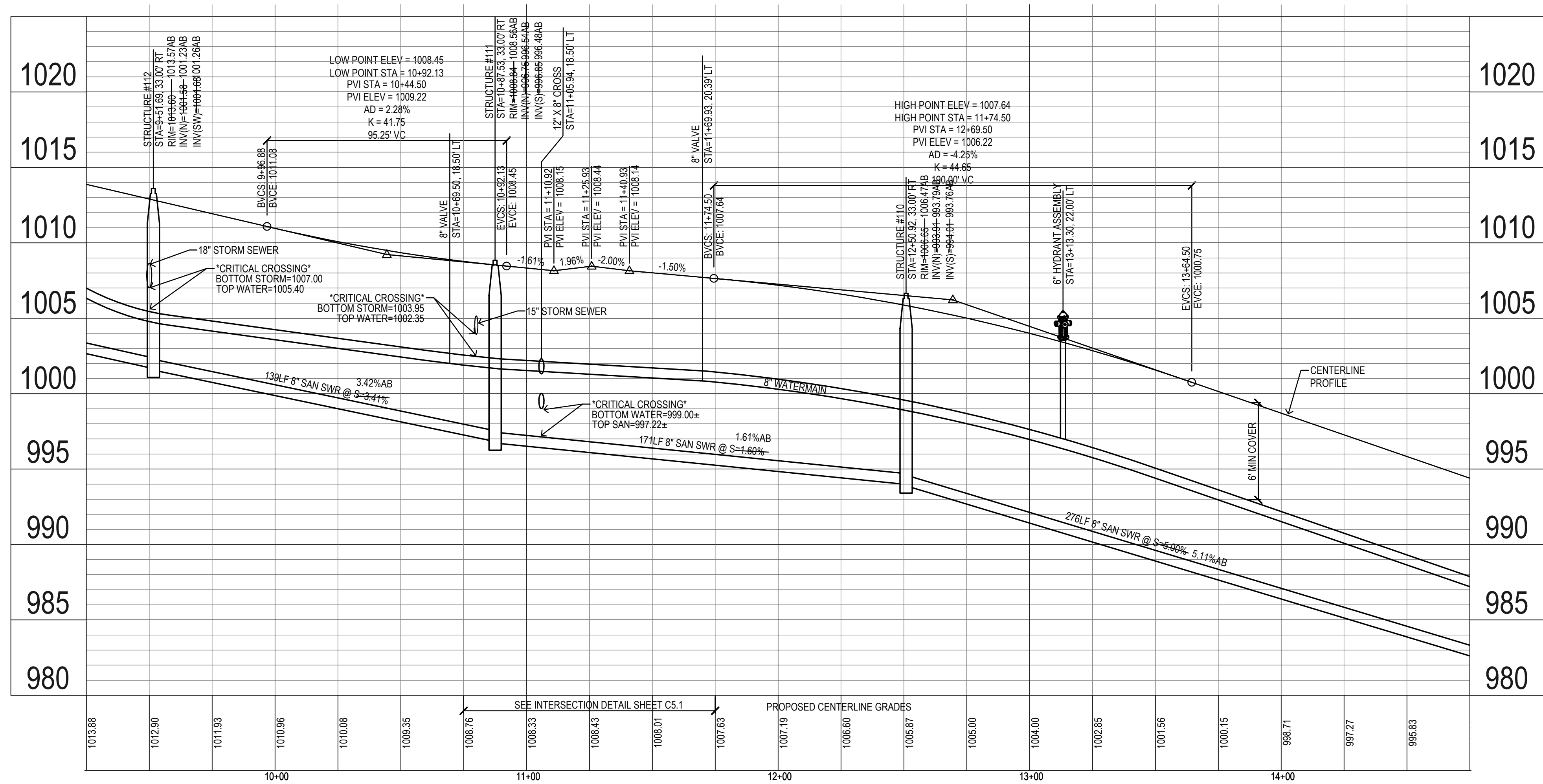
REVISION DATE:
7/18/15 1ST CITY SET
10/7/15 2ND CITY SET
10/26/15 BID SET
2/29/16 FINAL PLANS
9/1/16 AS-BUILT

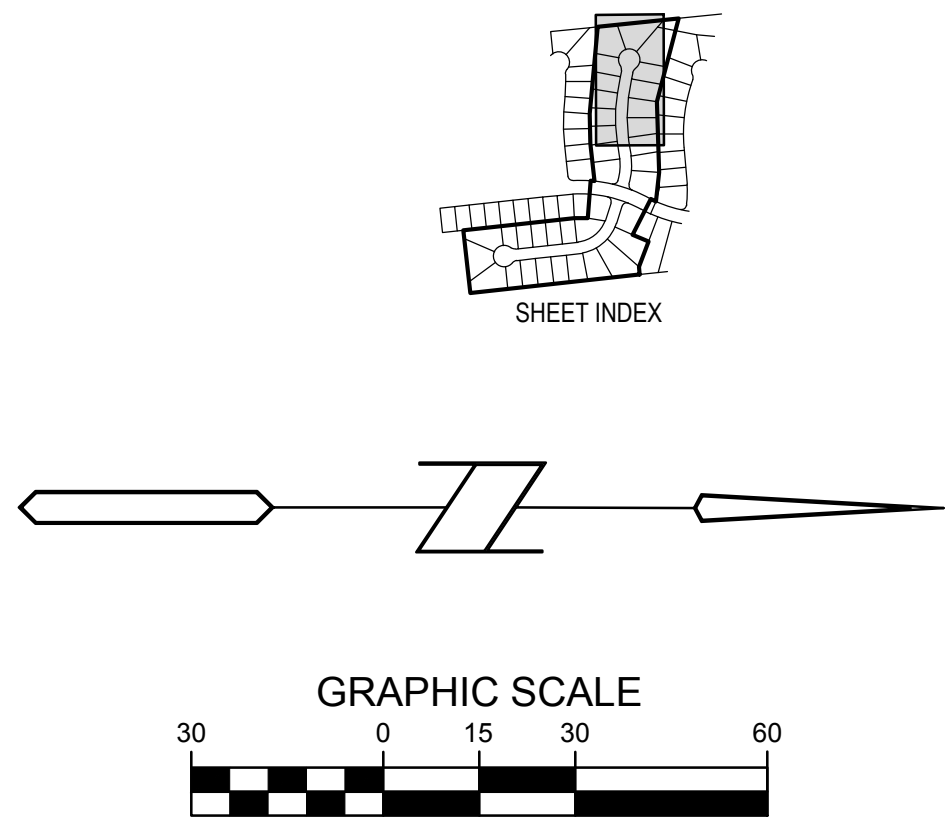
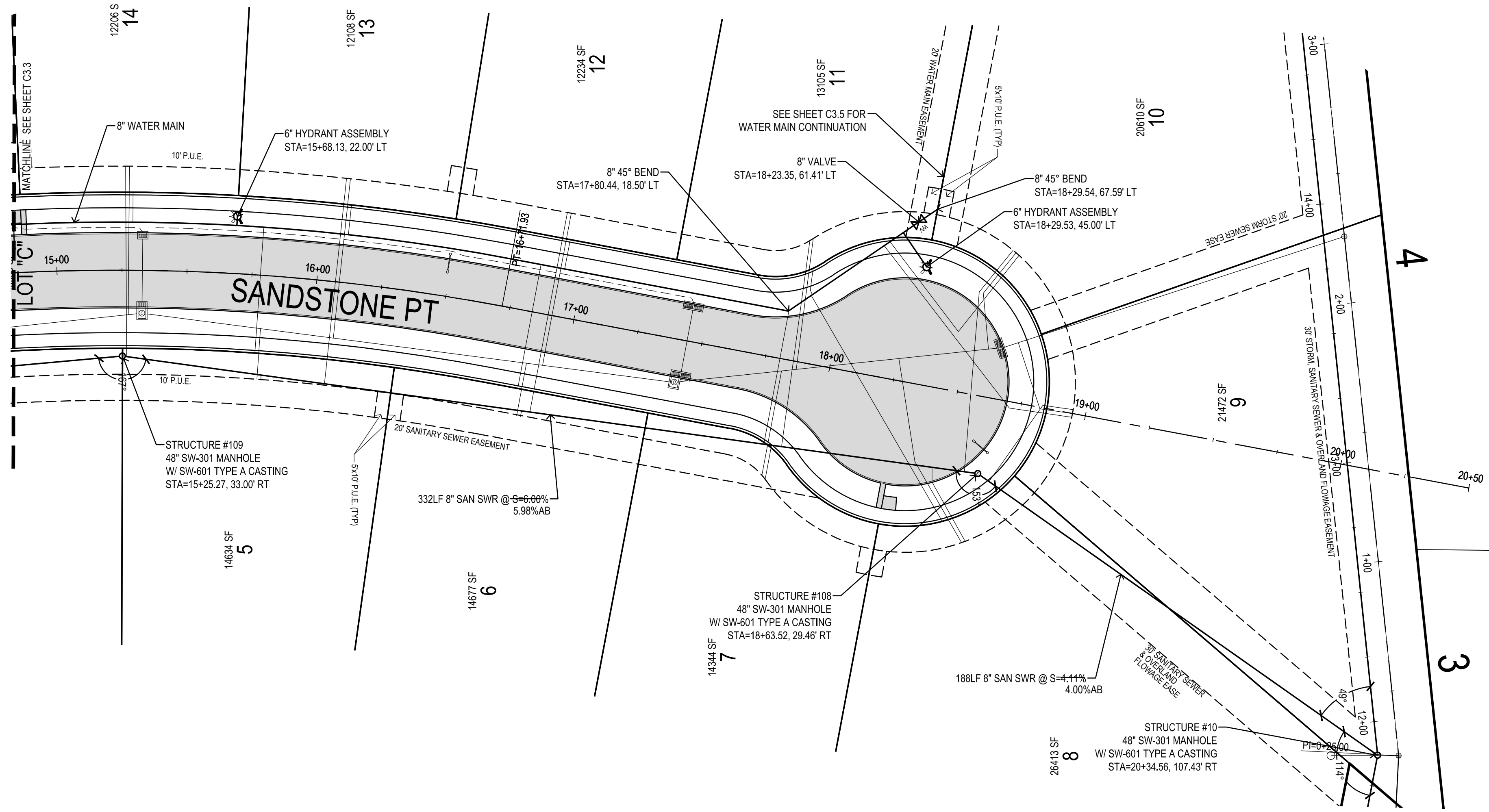
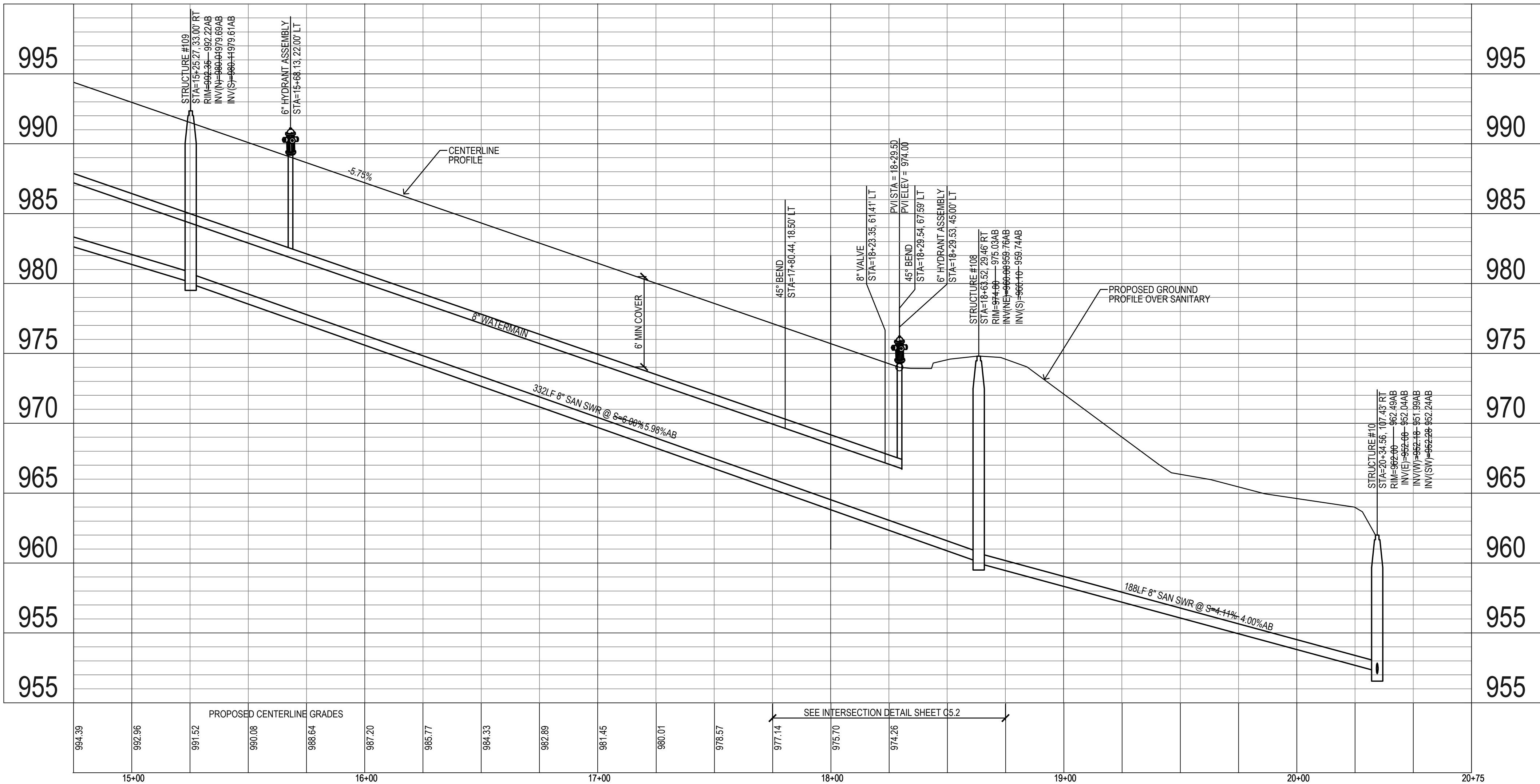
PROJECT NUMBER:
130444-2

SHEET NUMBER:

C3.2







PAINTED WOODS WEST PLAT 2

WAUKEE, IA

SANITARY & WATER MAIN

Bishop Engineering
"Planning Your Successful Development"

3501 104th Street
Des Moines, Iowa 50322-3825
Phone: (515)276-0467 Fax: (515)276-0217
Civil Engineering & Land Surveying Established 1959

REFERENCE NUMBER:

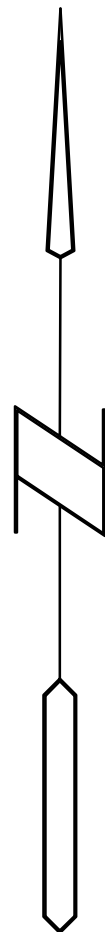
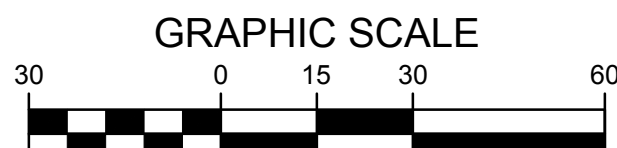
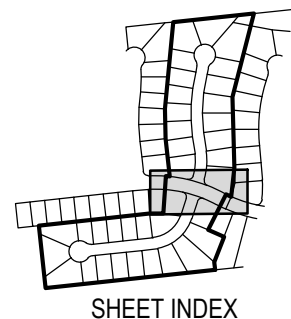
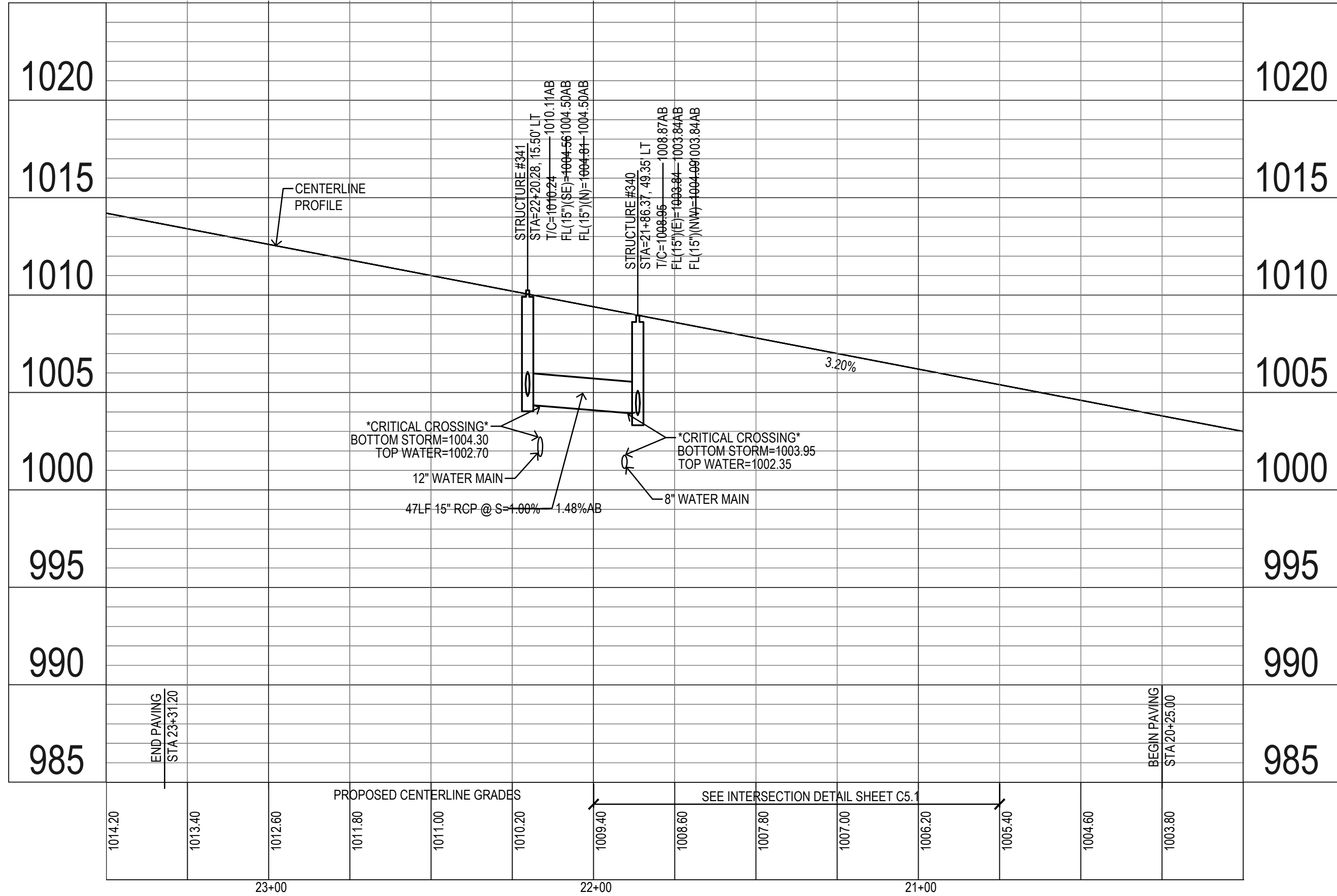
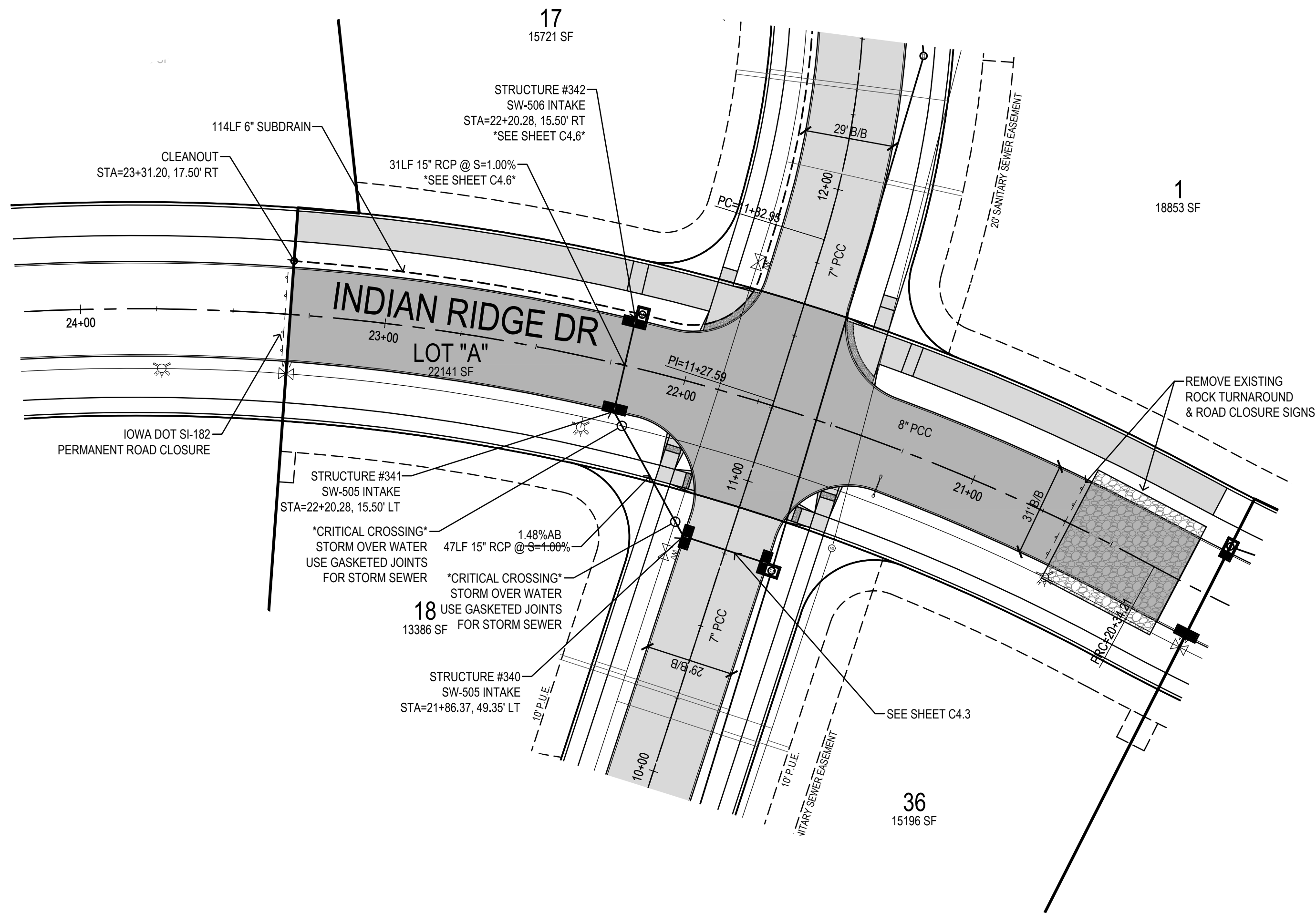
DRAWN BY:
JMR

CHECKED BY:
DB

REVISION DATE:
7/18/15 1ST CITY SET
10/7/15 2ND CITY SET
10/26/15 BID SET
2/29/16 FINAL PLANS
9/1/16 AS-BUILT

PROJECT NUMBER:
130444-2

SHEET NUMBER:
C3.4



PAINTED WOODS WEST PLAT 2
WAUKEE, IA

STORM & PAVING

Bishop Engineering
"Planning Your Successful Development"

3501 104th Street
Des Moines, Iowa 50322-3825
Phone: (515)276-0467 Fax: (515)276-0217
Civil Engineering & Land Surveying Established 1959

REFERENCE NUMBER:

DRAWN BY:
JMR

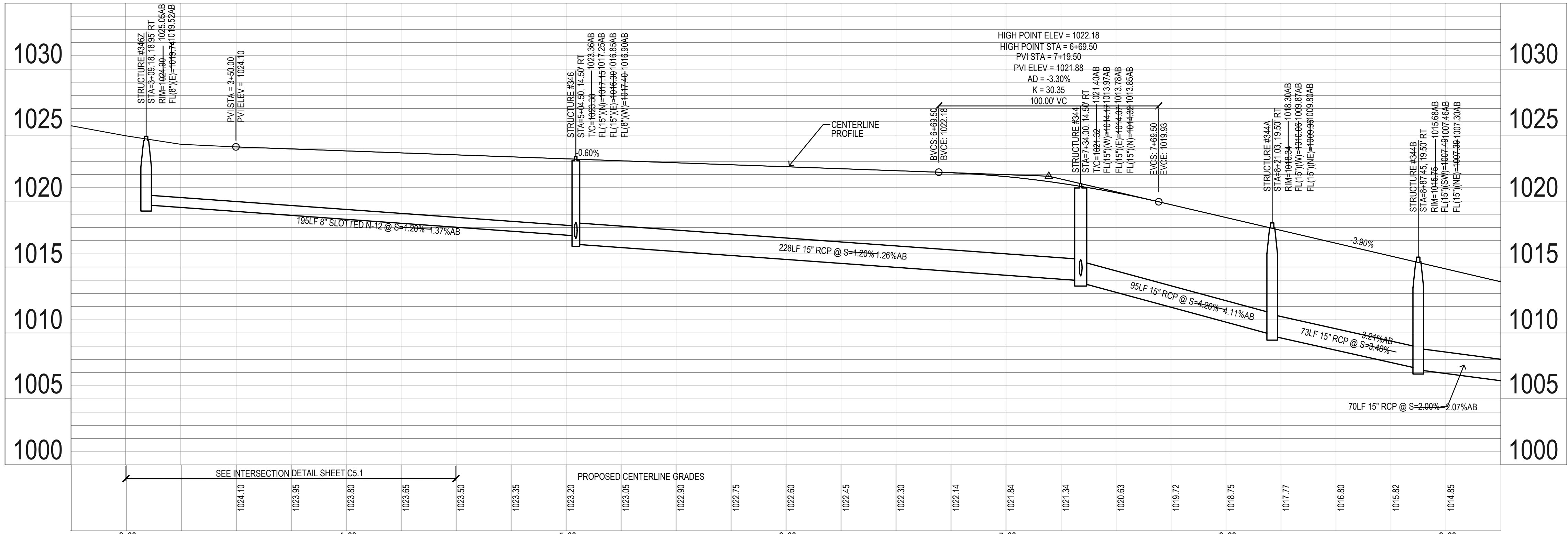
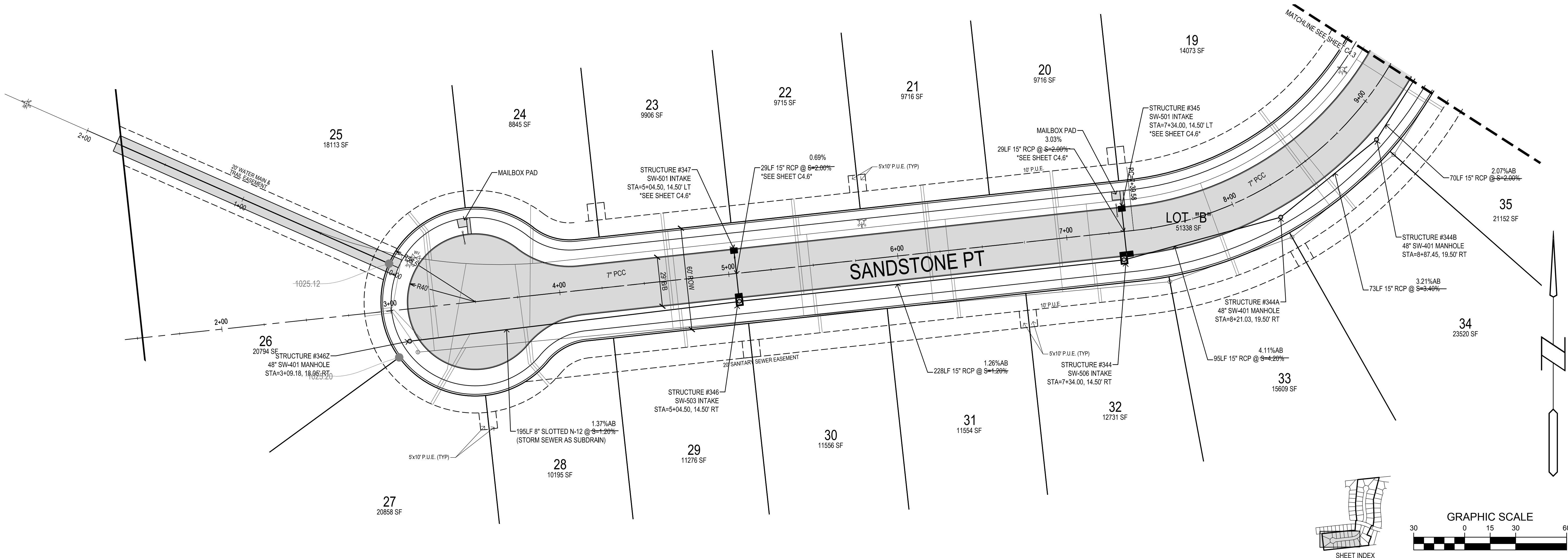
CHECKED BY:
DB

REVISION DATE:
7/18/15 1ST CITY SET
10/7/15 2ND CITY SET
10/26/15 BID SET
2/29/16 FINAL PLANS
9/1/16 AS-BUILT

PROJECT NUMBER:
130444-2

SHEET NUMBER:
C4.1

9/1/2016 2:03:32 PM M:\LAND PROJECTS 2013\130444-2 ABDW\GIC4 STORM & PAVING.DWG



PAINTED WOODS WEST PLAT 2

WAUKEE, IA

STORM & PAVING

Bishop Engineering
"Planning Your Successful Development"

3501 104th Street
Des Moines, Iowa 50322-3825
Phone: (515) 276-0467 Fax: (515) 276-0217
Civil Engineering & Land Surveying Established 1959

REFERENCE NUMBER:

DRAWN BY:

CHECKED BY:

REVISION DATE:
7/18/15 1ST CITY SET
10/7/15 2ND CITY SET
10/26/15 BID SET
2/29/16 FINAL PLANS
9/1/16 AS-BUILT

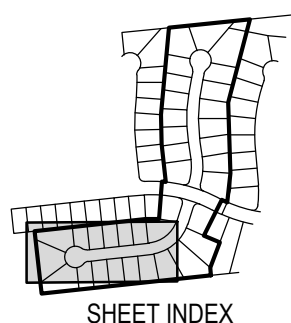
PROJECT NUMBER:

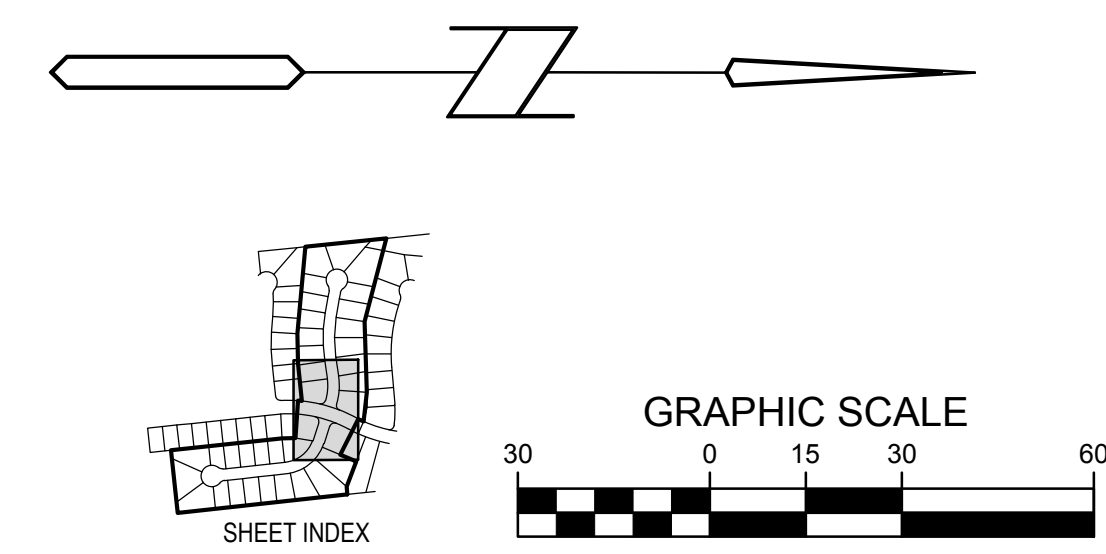
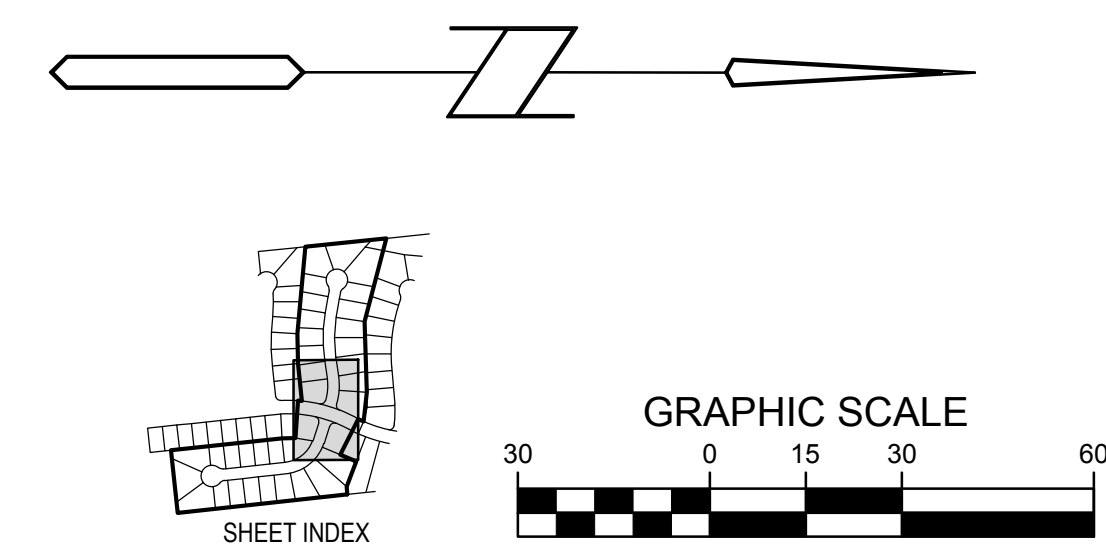
130444-2

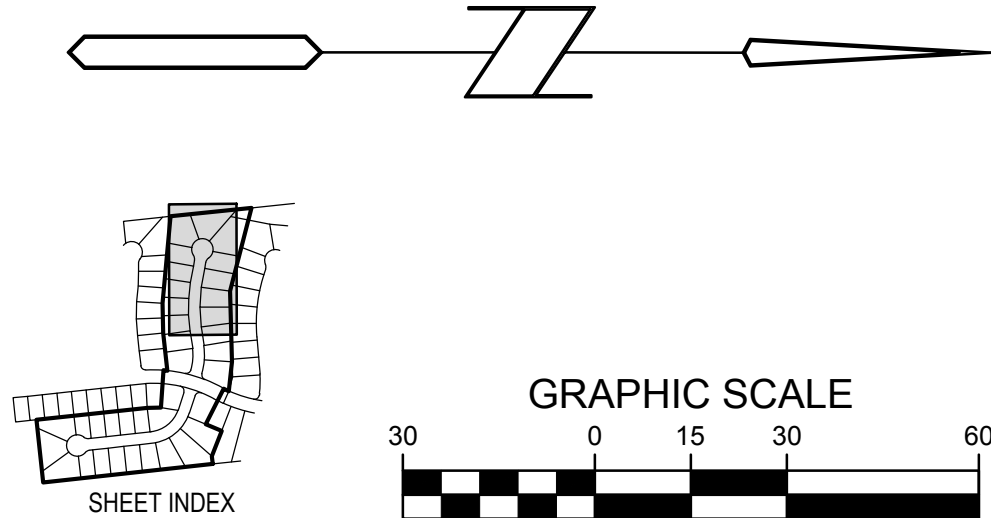
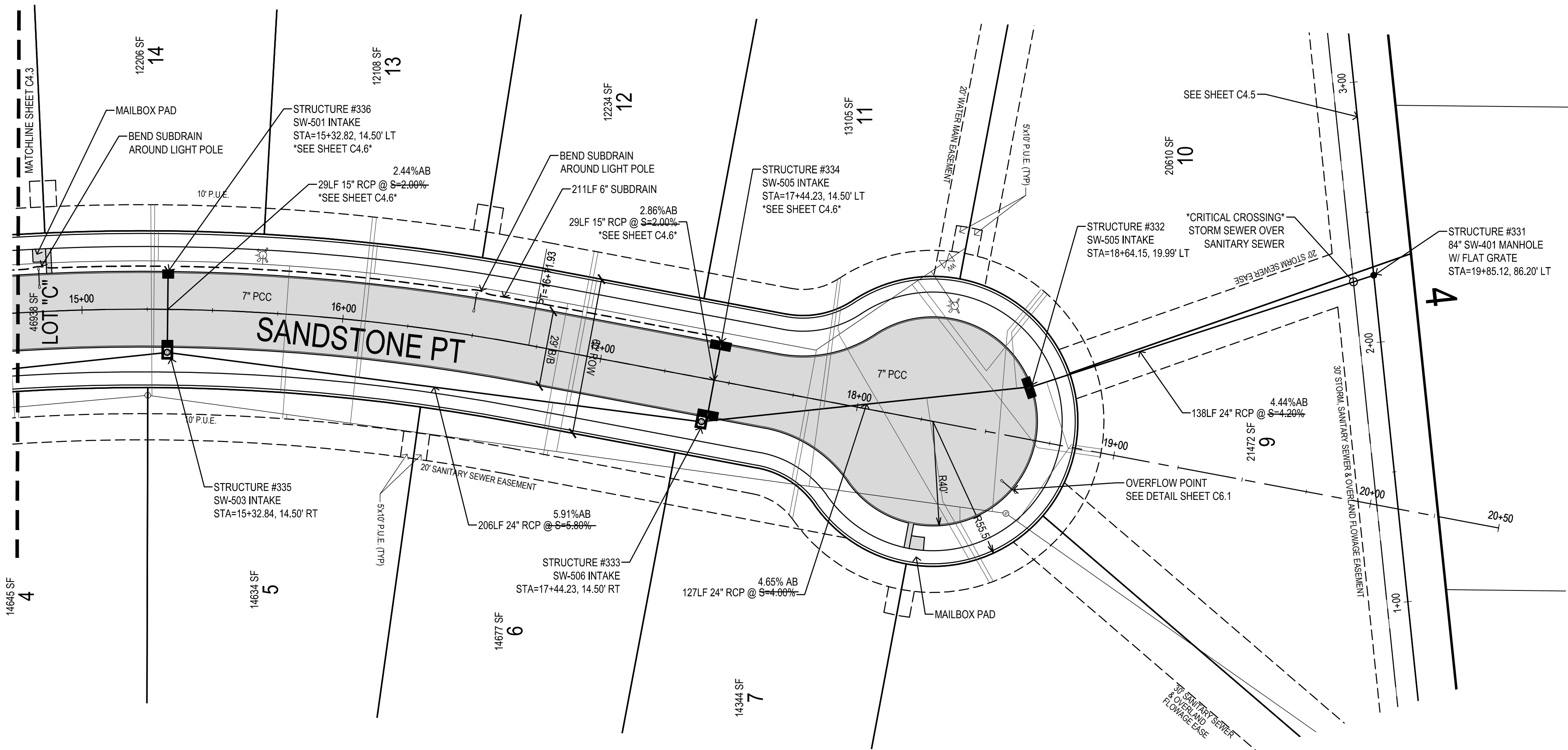
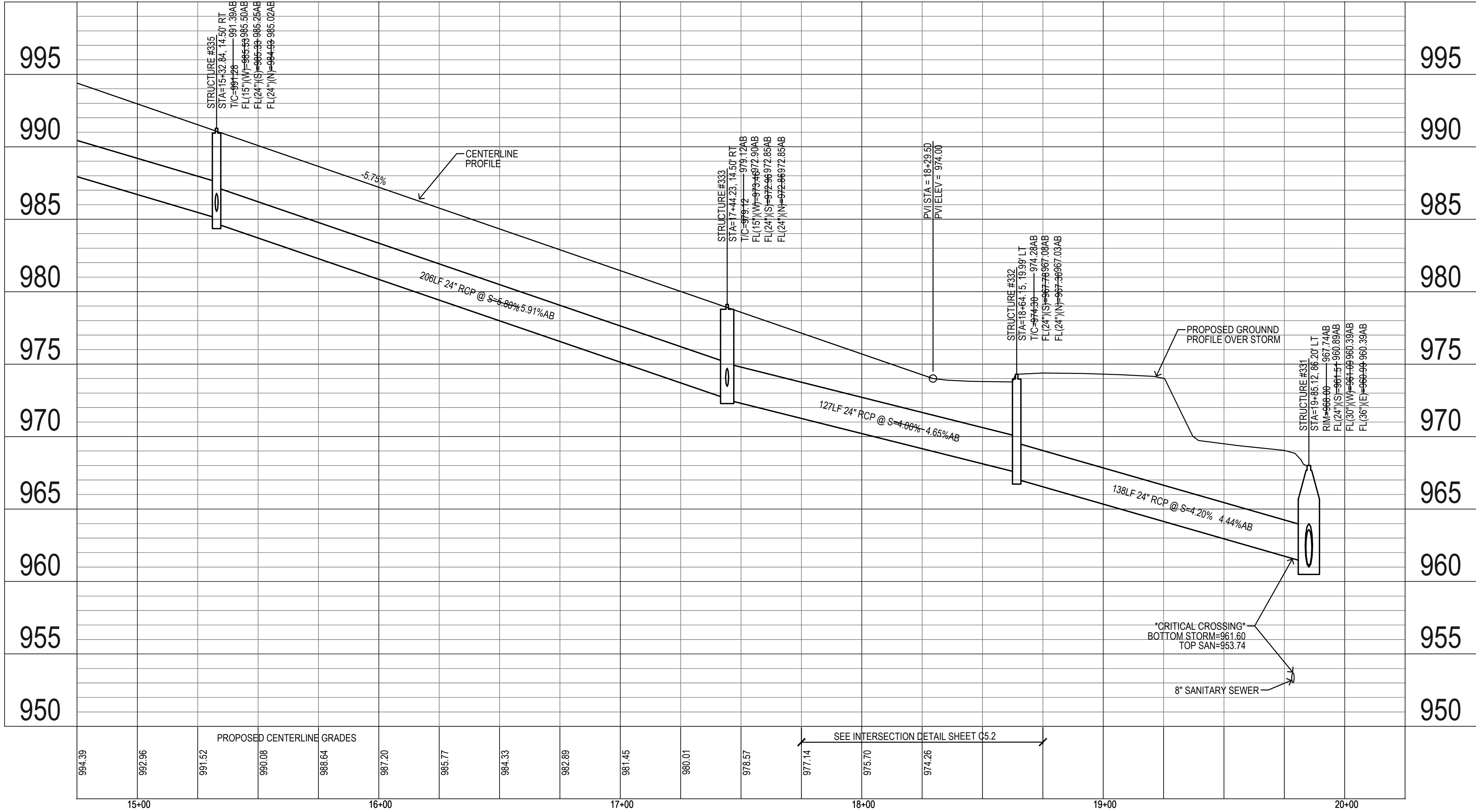
SHEET NUMBER:

C4.2

GRAPHIC SCALE







PAINTED WOODS WEST PLAT 2
WAUKEE, IA

STORM & PAVING

Bishop Engineering
"Planning Your Successful Development"

3501 104th Street
Des Moines, Iowa 50322-3825
Phone: (515)276-0467 Fax: (515)276-0217
Civil Engineering & Land Surveying Established 1959

REFERENCE NUMBER:

DRAWN BY:
JMR

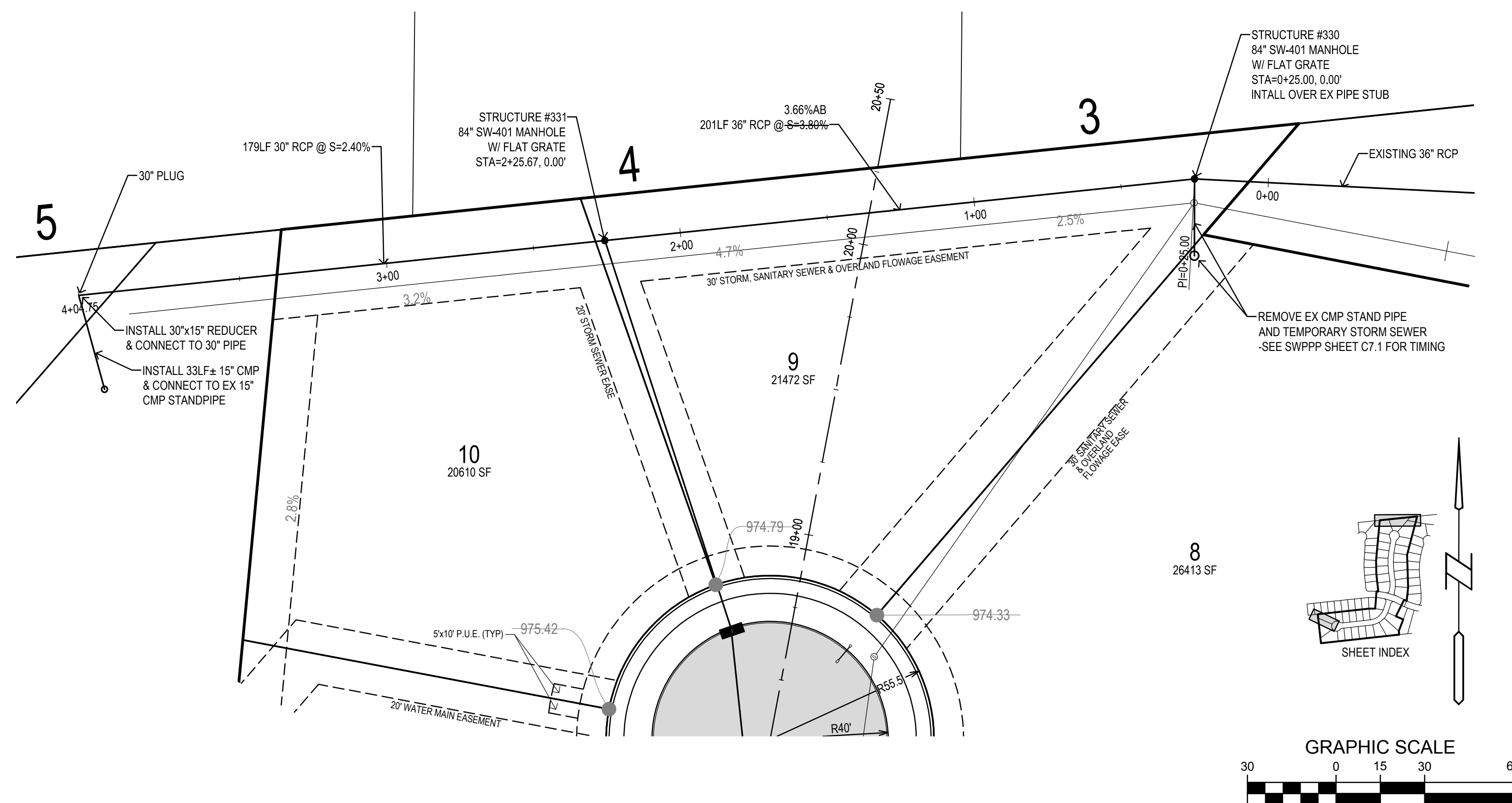
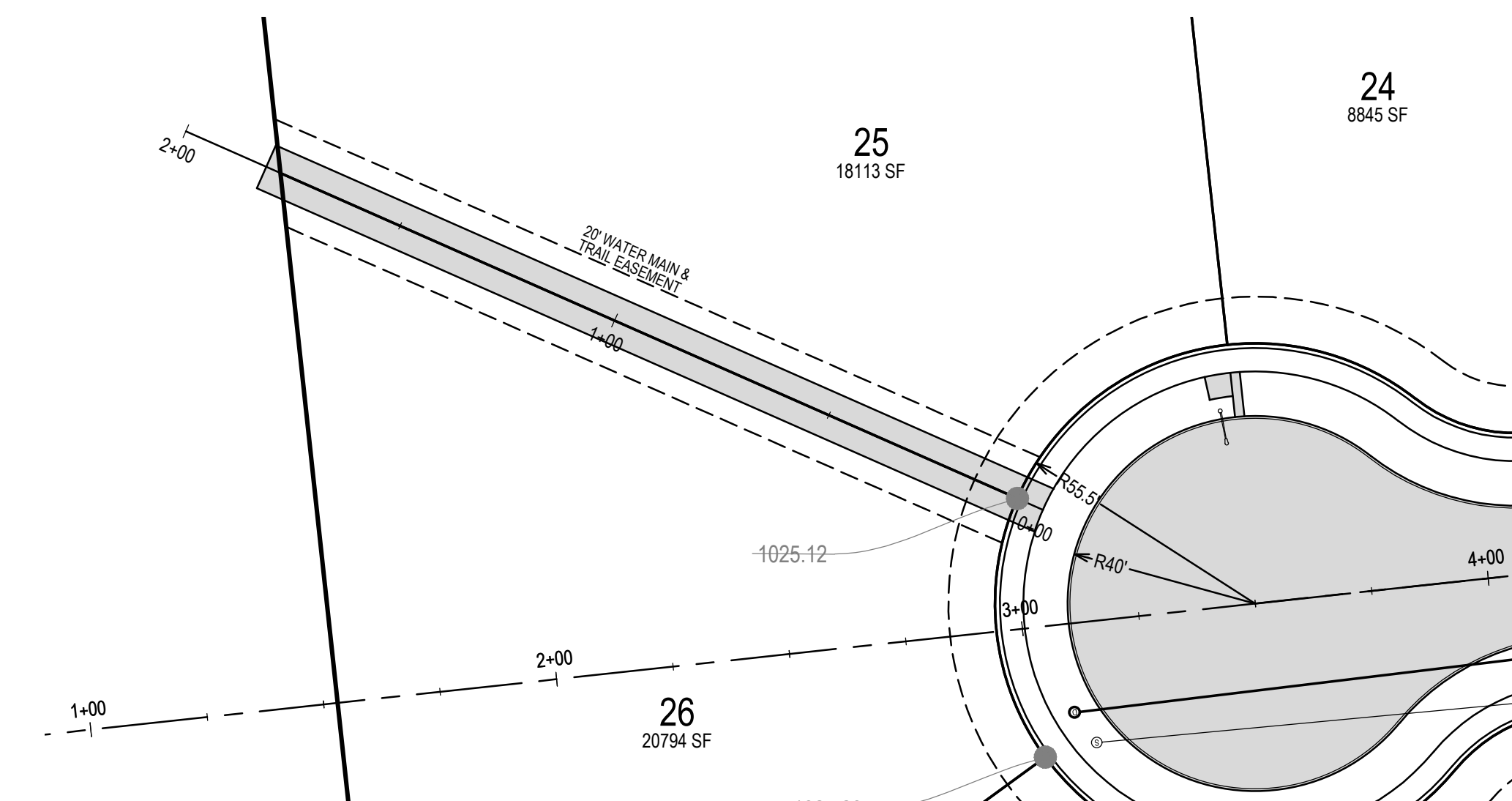
CHECKED BY:
DB

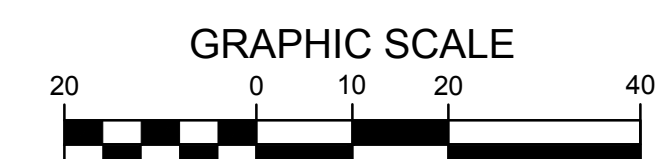
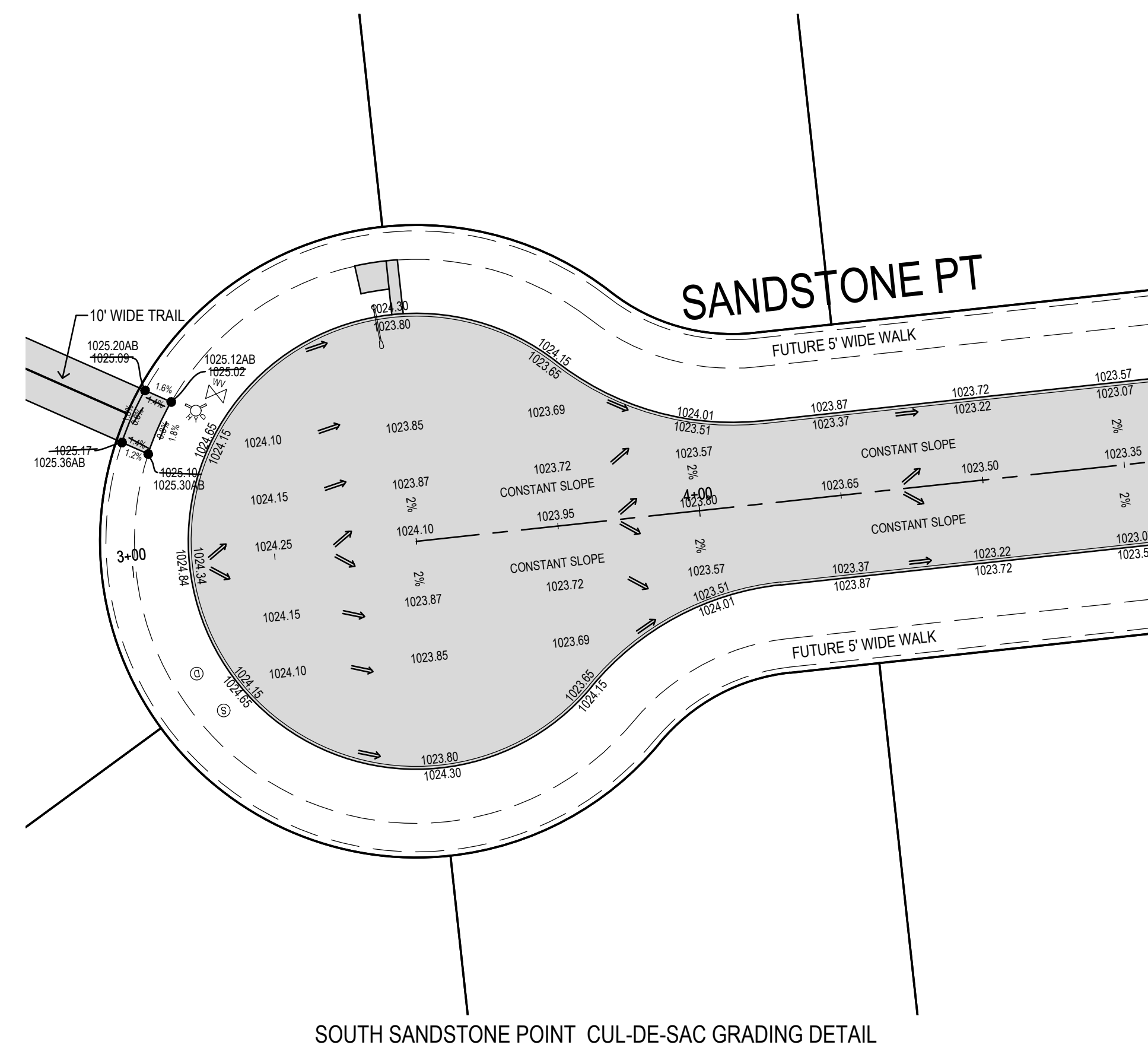
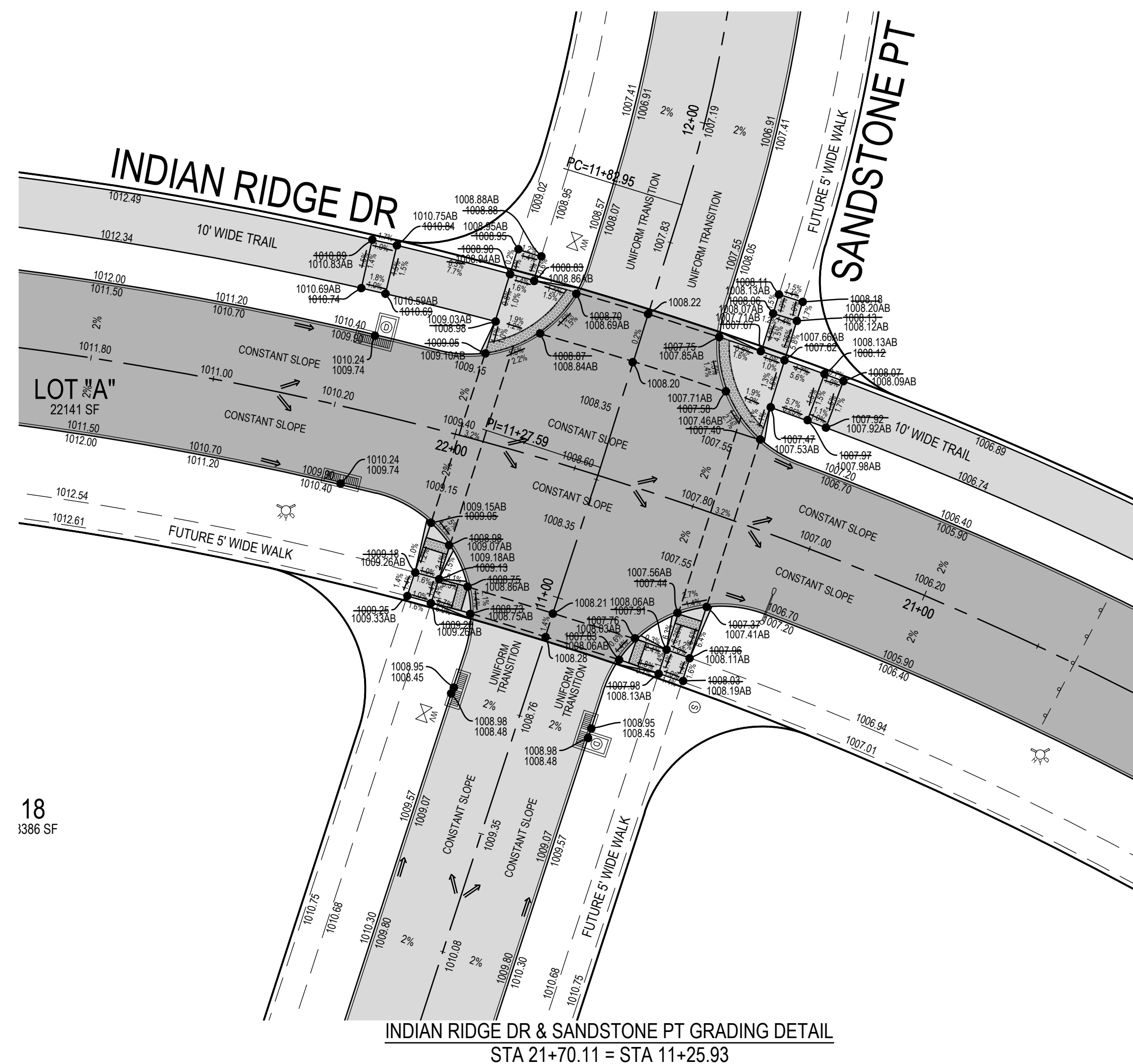
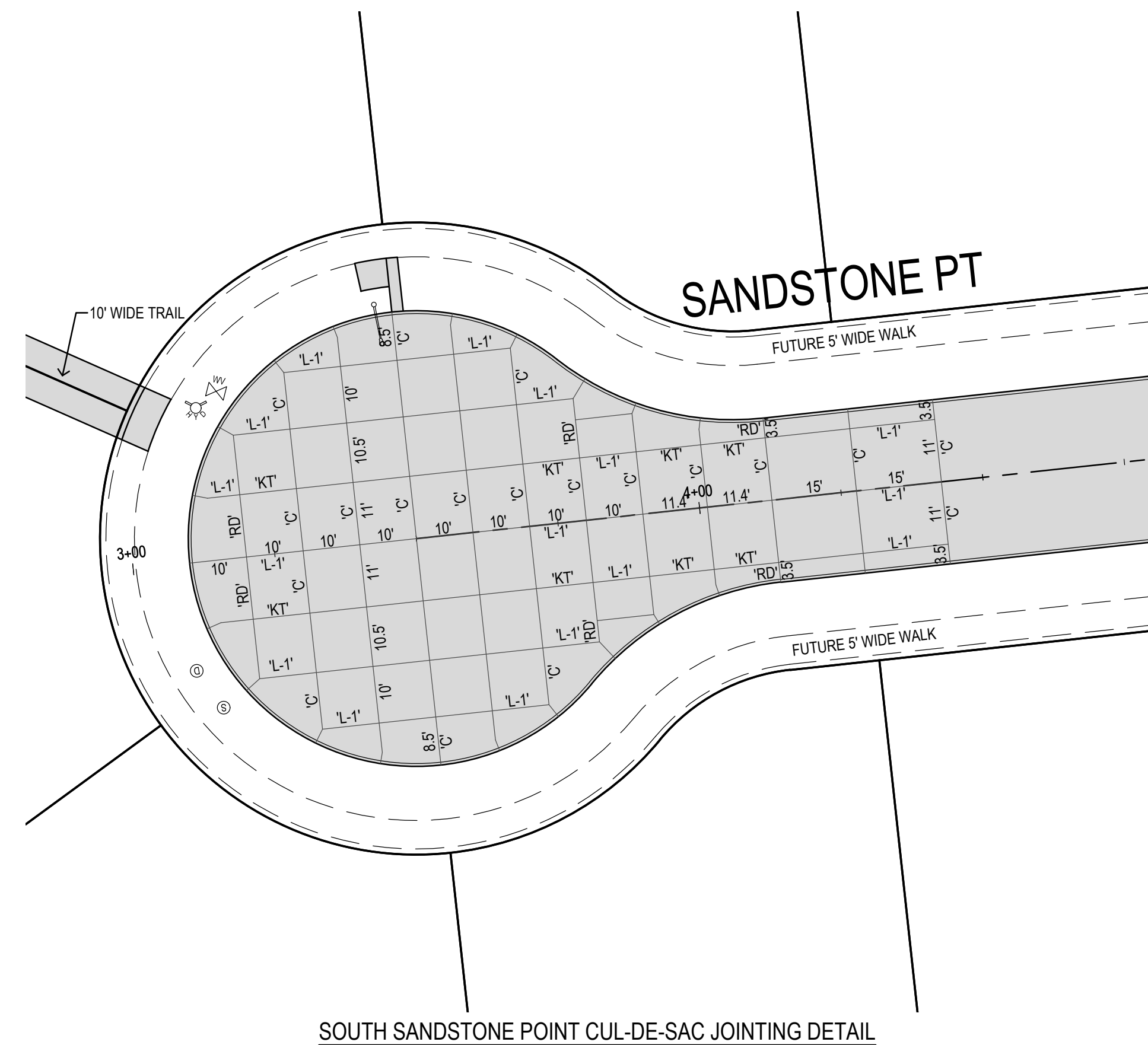
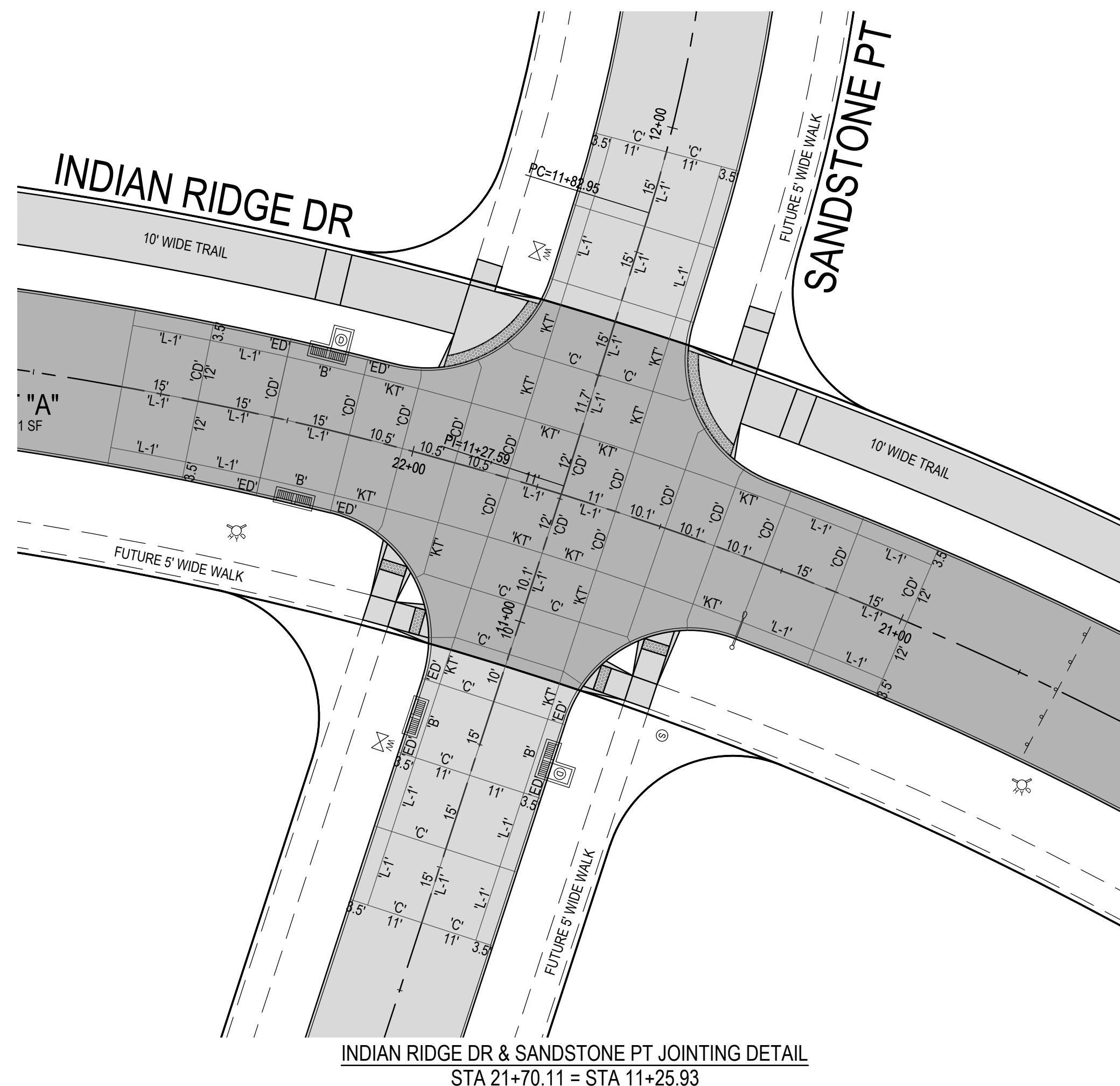
REVISION DATE:
7/18/15 1ST CITY SET
10/7/15 2ND CITY SET
10/26/15 BID SET
2/29/16 FINAL PLANS
9/1/16 AS-BUILT

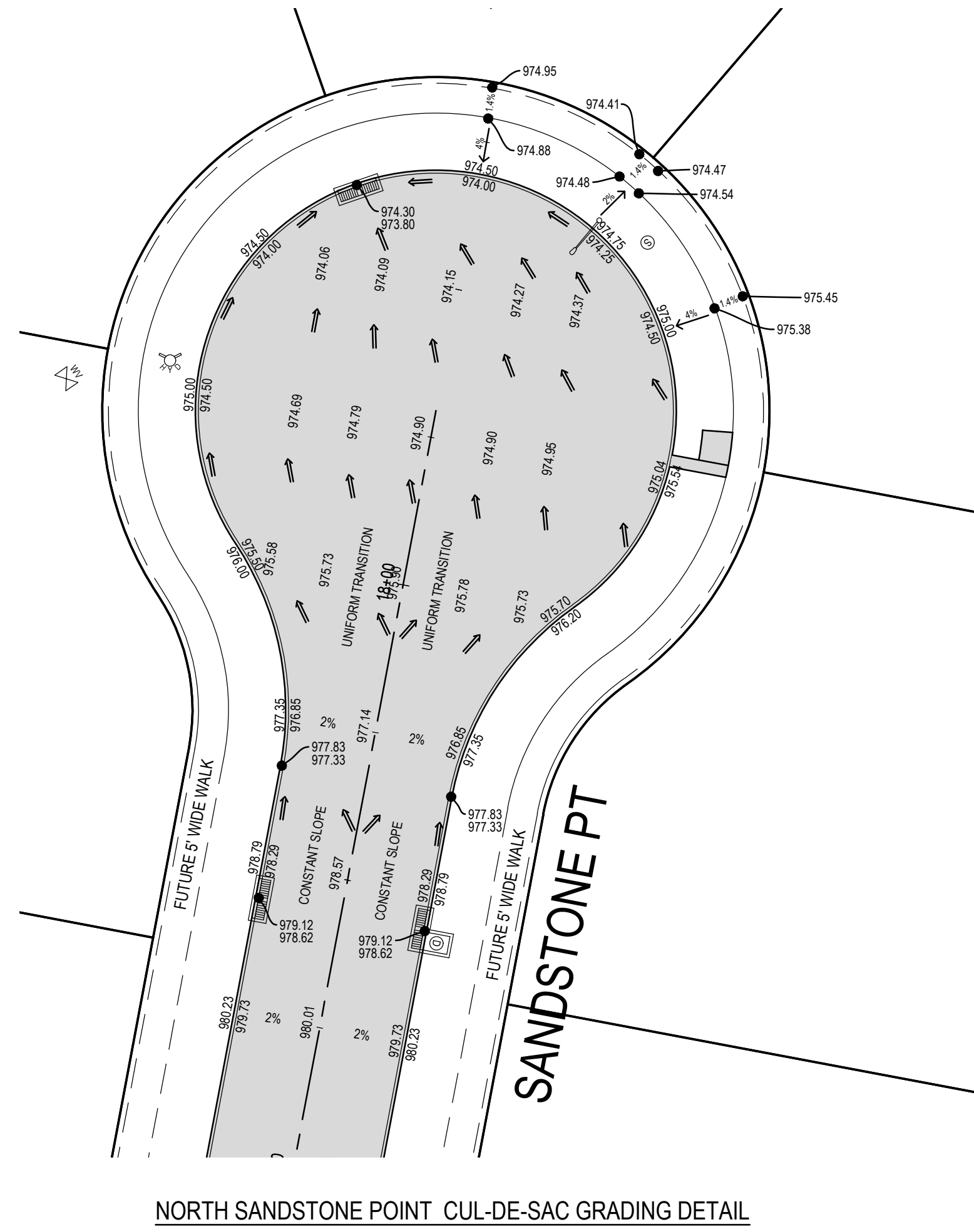
PROJECT NUMBER:
130444-2

SHEET NUMBER:

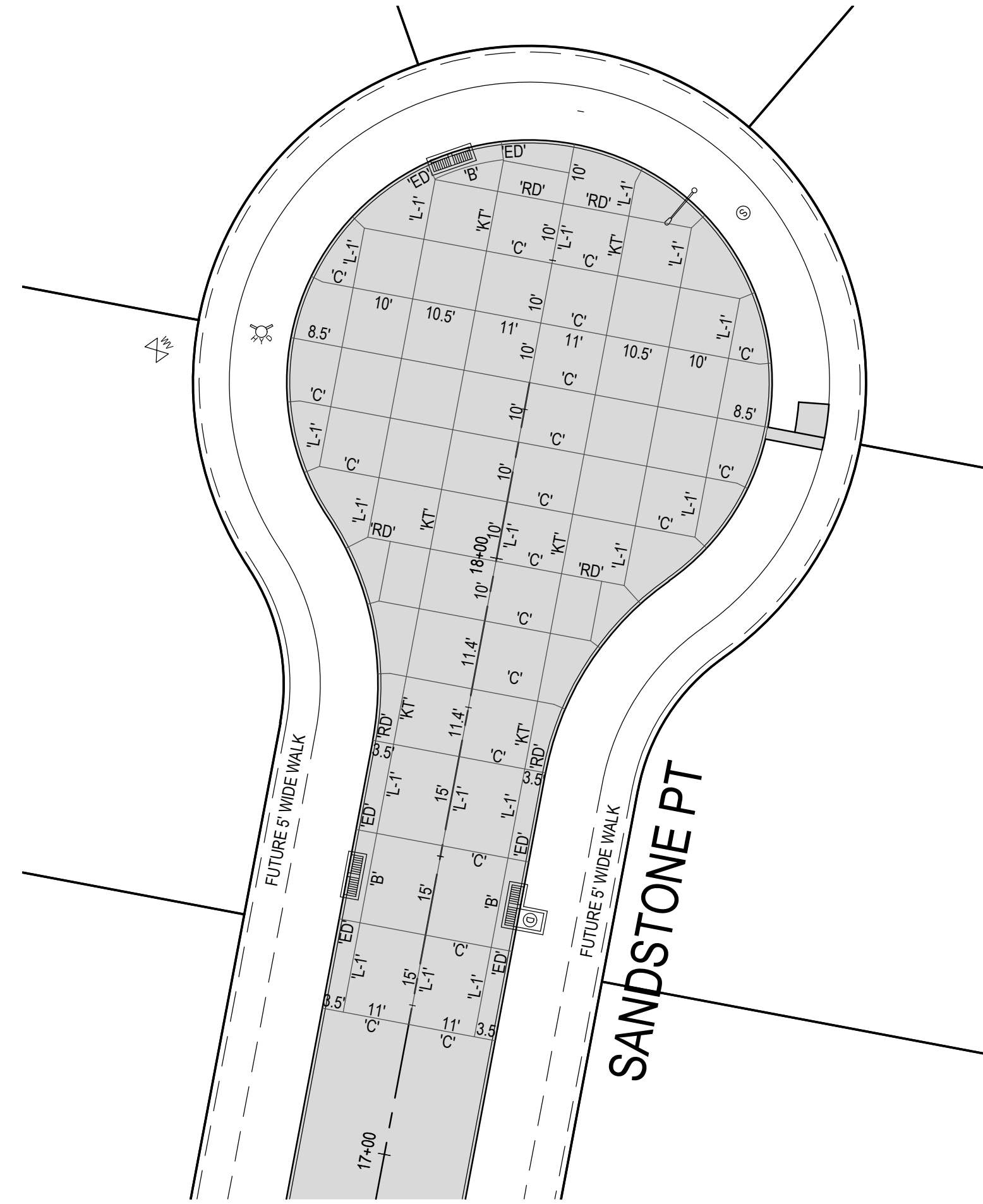
C4.4



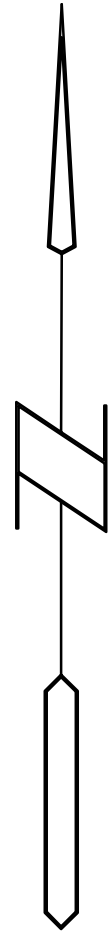
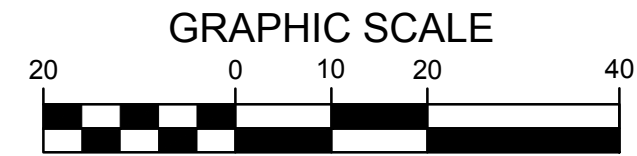




NORTH SANDSTONE POINT CUL-DE-SAC GRADING DETAIL



NORTH SANDSTONE POINT CUL-DE-SAC JOINTING DETAIL



PAINTED WOODS WEST PLAT 2
WAUKEE, IA

REFERENCE NUMBER:

DRAWN BY:
JMR

CHECKED BY:
DB

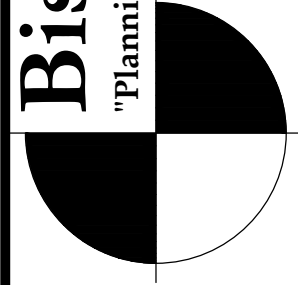
REVISION DATE:
7/18/15 1ST CITY SET
10/7/15 2ND CITY SET
10/26/15 BID SET
2/29/16 FINAL PLANS
9/1/16 AS-BUILT

PROJECT NUMBER:

130444-2

SHEET NUMBER:

C5.2



Bishop Engineering

"Planning Your Successful Development"

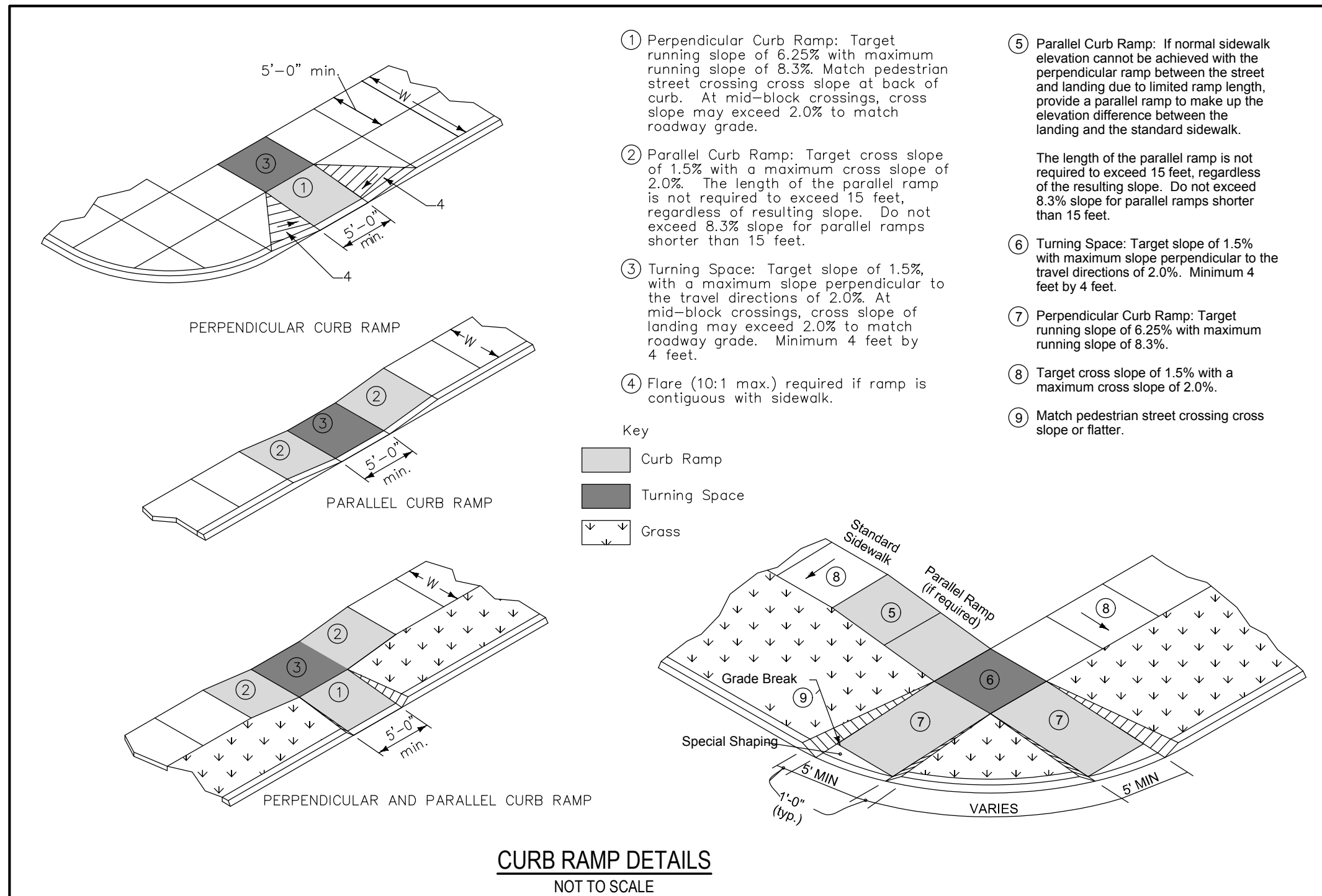
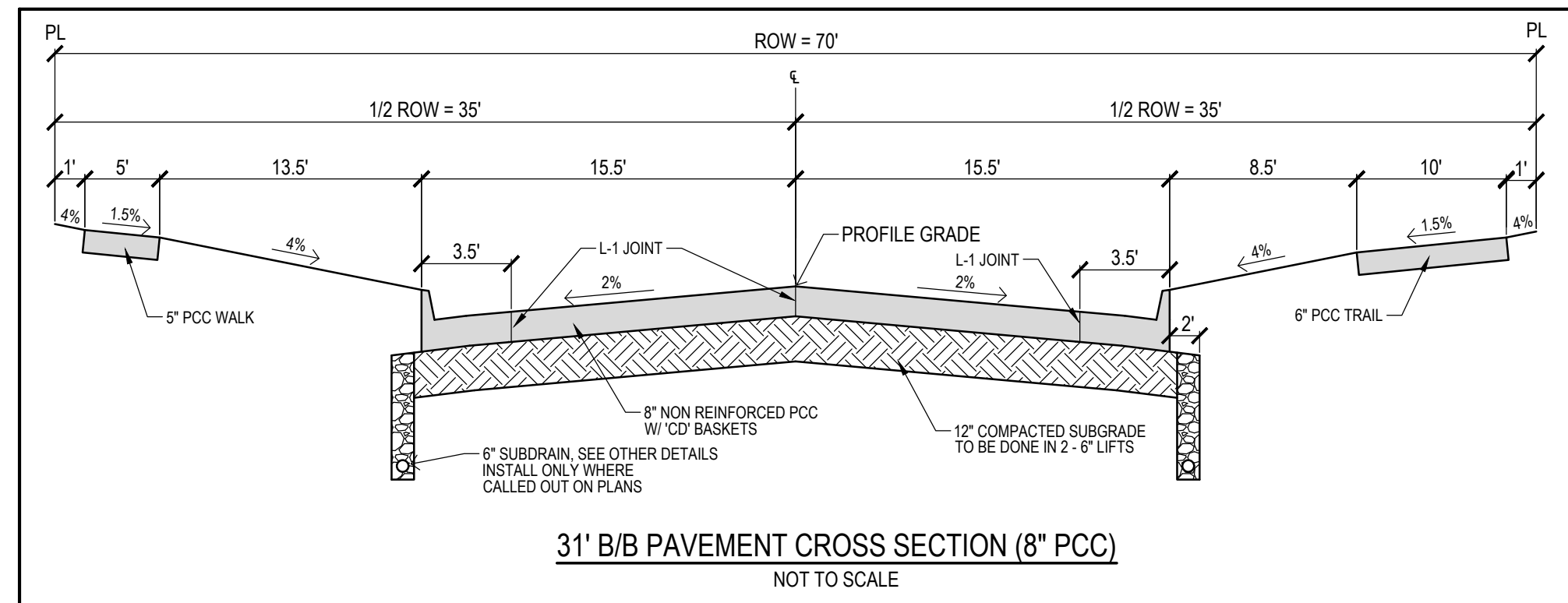
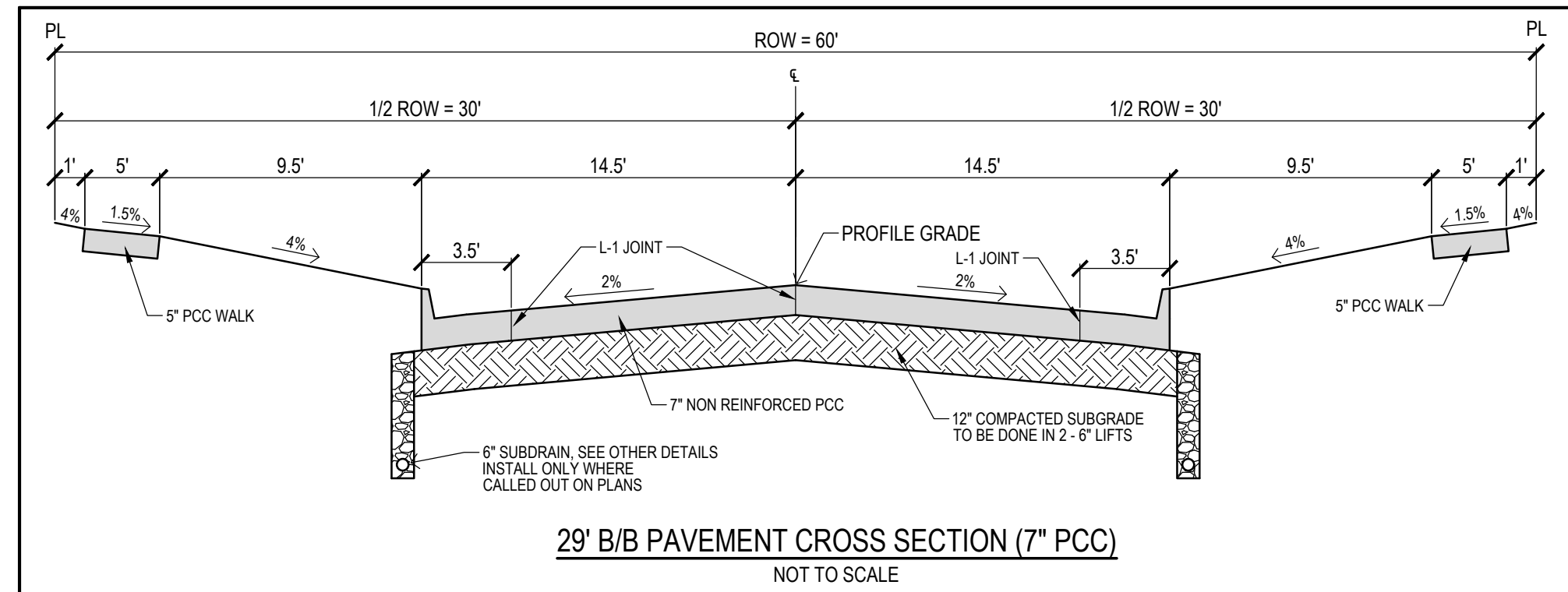
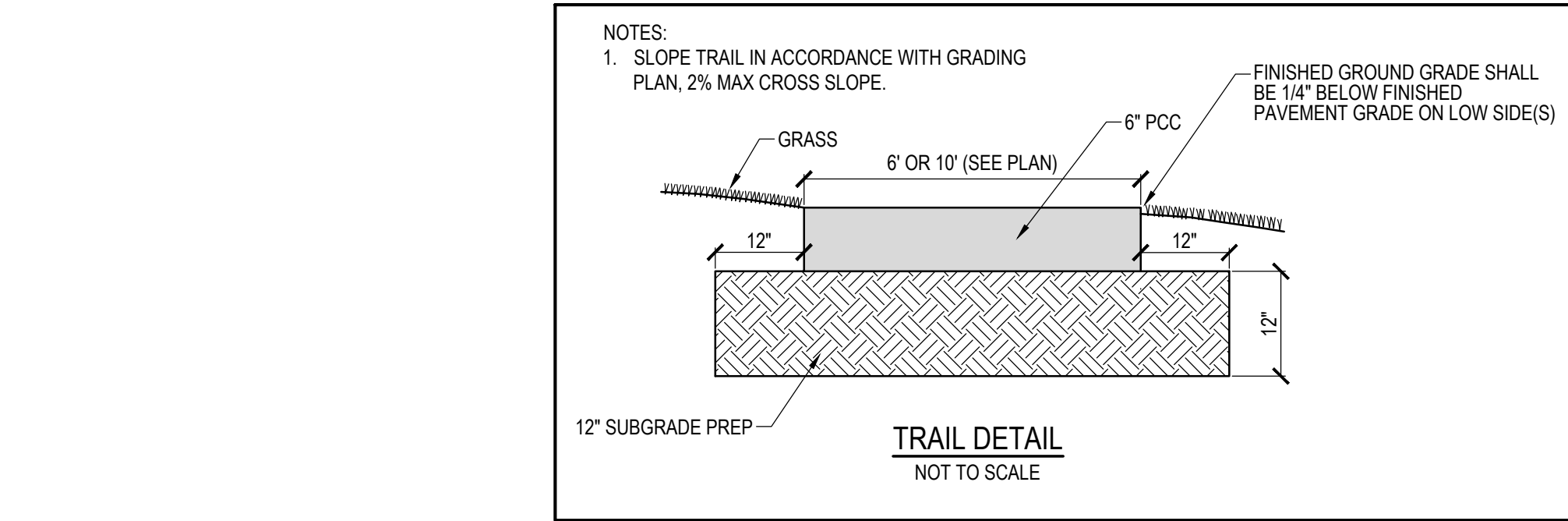
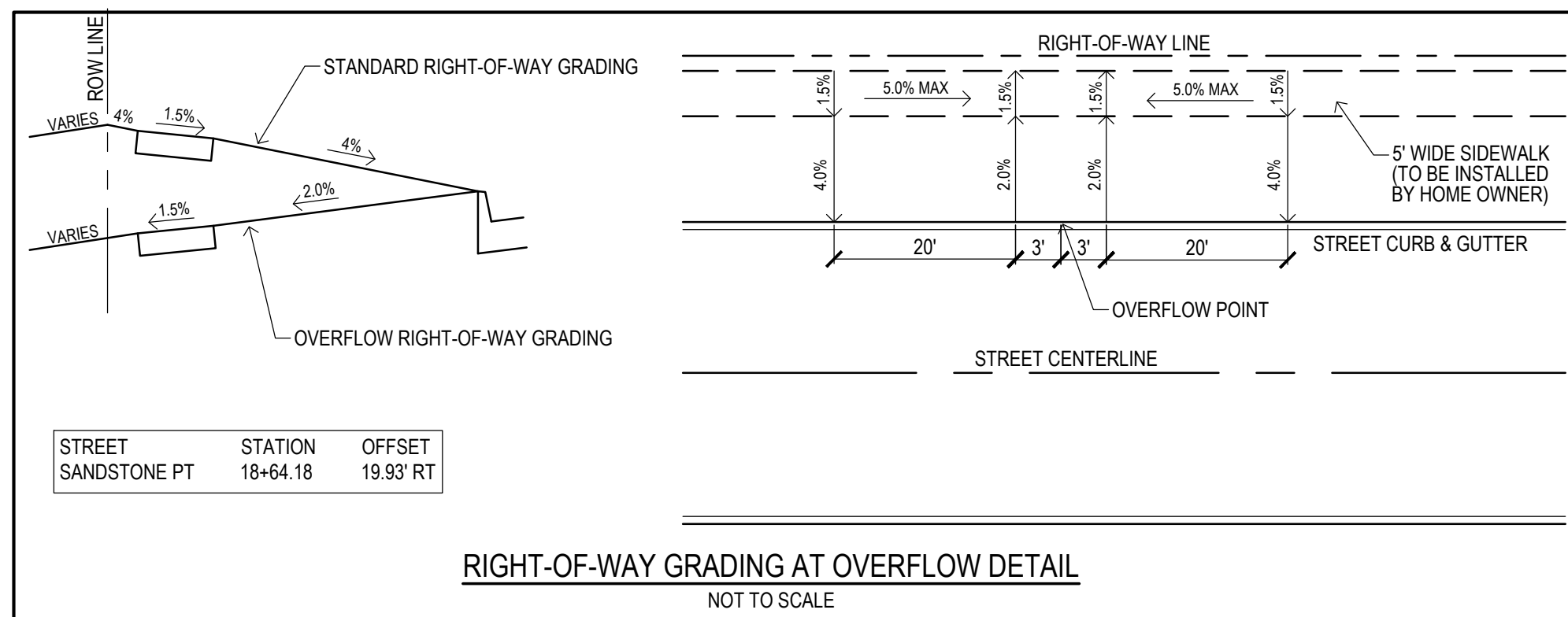
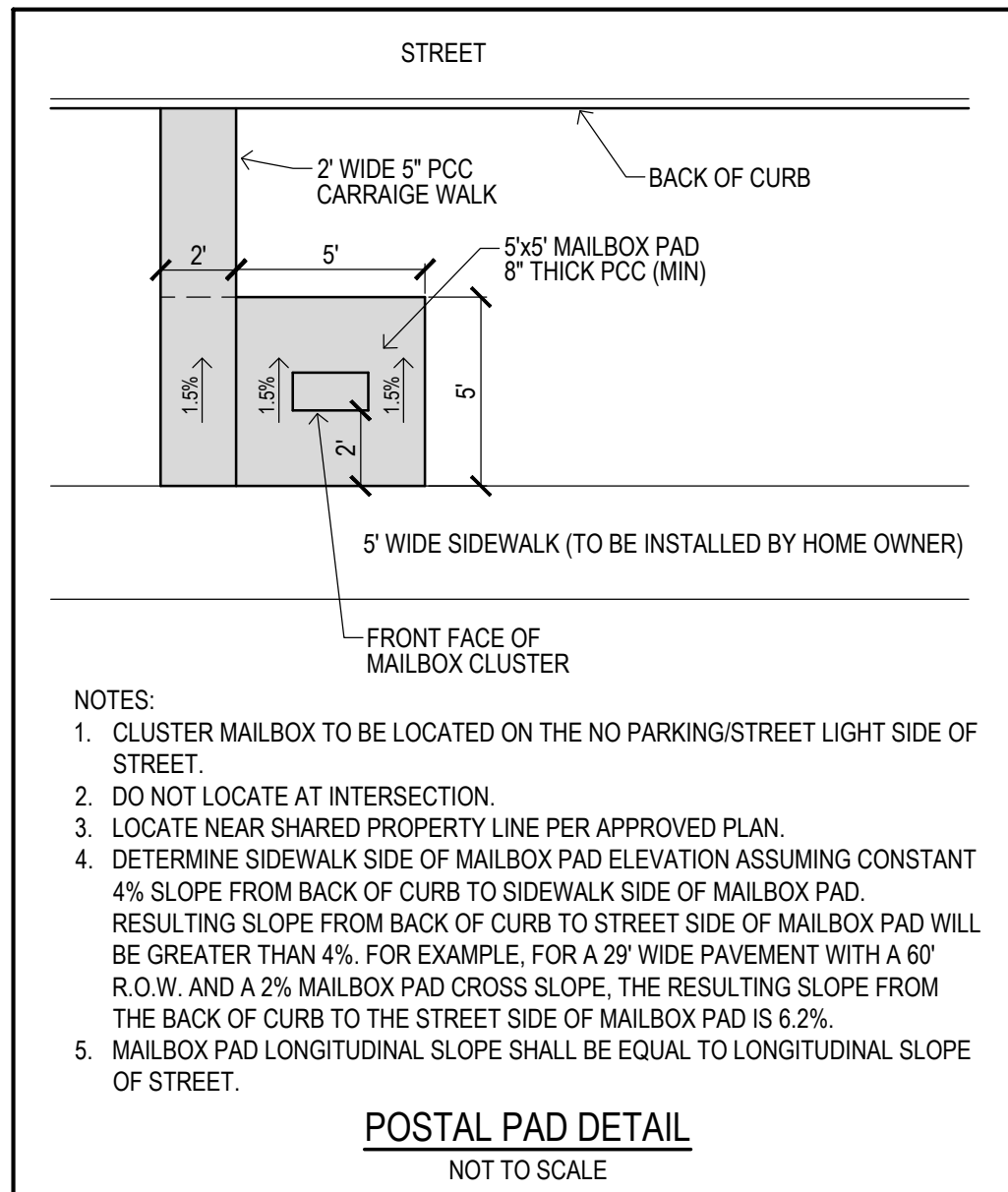
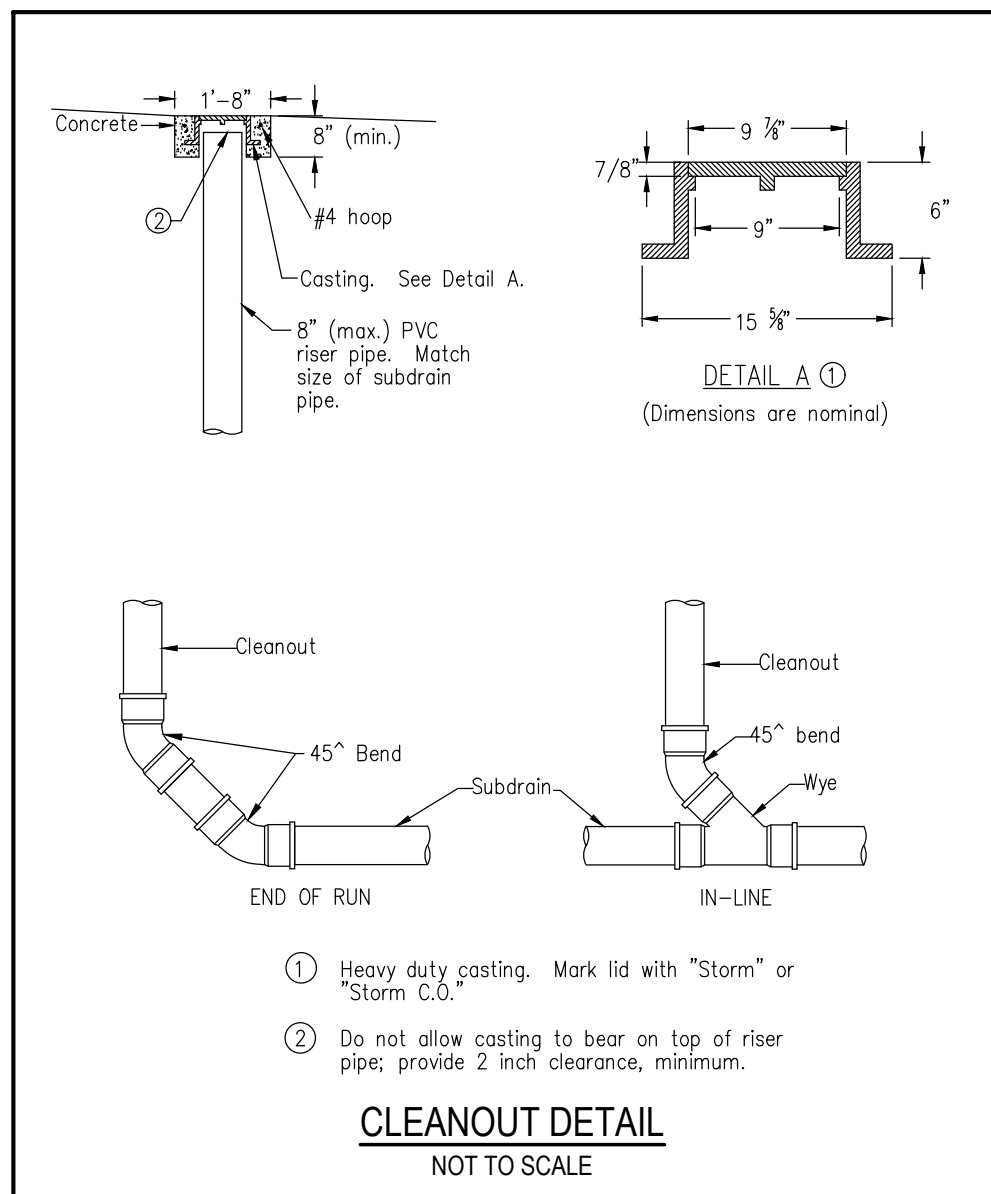
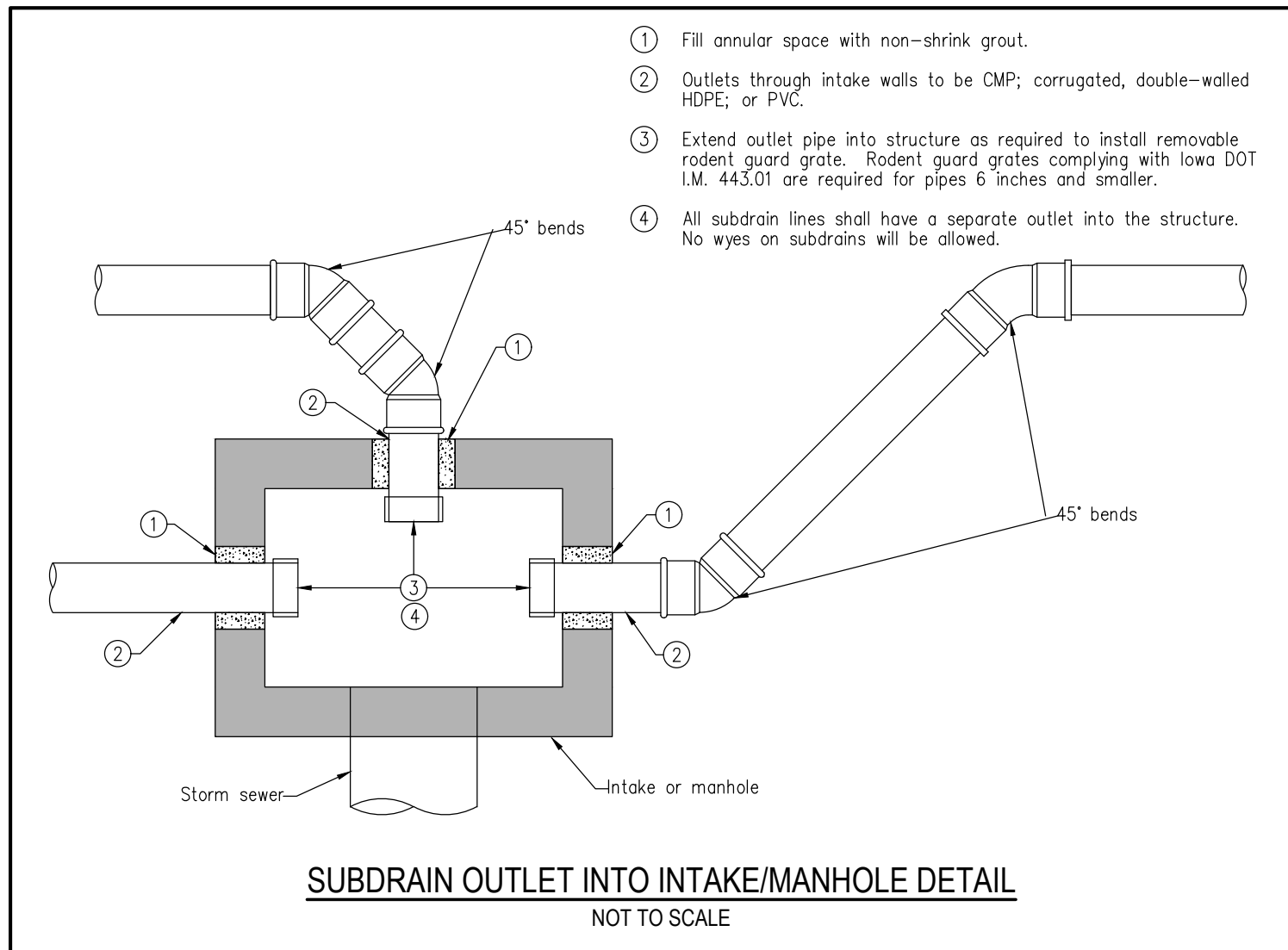
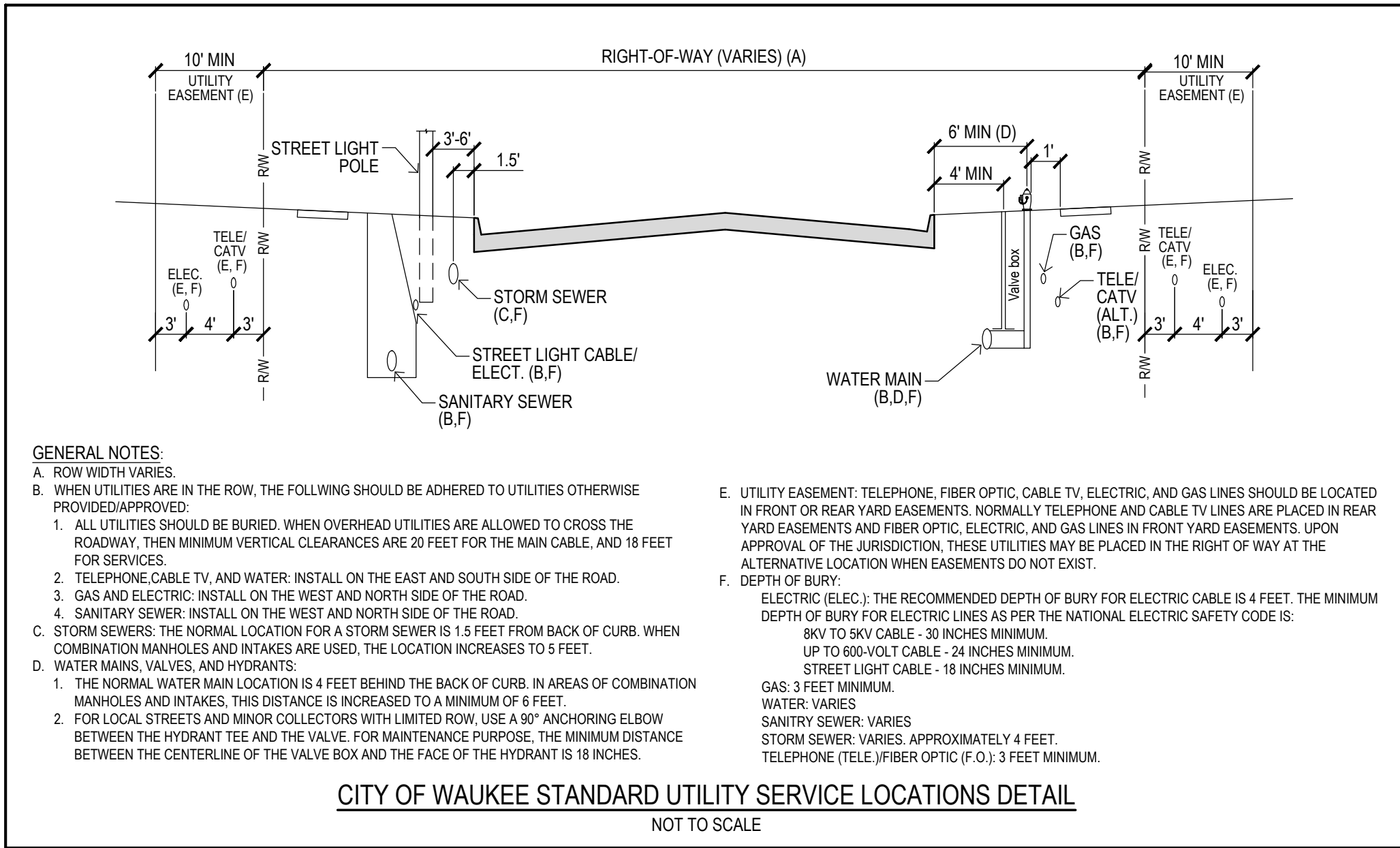
3501 104th Street

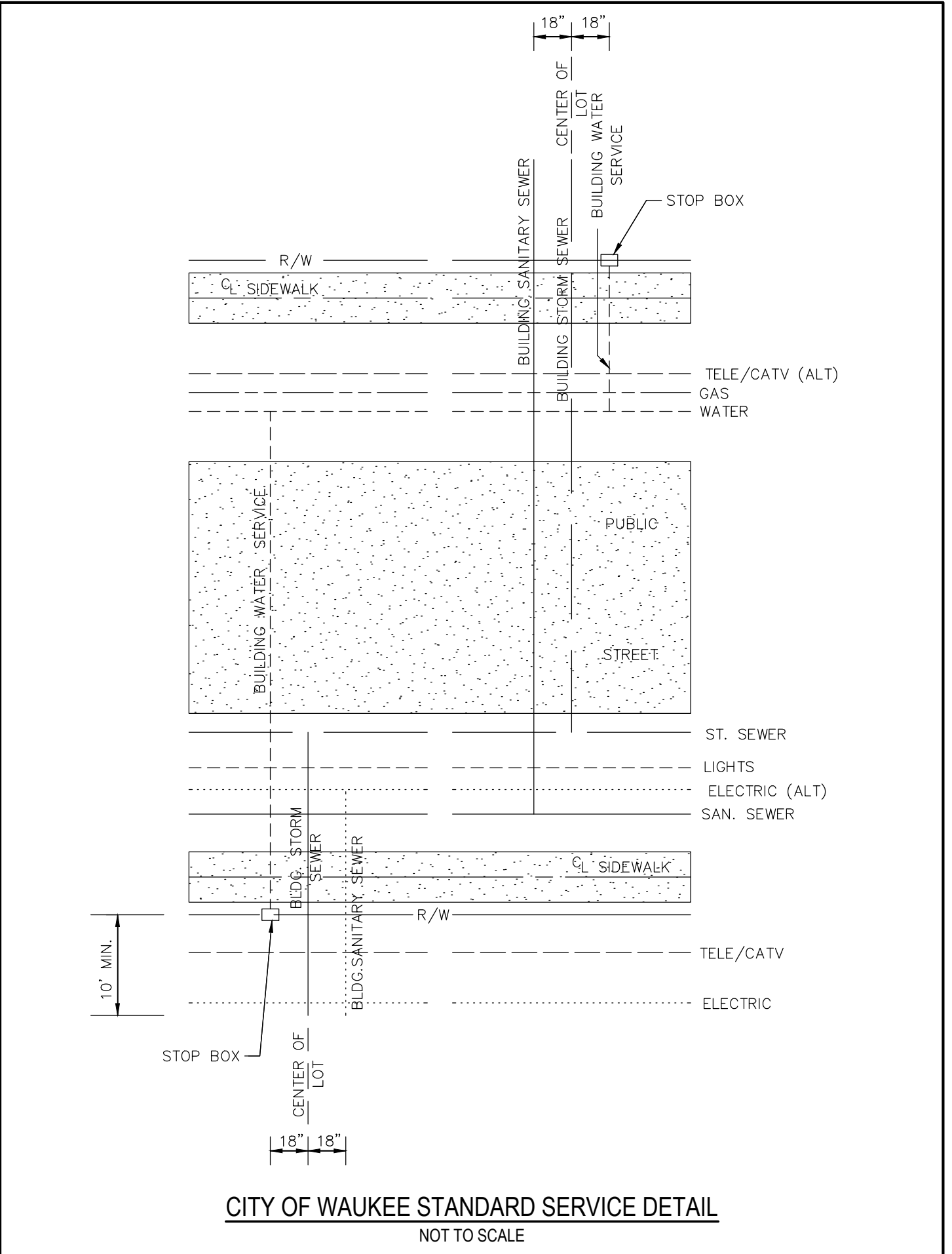
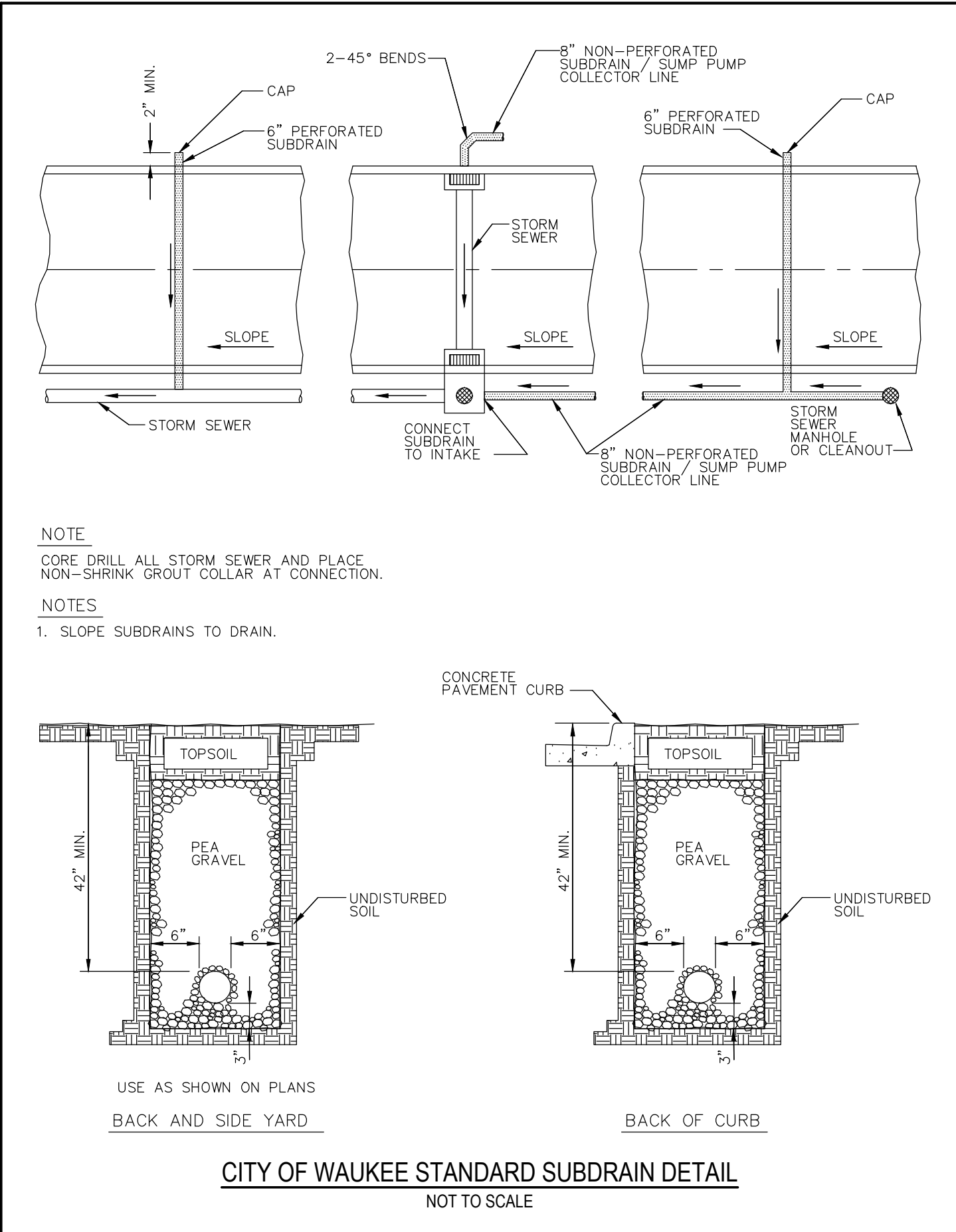
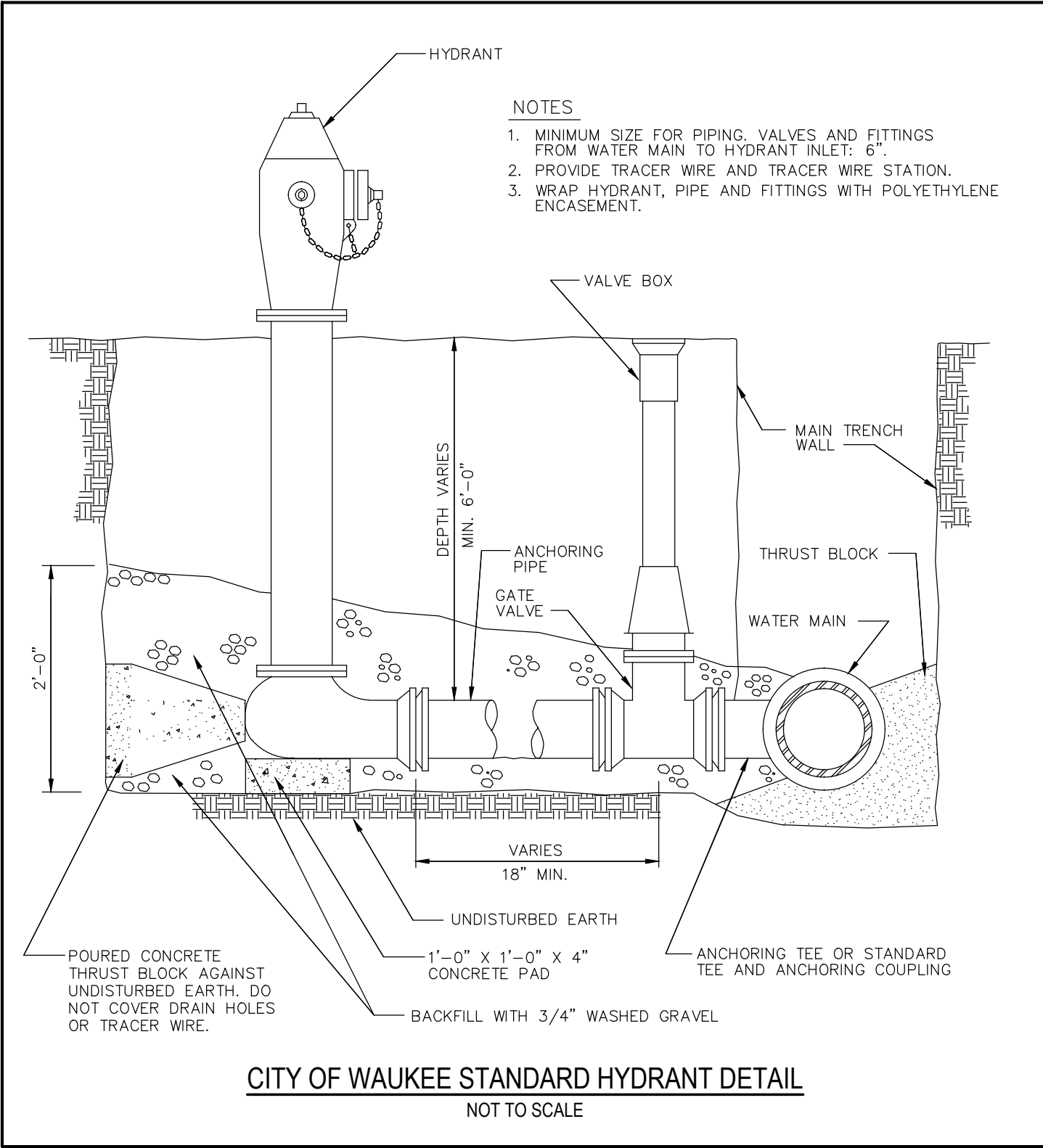
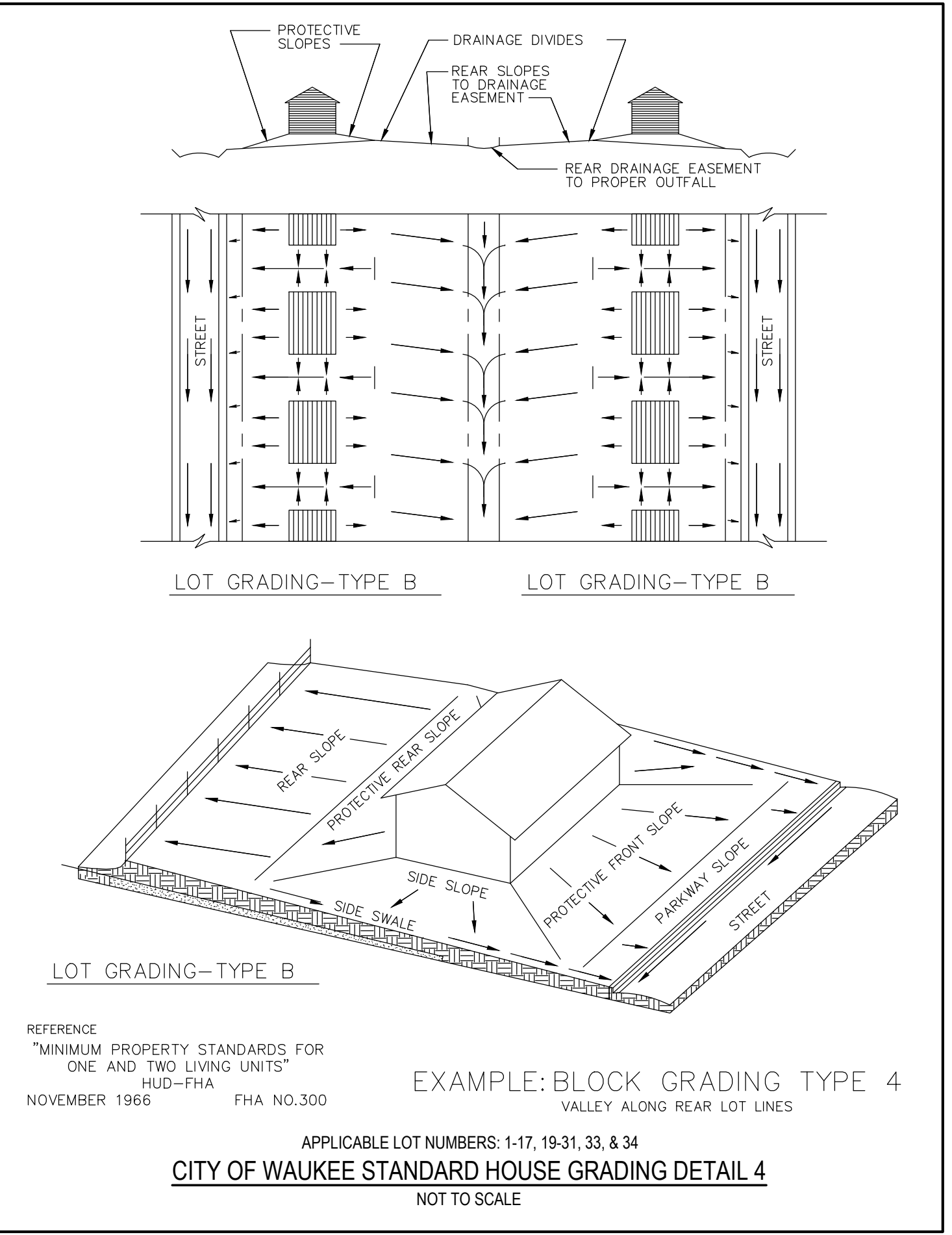
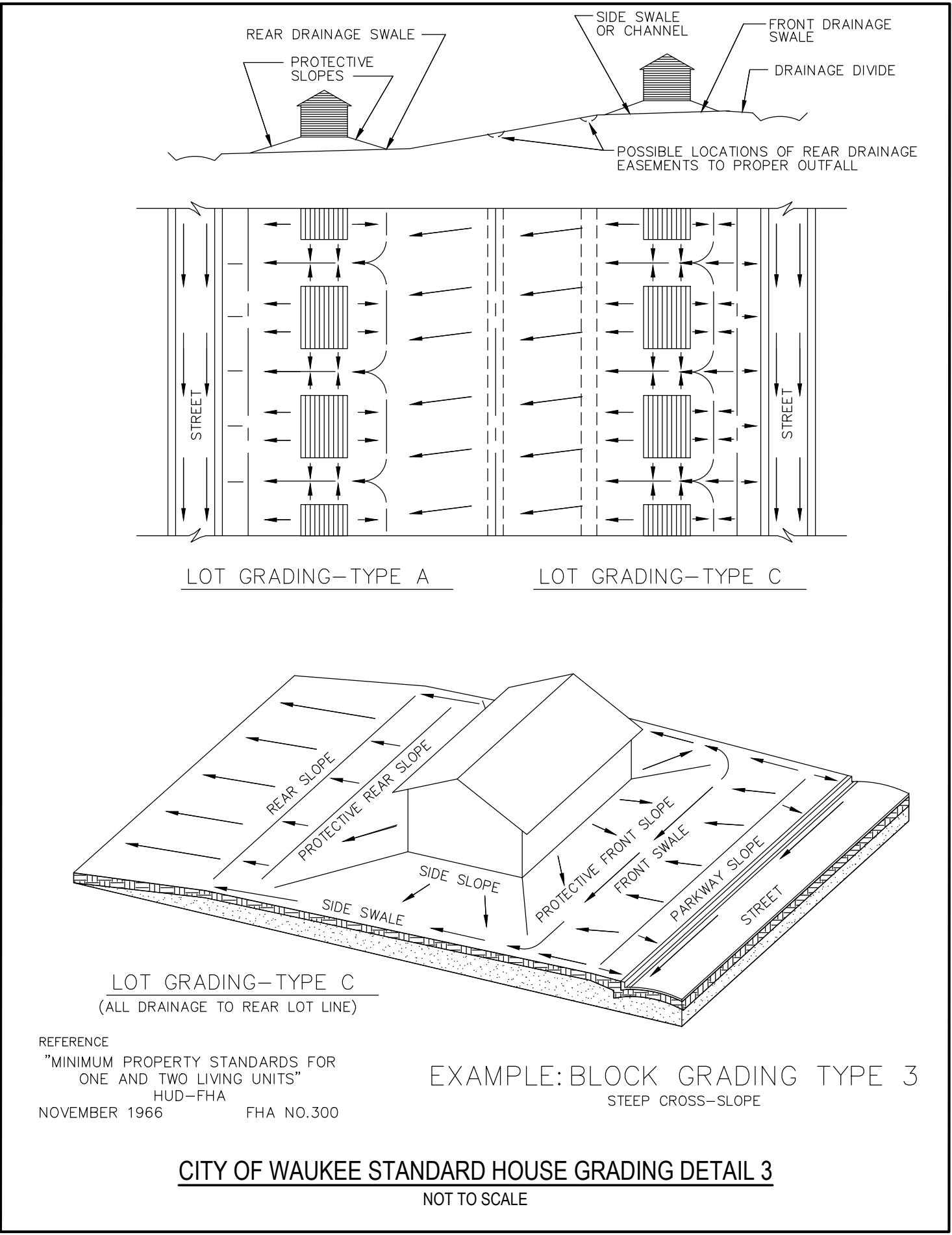
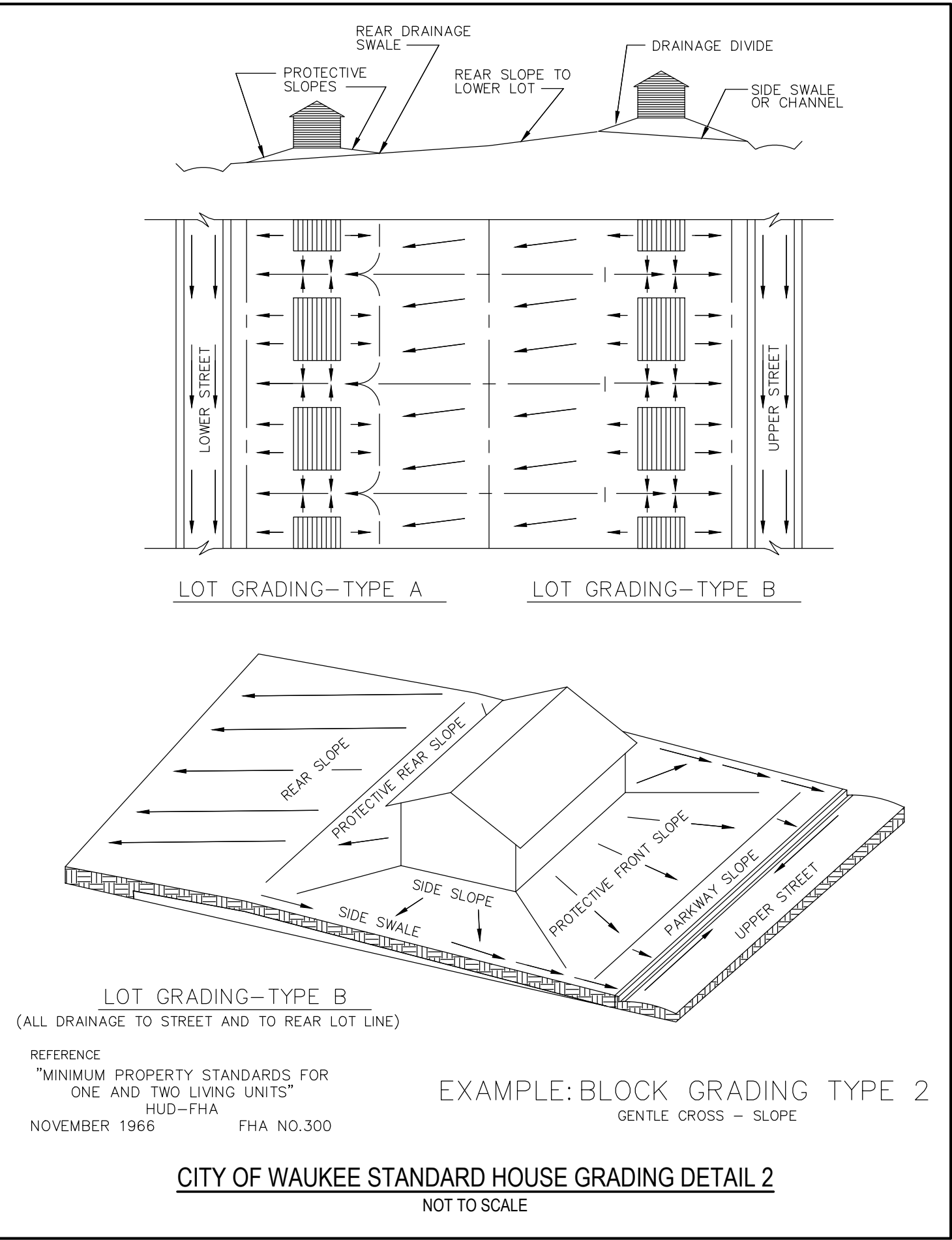
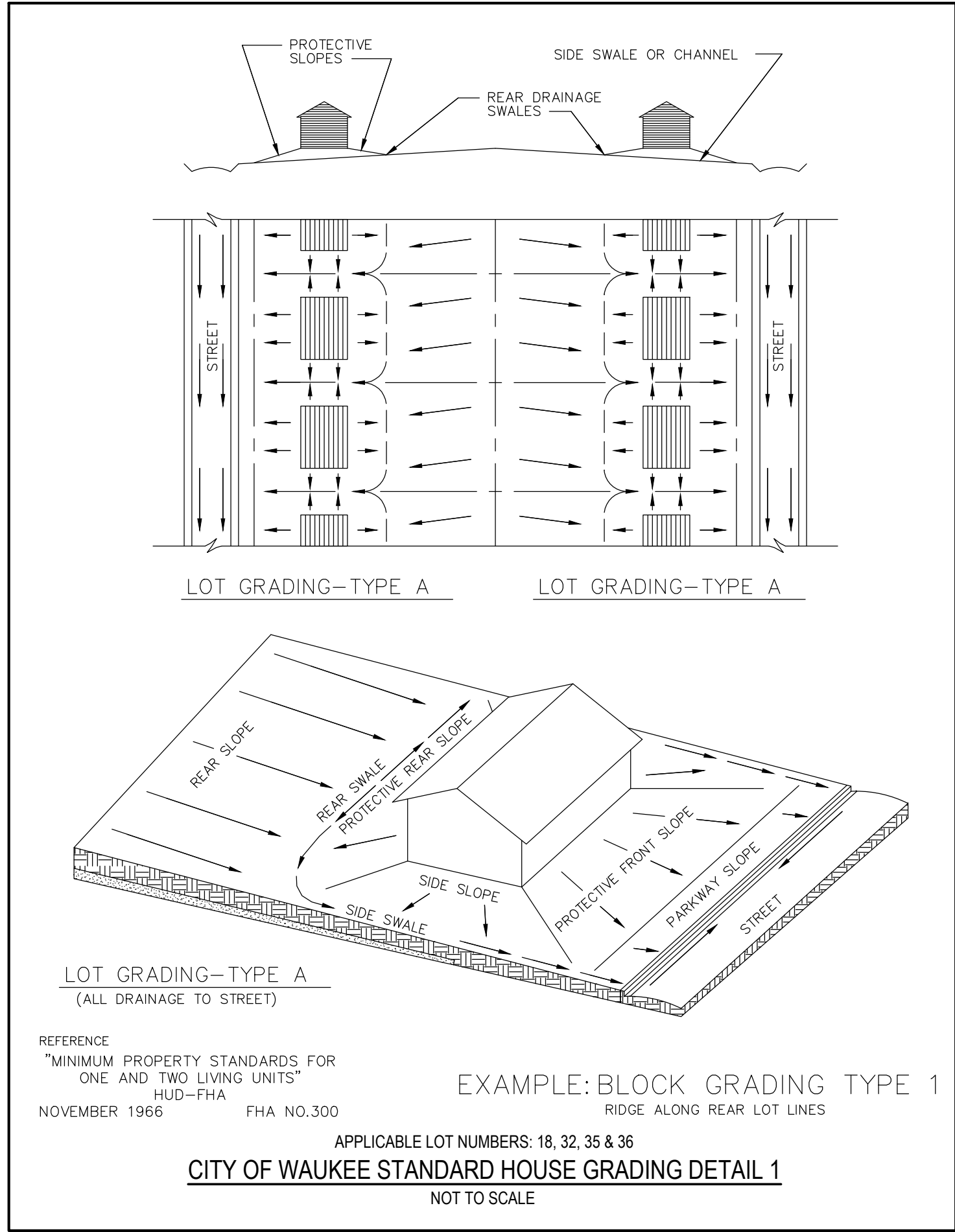
Des Moines, Iowa 50322-3825

Des Moines, Iowa 50322-3823
Phone: (515)276-0467 Fax: (515)276-0217

Civil Engineering & Land Surveying

M:\LAND PROJECTS 2013\130444.2 ABDW\GCS DETAILS\DWG2016 2.07-18 PM





EROSION CONTROL NOTES:

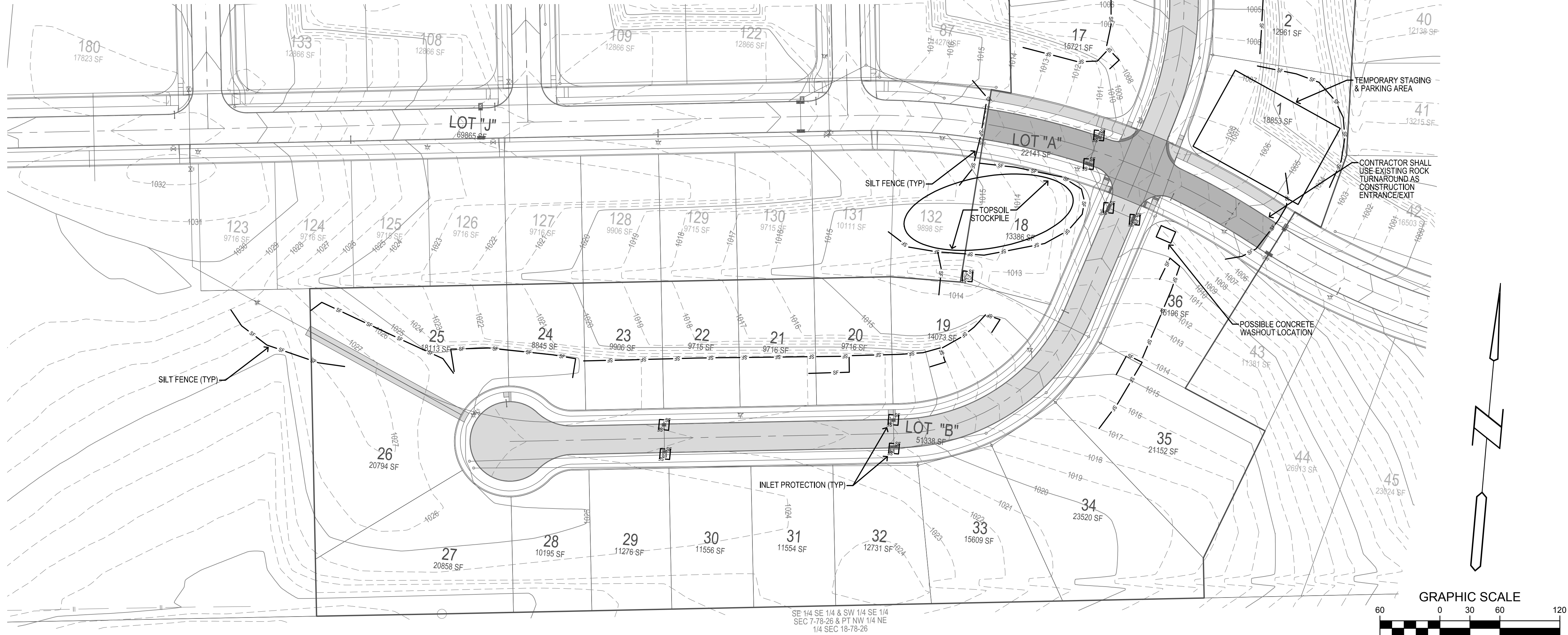
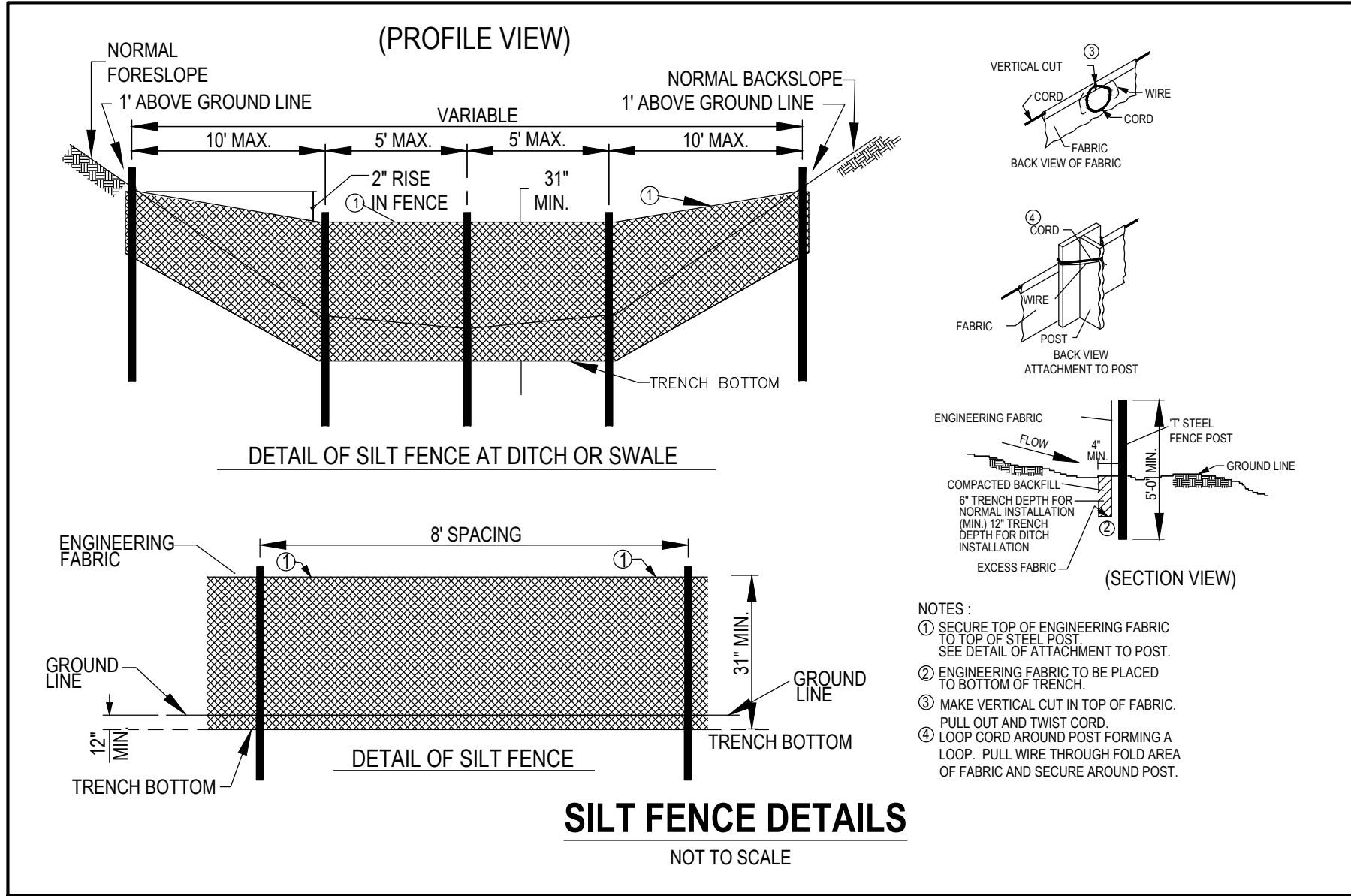
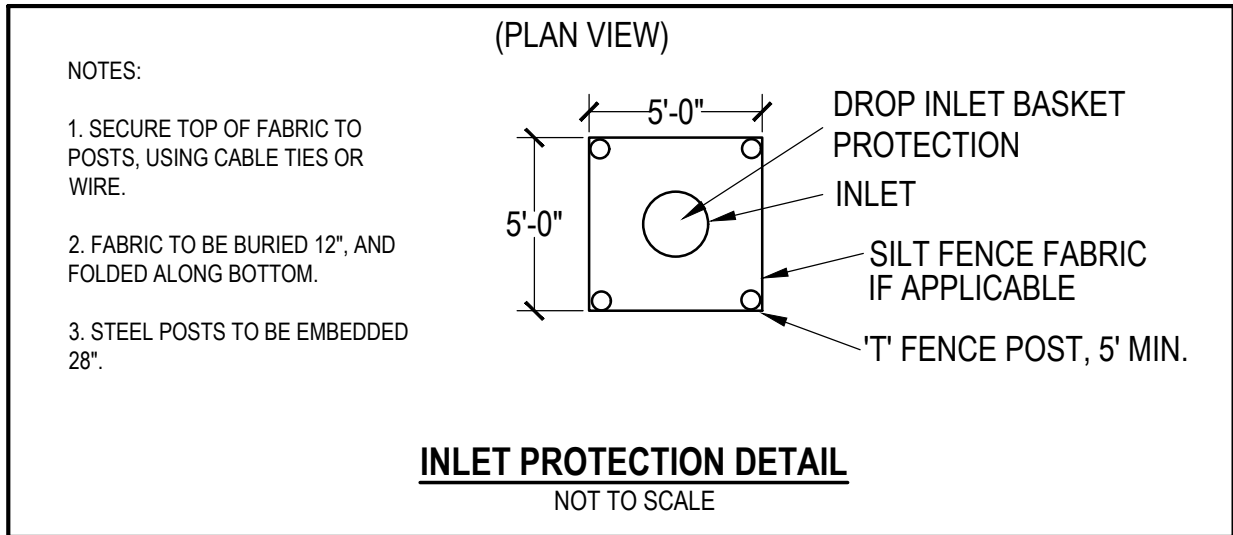
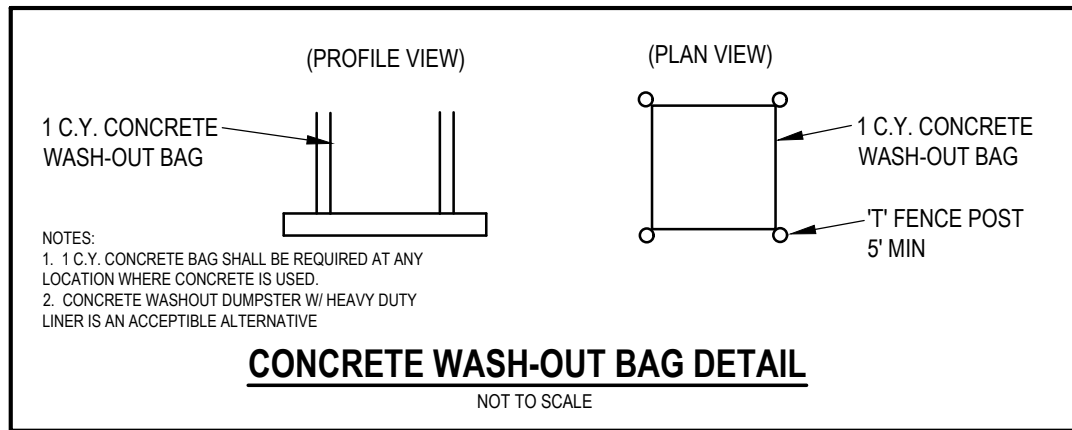
1. SEE SUPPLEMENTAL DETAIL STORM WATER POLLUTION PLAN NARRATIVE FOR ALL EROSION CONTROL MEASURES, ADDITIONAL DETAILS AND NOTE. ADDITIONAL NOTES AND MEASURES IN NARRATIVE SHALL BE CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN THE ORIGINAL BID.
2. SWPPP PLAN AND NARRATIVE ARE CONSIDERED A LIVING DOCUMENT AND WILL NEED PERIODIC UPDATES AND ADJUSTMENTS AS NECESSARY DEPENDING ON SITE CONDITIONS TO ASSURE COMPLIANCE WITH NPDES GENERAL PERMIT NO. 2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UPDATE THE SWPPP AND IMPLEMENT ANY AND ALL MEASURES NECESSARY TO COMPLY WITH SAID PERMIT NO. 2.
3. INSTALL PERIMETER SILT FENCE AS SHOWN ON PLANS PRIOR TO CONSTRUCTION.
4. INSTALL INTAKE PROTECTION WITH SILT FENCE IMMEDIATELY AFTER STORM SEWER CONSTRUCTION.
5. INSTALL FINISHED PAVING INLET PROTECTION INCLUDING BELOW GRADE IMMEDIATELY AFTER PAVING IS COMPLETED AROUND INTAKE. BELOW GRADE INLET PROTECTION SHALL BE MAINTAINED UNTIL FINAL STABILIZATION.
6. OTHER EROSION CONTROL TYPES MAY NOT BE SUBSTITUTED FOR SILT FENCE.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING A CONCRETE WASHOUT IN ACCORDANCE WITH NPDES GENERAL PERMIT NO. 2 DURING ALL CONCRETE WORK. POSSIBLE LOCATION SHOWN ON PLAN.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING TEMPORARY RESTROOM FACILITIES. SANITARY WASTE SHALL BE DISPOSED OF PER ALL FEDERAL, STATE AND LOCAL REGULATIONS.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL TOPSOIL REQUIREMENTS OF NPDES GENERAL PERMIT NO. 2 ARE MET. SEE GRADING PLAN FOR ADDITIONAL TOPSOIL REQUIREMENTS.
10. CONTRACTOR SHALL STABILIZE ALL AREAS PER REQUIREMENTS OF NPDES GENERAL PERMIT #2. DISTURBED AREA SHALL BE SEEDED WITH UNITED SEEDS SUBDIVISION MIX OR EQUAL.
11. CONTRACTOR SHALL INSTALL AND MAINTAIN BELOW GRADE INLET PROTECTION ON ALL PUBLIC STREETS ADJOINING THE PROJECT FOR THE DURATION OF SITE CONSTRUCTION.
12. ALL ROLLED EROSION CONTROL PRODUCTS (RECP) AND TURF REINFORCEMENT MAT (TRM) SHALL BE INSTALLED PER ALL MANUFACTURER'S RECOMMENDATIONS.

EROSION CONTROL REMOVAL NOTES:

1. AFTER FINAL STABILIZATION HAS OCCURED, AS DEFINED IN NPDES GENERAL PERMIT NO. 2, CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY EROSION CONTROL DEVICES INCLUDING, BUT NOT LIMITED TO: SILT FENCE, INLET PROTECTION, AND TEMPORARY STANDPIPES.
2. AFTER FINAL STABILIZATION HAS OCCURED, CONTRACTOR SHALL REMOVE AND REPLACE ROCK CHECK DAM.

SEEDING NOTES:

1. ALL DISTURBED AREA SHALL BE SEEDED WITH UNITED SEEDS SUBDIVISION MIX OR APPROVED EQUAL.



PAINTED WOODS WEST PLAT 2
WAUKEE, IA

SWPPP

REFERENCE NUMBER:

DRAWN BY:

JMR

CHECKED BY:

DB

REVISION DATE:

7/18/15 1ST CITY SET
10/7/15 2ND CITY SET
10/26/15 BID SET
2/29/16 FINAL PLANS
9/1/16 AS-BUILT

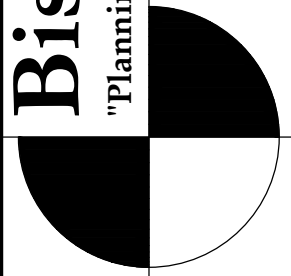
PROJECT NUMBER:

130444-2

SHEET NUMBER:

C7.1

Bishop Engineering
"Planning Your Successful Development"



3501 104th Street
Des Moines, Iowa 50322-3825
Phone: (515)276-0467 Fax: (515)276-0217

Civil Engineering & Land Surveying

Established 1959