

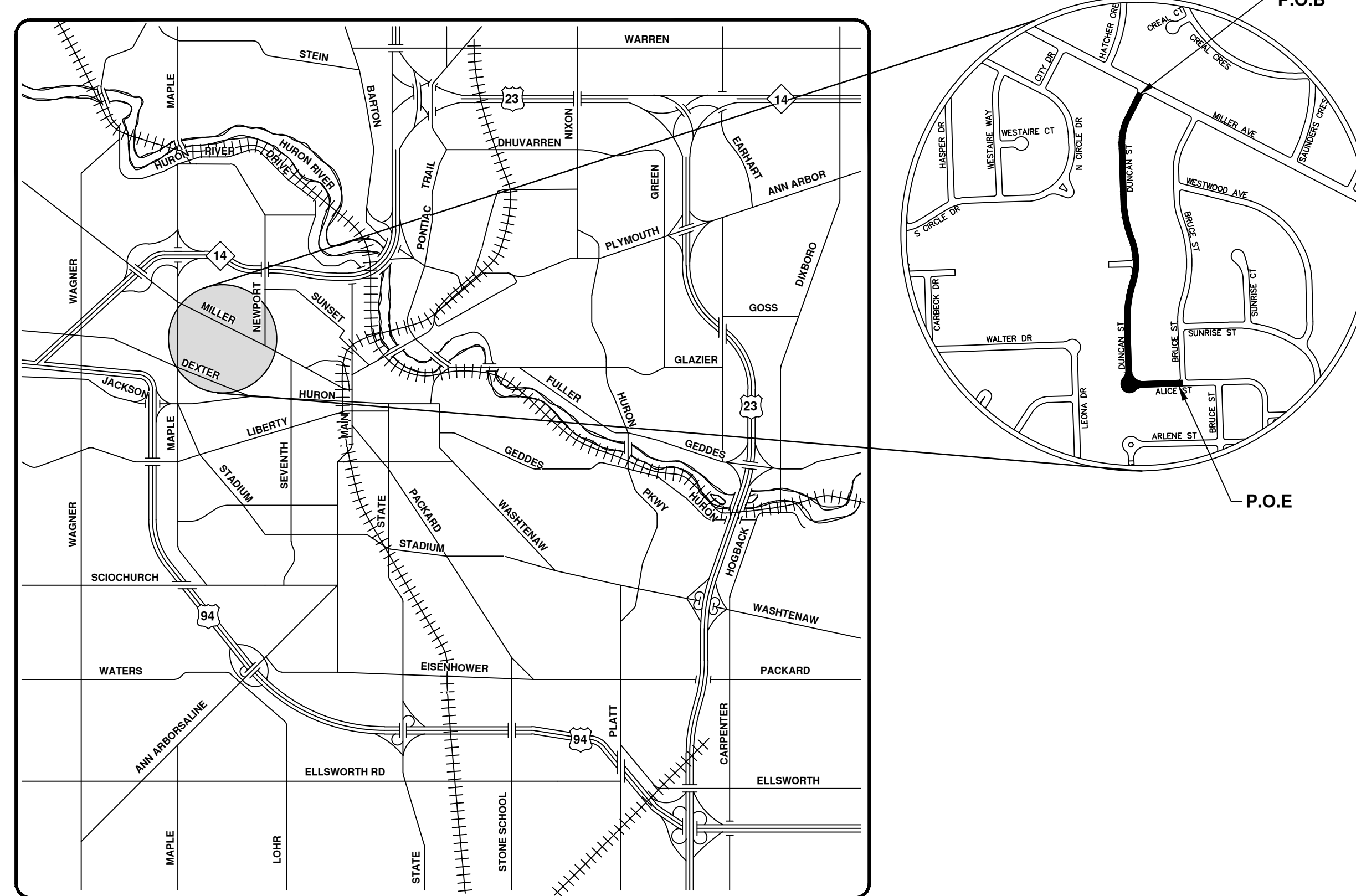
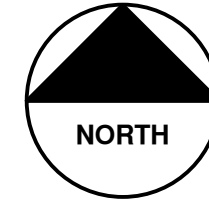


# CITY OF ANN ARBOR PROJECT MANAGEMENT

## DUNCAN STREET IMPROVEMENTS

BID No. ITB 4368, FILE No. 2013027

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2	NOTES AND CONTACTS
3	LEGEND, BENCHMARKS AND CASTING SCHEDULE
4	ROAD SECTION, TRENCH DETAIL, INLET DETAIL
5	TRAFFIC CONTROL
6 - 8	REMOVALS
9 - 14	WATER MAIN PLAN & PROFILE
15 - 17	ROAD AND STORM SEWER



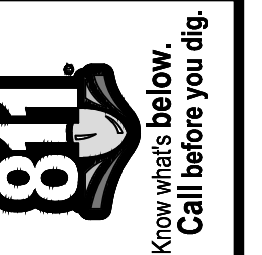
VICINITY MAP

**NOTES:**

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 53, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS, PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

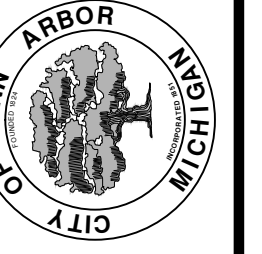
THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE 1994 EDITION OF THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS, ITS DETAILS, WHICH ARE INCLUDED BY REFERENCE, AND THIS PROJECT'S CONTRACT DOCUMENTS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.




REV.	DESCRIPTION	DATE	DRAWN	CHECKED

CITY OF ANN ARBOR  
PUBLIC SERVICES  
301 EAST HURON STREET  
ANN ARBOR, MI 48106-0647  
www.a2gov.org



PROJECT DESCRIPTION AND LIMITS  
PROJECT DESCRIPTION  
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

PROJECT MANAGEMENT SERVICE UNIT	
 NICHOLAS HUTCHINSON, P.E. - MI LICENSE No. 46789 CITY ENGINEER _____ / ____ / 2015 DATE	ENGINEER'S SEAL
PREPARED UNDER THE SUPERVISION OF _____ IGOR V. KOTLYAR, P.E. - MI LICENSE No. 43287 PROJECT ENGINEER _____ / ____ / 2015 DATE	ENGINEER'S SEAL

SHEET No.	1 TO 17
DRAWING No.	2013027 - 1



Table with 3 columns: BM #, ELEV, DESCRIPTION. Lists 11 benchmark points with elevations and descriptions.

PROPOSED STORM SEWER STRUCTURE TABLE. Columns: STRUCTURE, ROAD STATION, INVERT ELEVATION, SIZE & DIRECTION, TOP OF CASTING ELEVATION, DEPTH (Feet), SIZE, APPLICATION/CONSTRUCTION.

EXISTING SANITARY SEWER STRUCTURE TABLE. Columns: STRUCTURE, ROAD STATION, RIM, DEPTH, DIA., TYPE, INVERTS.

WATER MAIN STRUCTURE TABLE. Columns: STRUCTURE, TYPE, ROAD STATION, RIM, DEPTH.

PROPOSED WATER MAIN STRUCTURE TABLE. Columns: STRUCTURE, TYPE, UTILITY STATION, RIM, DEPTH.

STORM SEWER STRUCTURE TABLE. Columns: STRUCTURE, ROAD STATION, INVERT ELEVATION, SIZE & DIRECTION, TOP OF CASTING ELEVATION, DEPTH (Feet), SIZE, APPLICATION/CONSTRUCTION.

EXISTING LEGEND

Legend for existing infrastructure: FIRE HYDRANT, GATE VALVE IN BOX, GATE VALVE IN WELL, STOP BOX, WATER VAULT, WELL, CATCH BASIN (SQ), CATCH BASIN (RD), STORM MANHOLE, NON-CURB CATCH BASIN (SQ), SANITARY MANHOLE, CLEAN-OUT, POST, PEDESTRIAN SIGNAL, SIGN, HAND HOLE, ORNAMENTAL LIGHT, FLOOD LIGHT, UNKNOWN MANHOLE, TELEPHONE MANHOLE, TELEPHONE RISER, GAS VALVE, GAS VENT, GAS BOX, ELECTRICAL RISER, TRANSFORMER, UTILITY POLE, LAMP POLE, GUY ANCHOR, GUY POLE, MONITORING WELL, MAILBOX, SOIL BORING, TRAVERSE POINT, BENCH MARK, IRON PIPE, MON BOX.

PROPOSED LEGEND

Legend for proposed infrastructure: HYDRANT (PLAN), WATER GATE WELL, REDUCER, WATER GATE VALVE, WATER STOP BOX, WATER VAULT, INLET, DOUBLE INLET, INLET JUNCTION CHAMBER, ROUND CATCH BASIN, STORM MANHOLE, DRAIN ARROW, FLARED END SECTION, SANITARY MANHOLE, CLEAN-OUT, BARREL, SIGN, DETECTABLE WARNING, ASPHALT, CONCRETE, SIDEWALK, TREE (DECIDUOUS), TREE (CONIFEROUS).

Project information including: PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR, DUNCAN STREET IMPROVEMENTS, LEGENDS, BENCHMARKS AND CASTING SCHEDULES, SCALE: NTS, DRAWING No. 2013027-3, SHEET No. 3 OF 17, and city logos.

S:\Project Management\Design\2013027 Duncan St\Plan Production\Primary\2013027Det.dwg Dwg Created: 28-Aug-14 - a2 standard bw.stb - Plot Date: 6-Feb-15



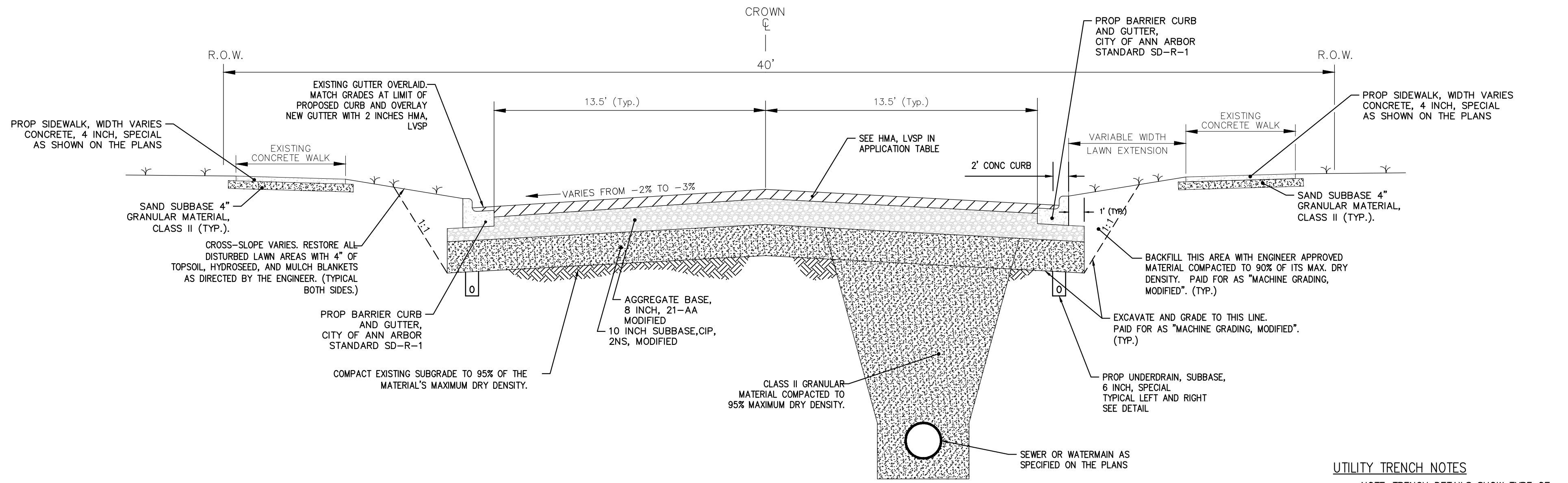
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

CITY OF ANN ARBOR  
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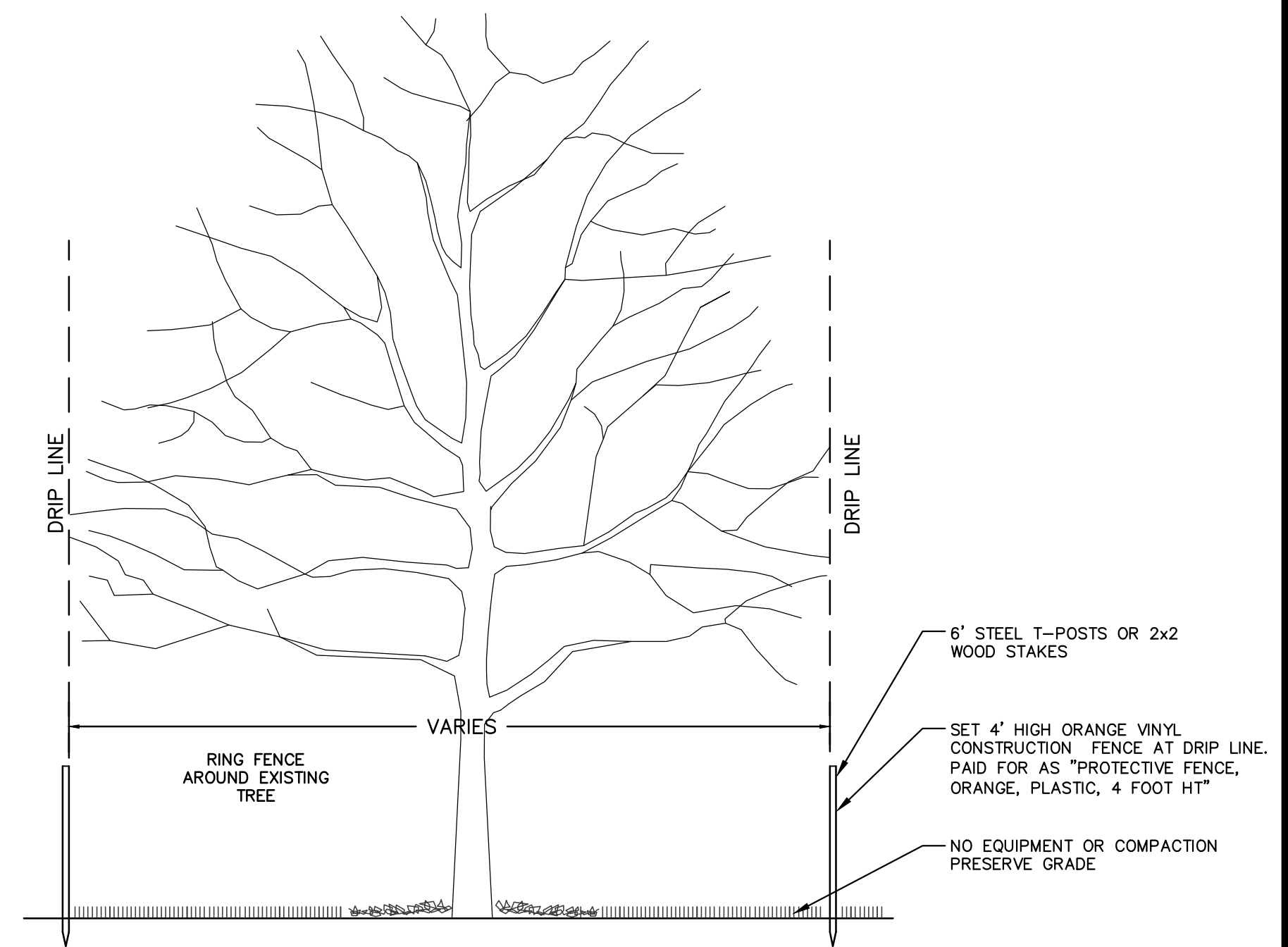
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR  
DUNCAN STREET IMPROVEMENTS  
ROAD SECTION, TRENCH DETAIL, INLET DETAIL

SHEET No. 4 OF 17  
SCALE: NTS  
DRAWING No. 2013027-4

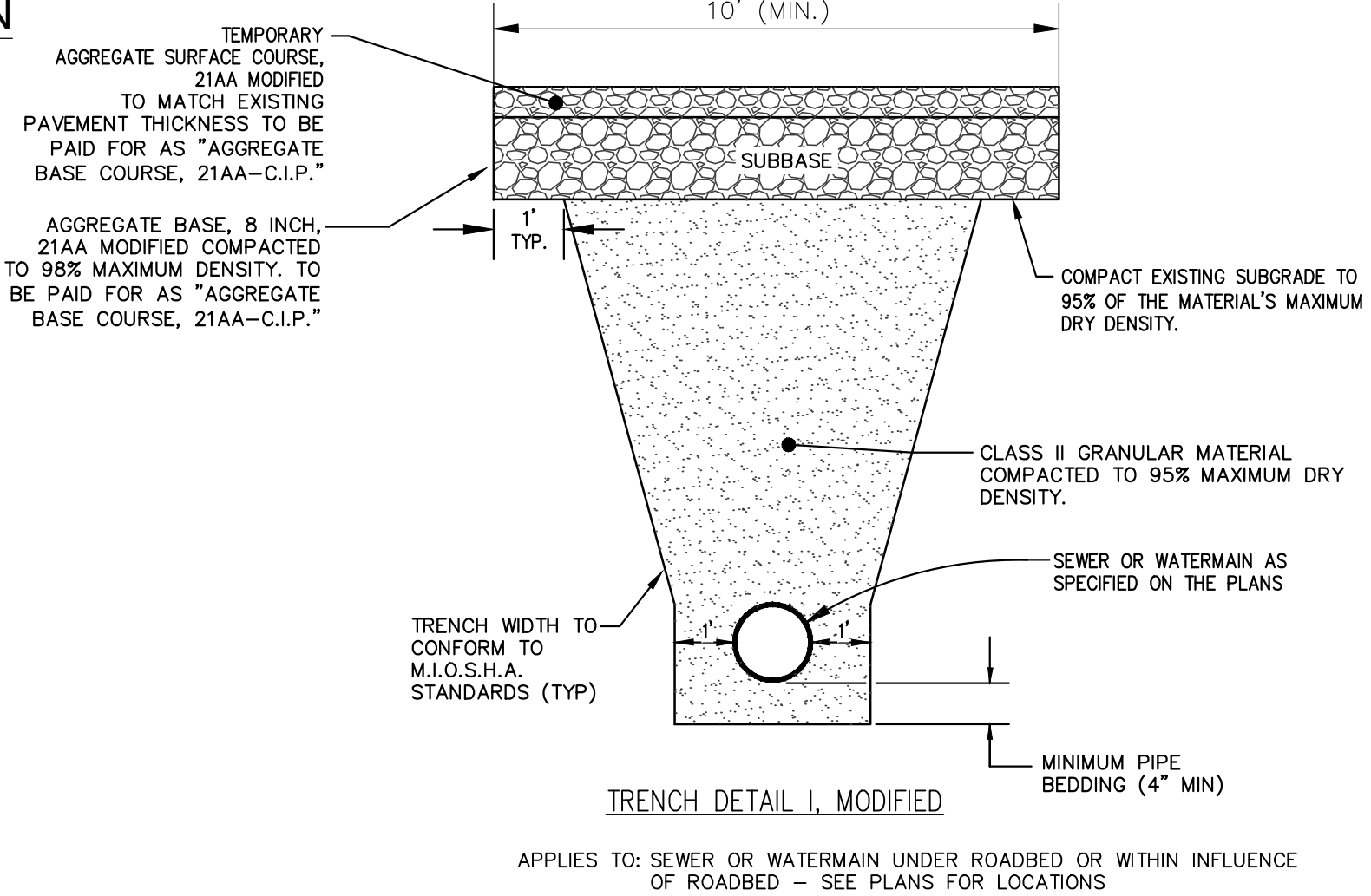


**DUNCAN STREET PROPOSED TYPICAL CROSS SECTION**  
N.T.S.

HARVARD PLACE & ARLINGTON BLVD - HMA APPLICATION ESTIMATE					
HMA MIX	RATE OF APPLICATION	THICKNESS (INCHES)	AWI (MIN.)	BINDER	LOCATION/NOTES
LVSP	220 LB/SYD	2.0	260 (TOP)	PG 58-28	TOP COURSE
LVSP	220 LB/SYD	2.0	260 (TOP)	PG 58-28	LEVELING COURSE
Bond Coat SS-1h	0.05 GAL/SYD	-	-	-	INCLUDE IN COST OF HMA ITEM

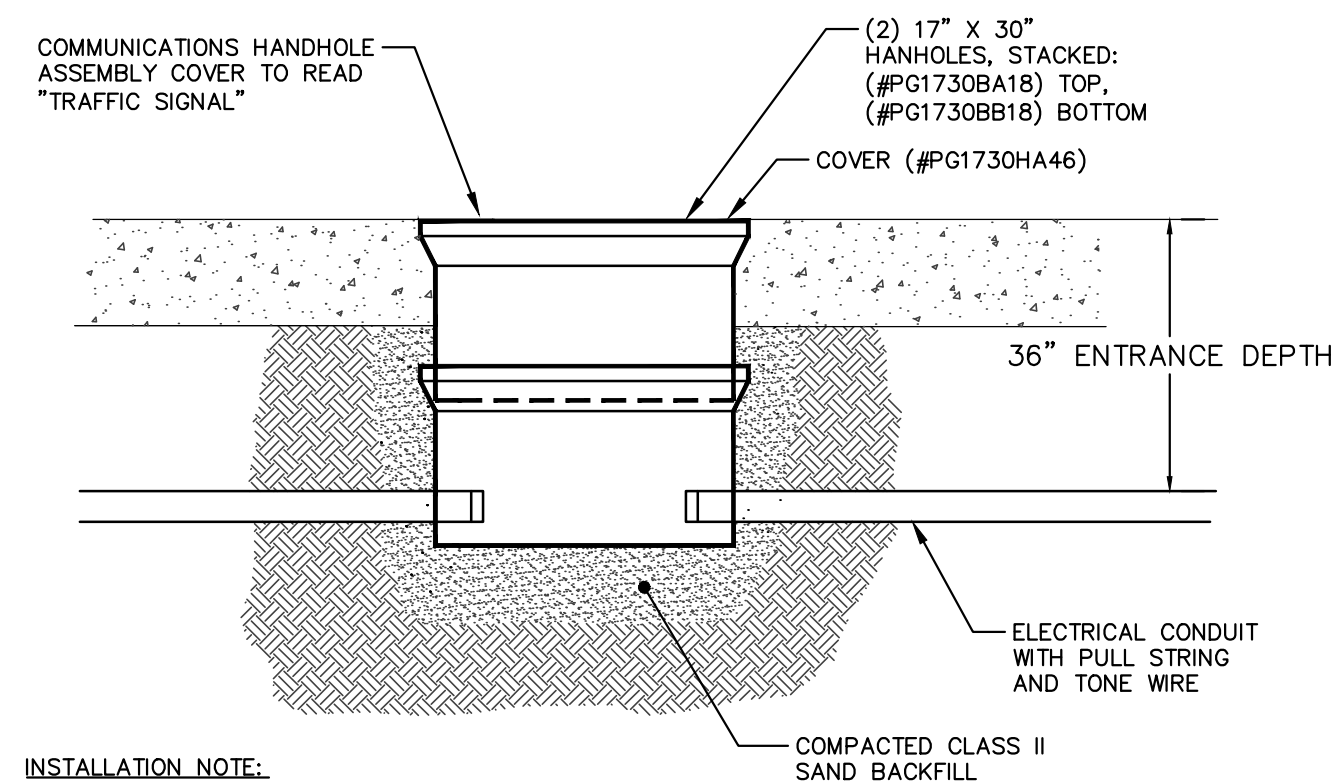


**TREE PROTECTION DETAIL**



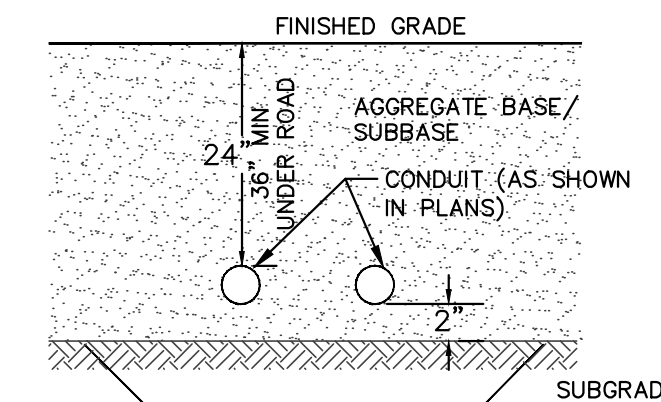
**TRENCH DETAIL I, MODIFIED**

APPLIES TO: SEWER OR WATERMAIN UNDER ROADBED OR WITHIN INFLUENCE OF ROADBED - SEE PLANS FOR LOCATIONS



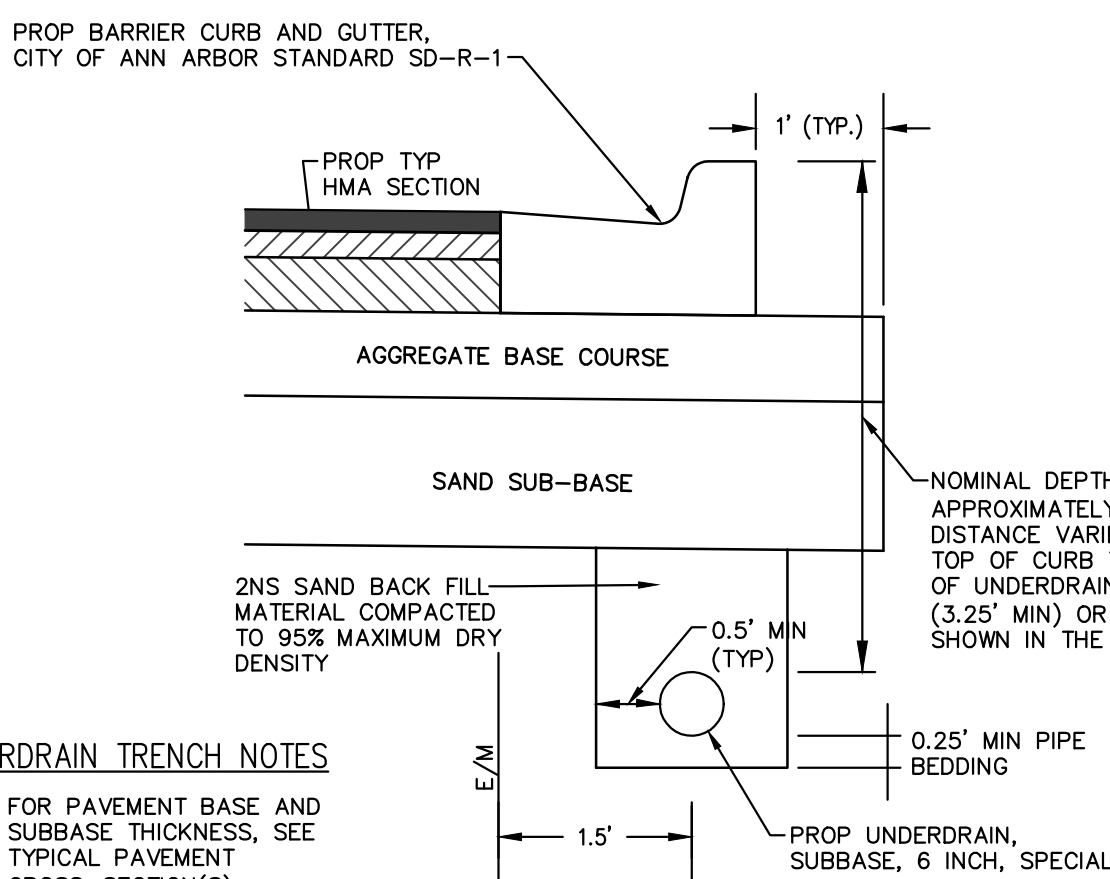
**COMMUNICATIONS HANDHOLE ASSEMBLY**

INSTALLATION NOTE:  
THE CONDUIT SHALL BE LOWERED TO A MINIMUM ENTRANCE DEPTH OF 36\"/>



**CONDUIT PLACEMENT DETAIL**

MAY REQUIRE UNDERCUTTING SUBGRADE TO MAINTAIN MINIMUM DEPTH AND 2\"/>



**TRENCH DETAIL FOR UNDERDRAIN (UNDER HMA PAVEMENT)**

**UNDERDRAIN TRENCH NOTES**

NOTE: FOR PAVEMENT BASE AND SUBBASE THICKNESS, SEE TYPICAL PAVEMENT CROSS-SECTION(S)  
NOTE: TRENCH DETAILS SHOW TYPE OF BACKFILL AND SURFACE RESTORATION ONLY  
NOTE: ALL TRENCHING TO CONFORM TO ALL APPLICABLE M.I.O.S.H.A. STANDARDS  
BASED ON CITY OF ANN ARBOR STANDARD SD-TD-10  
APPLIES TO: HMA PAVEMENT - SEE PLANS FOR LOCATIONS

NOTE: THE SILTSACK WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS.

**REGULAR FLOW SILTSACK**

(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

PROPERTIES	REQUIRED VALUE	TEST METHOD
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4633	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80%
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC -1

**HI-FLOW SILTSACK**

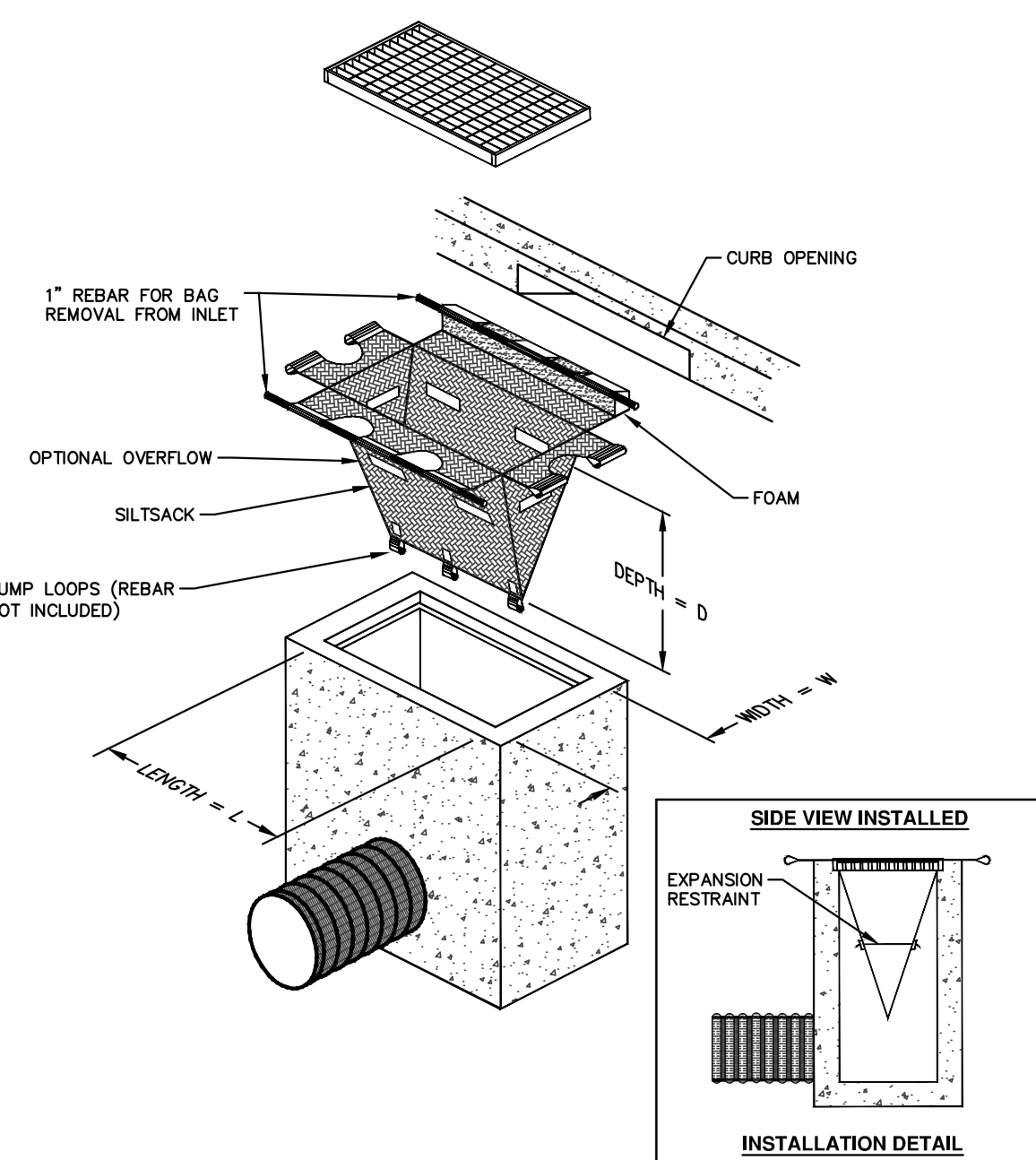
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

PROPERTIES	REQUIRED VALUE	TEST METHOD
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4633	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90%
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC-1

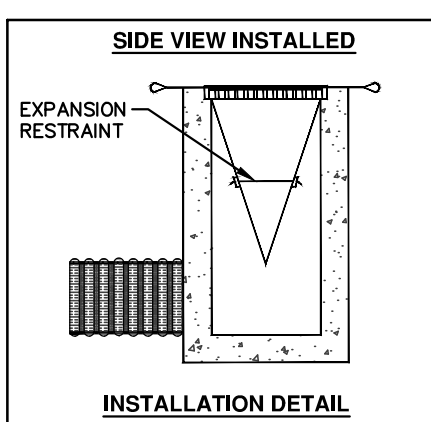
**OIL-ABSORBANT SILTSACK**

(FOR AREAS WHERE THERE IS A CONCERN FOR OIL RUN-OFF OR SPILLS)

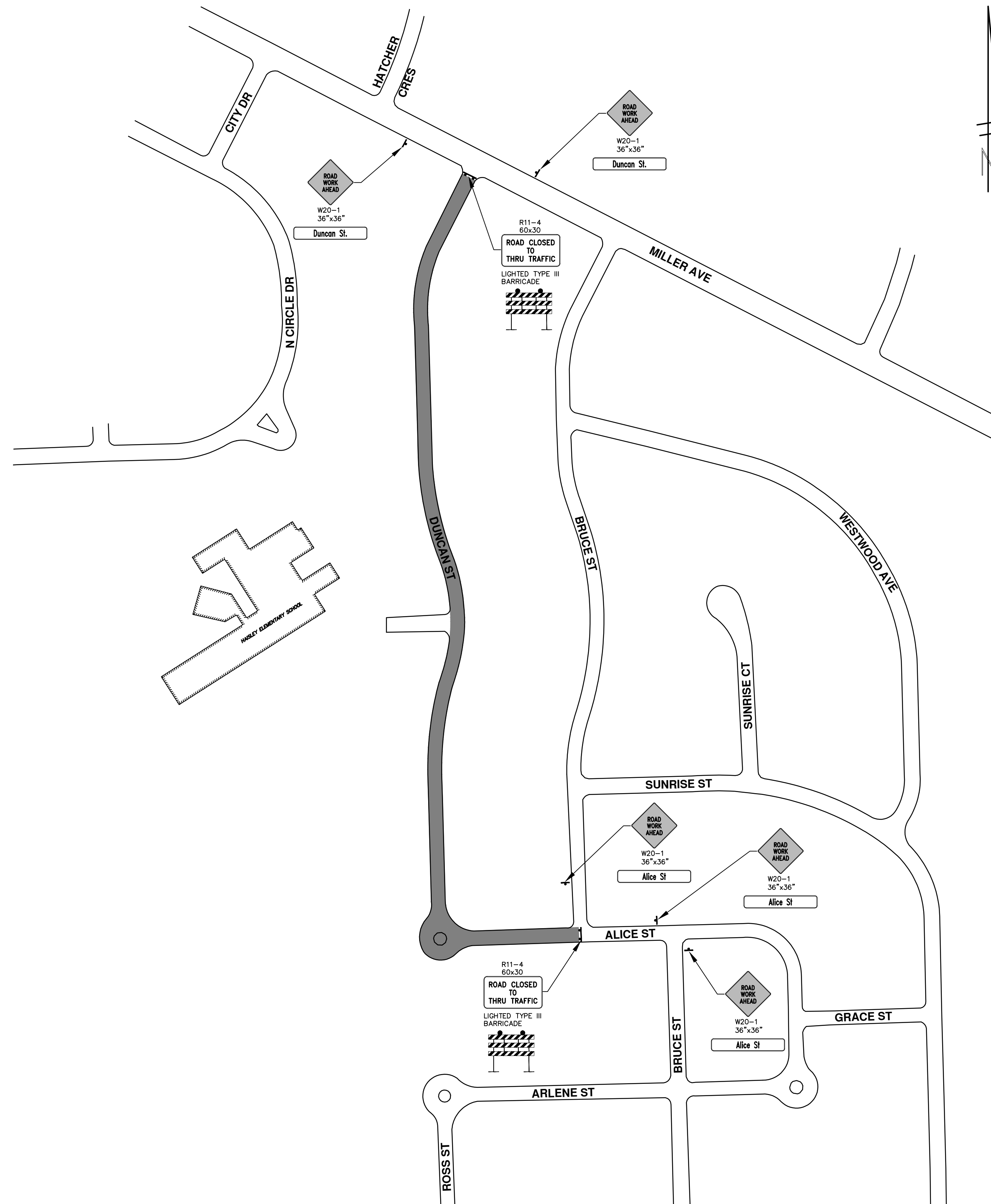
IT IS THE INTENT OF THE PLANS AND SPECIFICATIONS THAT THE CONTRACTOR INSTALL THE REBAR AS SHOWN IN THIS DETAIL TO PROVIDE A FULLY FUNCTIONING UNIT. ALL COSTS ASSOCIATED WITH FURNISHING, CLEANING AS MANY TIMES AS REQUIRED, DISPOSAL OF SEDIMENT, AND REMOVING THE INLET FILTER WHEN NO LONGER NEEDED IS INCLUDED IN THE ITEM OF WORK AND WILL NOT BE PAID FOR SEPARATELY.



**SILTSACK DETAIL**



**INSTALLATION DETAIL**



THIS PROJECT WILL REQUIRE ADDITIONAL COORDINATION WITH THE CITY OF ANN ARBOR 2015 STREET RESURFACING CONTRACT. THE FINAL STREET RESTORATION INCLUDING PLACEMENT OF THE CONCRETE CURB AND GUTTER, CONCRETE SIDEWALK, DRIVE APPROACHES, BITUMINOUS PAVEMENT AND TURF RESTORATION WILL BE PERFORMED UNDER SEPARATE CONTRACT.

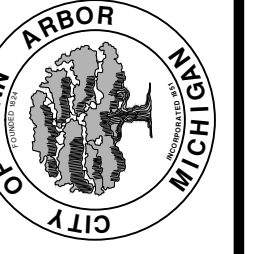
ALL TRAFFIC CONTROL MEASURES SHALL REMAIN IN PLACE PER APPROVED PLANS AND SPECIFICATIONS UNTIL FINAL STREET RESTORATION WORK IS COMPLETED BY CITY OF ANN ARBOR 2015 STREET RESURFACING CONTRACT. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE TRAFFIC CONTROL MEASURES UNTIL THE CITY CONTRACTOR FOR 2015 STREET RESURFACING CONTRACT MOBILIZES TO THE SITE. THE CITY WILL NOTIFY CONTRACTOR OF THE COMPLETION OF THE FINAL STREET RESTORATION WORK AND THE CONTRACTOR WILL BE REQUIRED TO REMOVE ALL TRAFFIC CONTROL MEASURES AT THIS TIME. THE TIMEFRAME BETWEEN COMPLETION OF THE UTILITY WORK AND COMPLETION OF THE FINAL STREET RESTORATION IS NOT EXPECTED TO EXCEED 90 CALENDAR DAYS. THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR THE CONTRACT PAY ITEM "ITEM NO. 203, MINOR TRAFFIC CONTROL."

**MAINTAINING TRAFFIC AND TRAFFIC CONTROL**

1. THE NECESSARY SIGNS AND SIGN SUPPORT STANDARDS, BARRICADES, AND TRAFFIC CONTROL DEVICES NECESSARY FOR THE PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AS APPROVED BY THE CITY OF ANN ARBOR. ALL SUCH DEVICES SHALL BE FURNISHED, INSTALLED, AND MAINTAINED BY THE CONTRACTOR.
2. REFER TO CITY SPECIFICATIONS FOR DETAILS ON MATERIALS, EQUIPMENT, AND CONSTRUCTION METHODS.
3. ALL POSTS TO BE DRIVEN INTO GROUND.
4. CONTRACTOR TO FIELD STAKE ALL SIGNS AND CONTACT CITY FOR REVIEW AND APPROVAL OF SIGN PLACEMENT PRIOR TO INSTALLATION.



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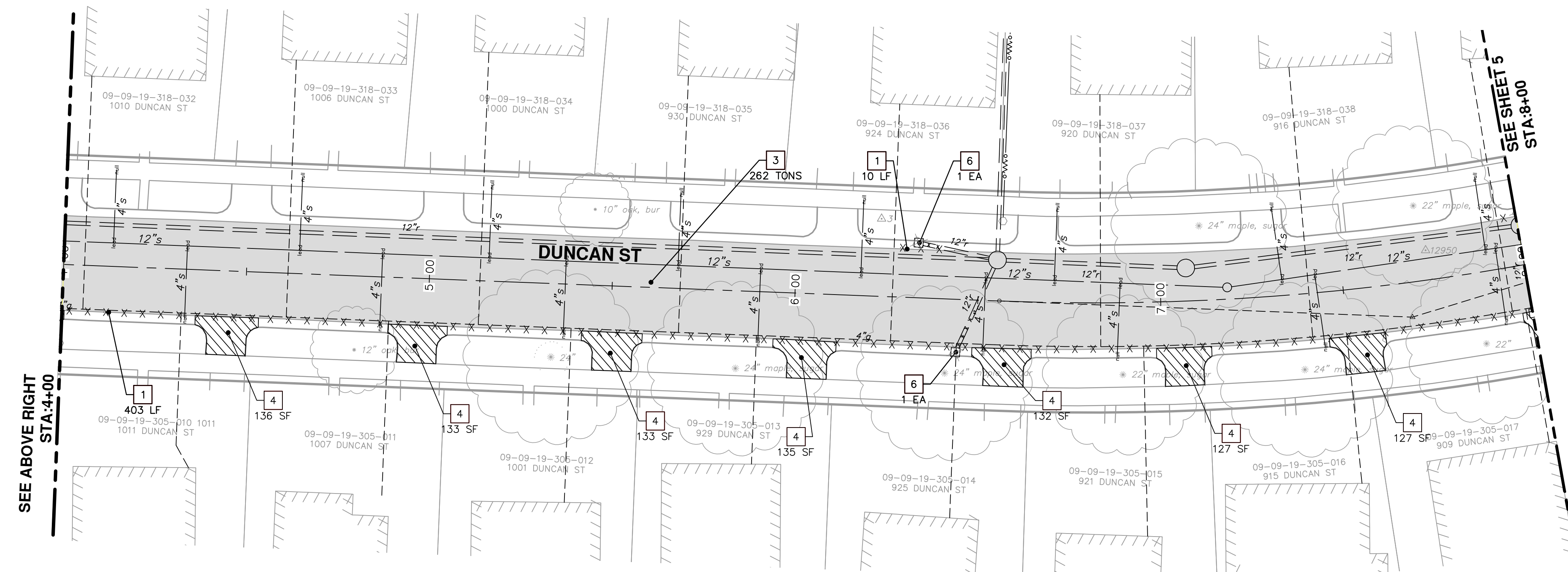
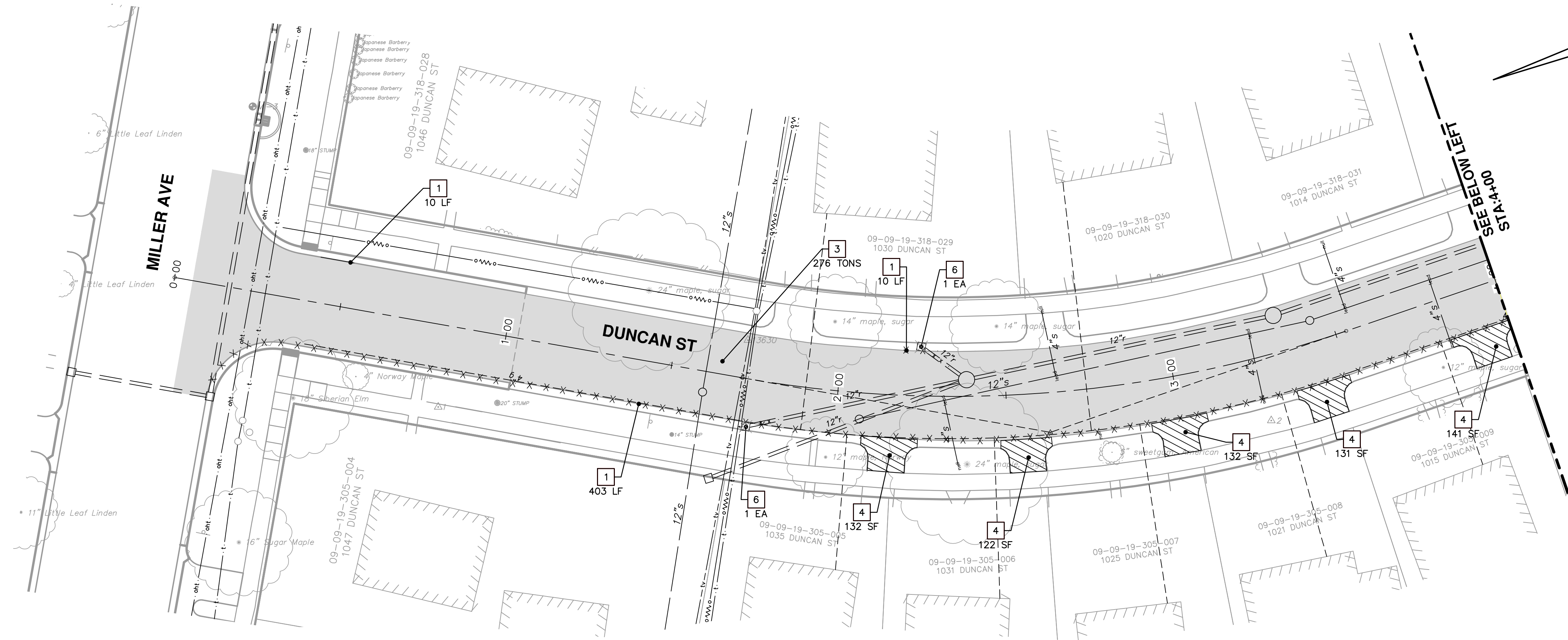


**PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR  
DUNCAN STREET IMPROVEMENTS  
TRAFFIC CONTROL**

SCALE PLAN: 1" = 150'  
DRAWING No. 2013027-5

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

S:\Project Management\Design\2013027 Duncan St\Plan Production\Primary\2013027REM.dwg Dwg Created: 21-Aug-14 - \_a2 standard bw.stb - Plot Date: 6-Feb-15



REMOVAL KEY	
KEY	DESCRIPTION
1	REMOVE EXISTING CURB AND GUTTER - ANY TYPE
2	REMOVE EXISTING SIDEWALK OR RAMP - ANY TYPE OR THICKNESS
3	REMOVE EXISTING PAVEMENT - ANY THICKNESS, SAWCUT FULL DEPTH AT REMOVAL LIMITS
4	REMOVE EXISTING 6-INCH DRIVEWAY
5	REMOVE DROP INLET & INSTALL SINGLE INLET STRUCTURE
6	REMOVE TREE
7	PROTECTIVE FENCING

**PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR**  
**DUNCAN STREET IMPROVEMENTS**  
 REMOVALS

SCALE PLAN: 1" = 20'  
 DRAWING No. 2013027-6

SHEET No. 6 OF 17

STA. 0+00 TO STA. 8+00

SEE ABOVE RIGHT STA:4+00

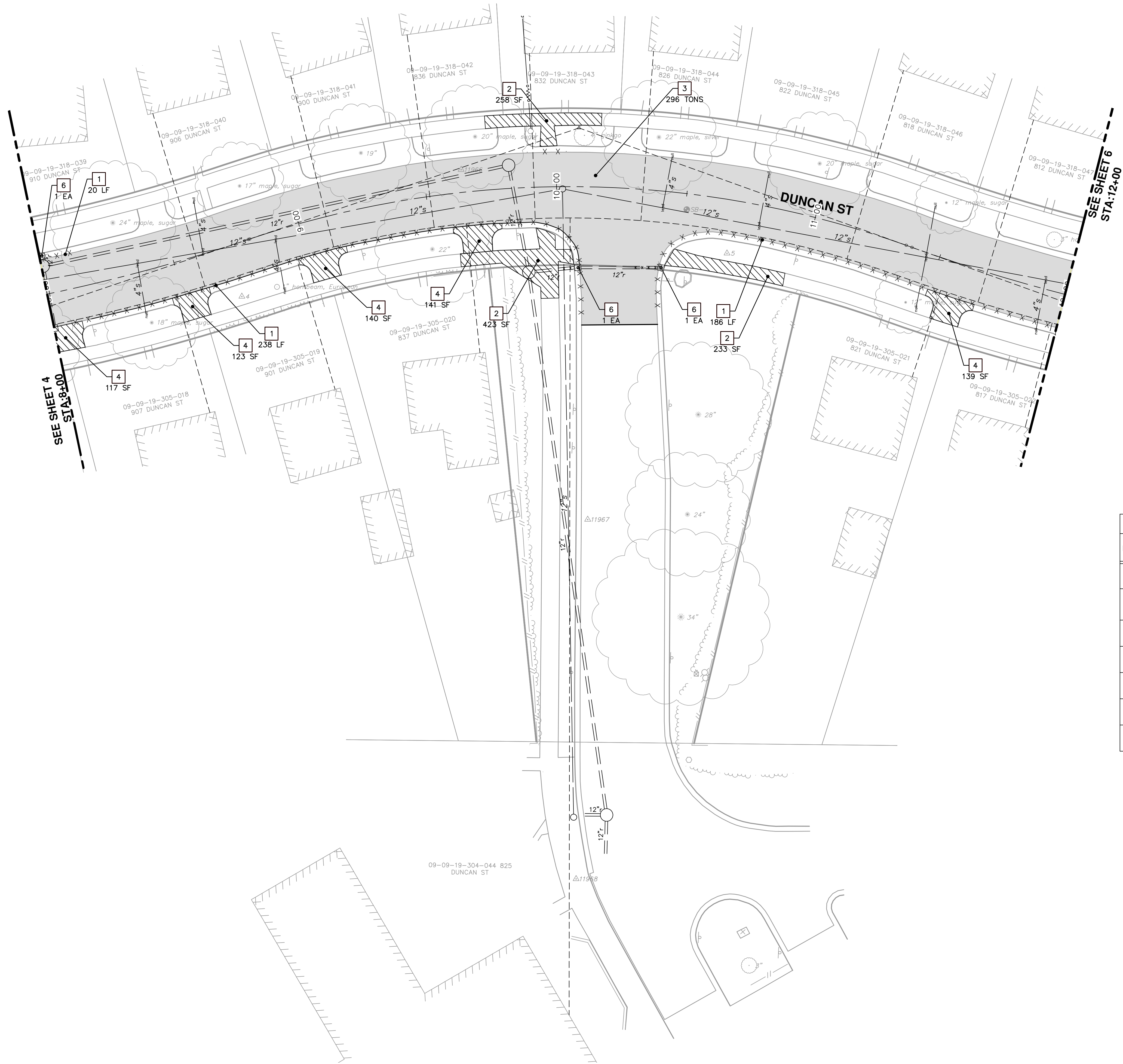
SEE SHEET 5 STA:8+00

SEE BELOW LEFT STA:14+00

CITY OF ANN ARBOR  
 PUBLIC SERVICES  
 301 EAST HURON STREET  
 ANN ARBOR, MI 48106-1667  
 WWW.A2GOV.ORG

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

Know what's below.  
 Call Before you dig.



REMOVAL KEY	
KEY	DESCRIPTION
1	REMOVE EXISTING CURB AND GUTTER - ANY TYPE
2	REMOVE EXISTING SIDEWALK OR RAMP - ANY TYPE OR THICKNESS
3	REMOVE EXISTING PAVEMENT - ANY THICKNESS, SAWCUT FULL DEPTH AT REMOVAL LIMITS
4	REMOVE EXISTING 6-INCH DRIVEWAY
5	REMOVE DROP INLET & INSTALL SINGLE INLET STRUCTURE
6	REMOVE TREE
7	PROTECTIVE FENCING

**PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR**  
**DUNCAN STREET IMPROVEMENTS**  
 REMOVALS  
 STA. 8+00 TO STA. 12+00

SCALE PLAN: 1" = 20'  
 DRAWING No. 2013027-7

**811**  
 Know what's below.  
 Call before you dig.

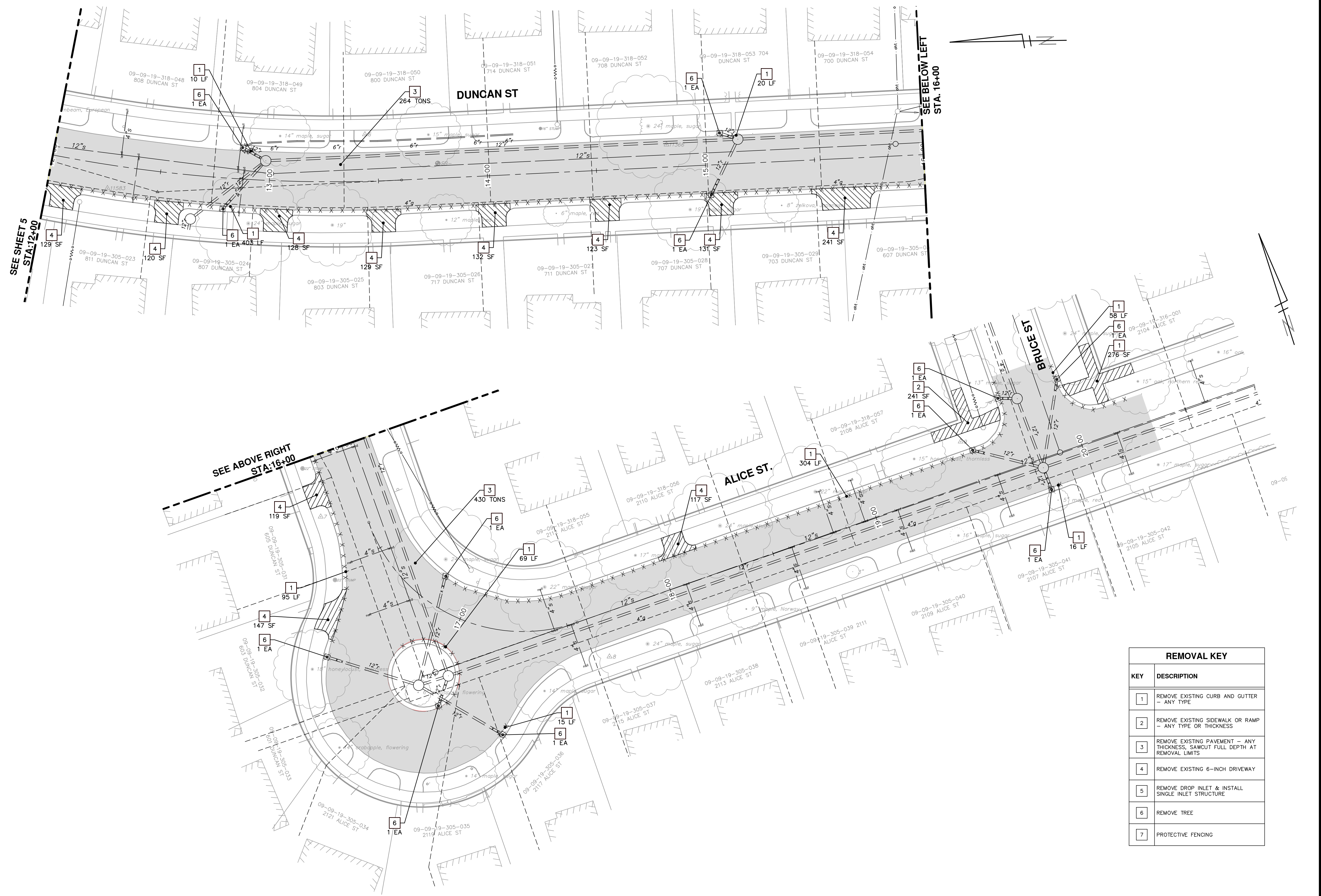
CITY OF ANN ARBOR  
 PUBLIC SERVICE  
 301 EAST HURON STREET  
 ANN ARBOR, MI 48106-8647  
 www.a2gov.org

REVISIONS TABLE:

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

7 OF 17

S:\Project Management\Design\2013027 Duncan St\Plan Production\Primary\2013027REM.dwg Dwg Created: 21-Aug-14 - \_a2 standard bw.stb - Plot Date: 6-Feb-15



REMOVAL KEY	
KEY	DESCRIPTION
1	REMOVE EXISTING CURB AND GUTTER - ANY TYPE
2	REMOVE EXISTING SIDEWALK OR RAMP - ANY TYPE OR THICKNESS
3	REMOVE EXISTING PAVEMENT - ANY THICKNESS, SAWCUT FULL DEPTH AT REMOVAL LIMITS
4	REMOVE EXISTING 6-INCH DRIVEWAY
5	REMOVE DROP INLET & INSTALL SINGLE INLET STRUCTURE
6	REMOVE TREE
7	PROTECTIVE FENCING

**PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR**  
**DUNCAN STREET IMPROVEMENTS**  
 REMOVALS  
 STA. 12+00 TO P.O.E.

SCALE PLAN: 1" = 20'  
 DRAWING No. 2013027-8  
 SHEET No. 8 OF 17

**811**  
 Know what's below.  
 Call before you dig.

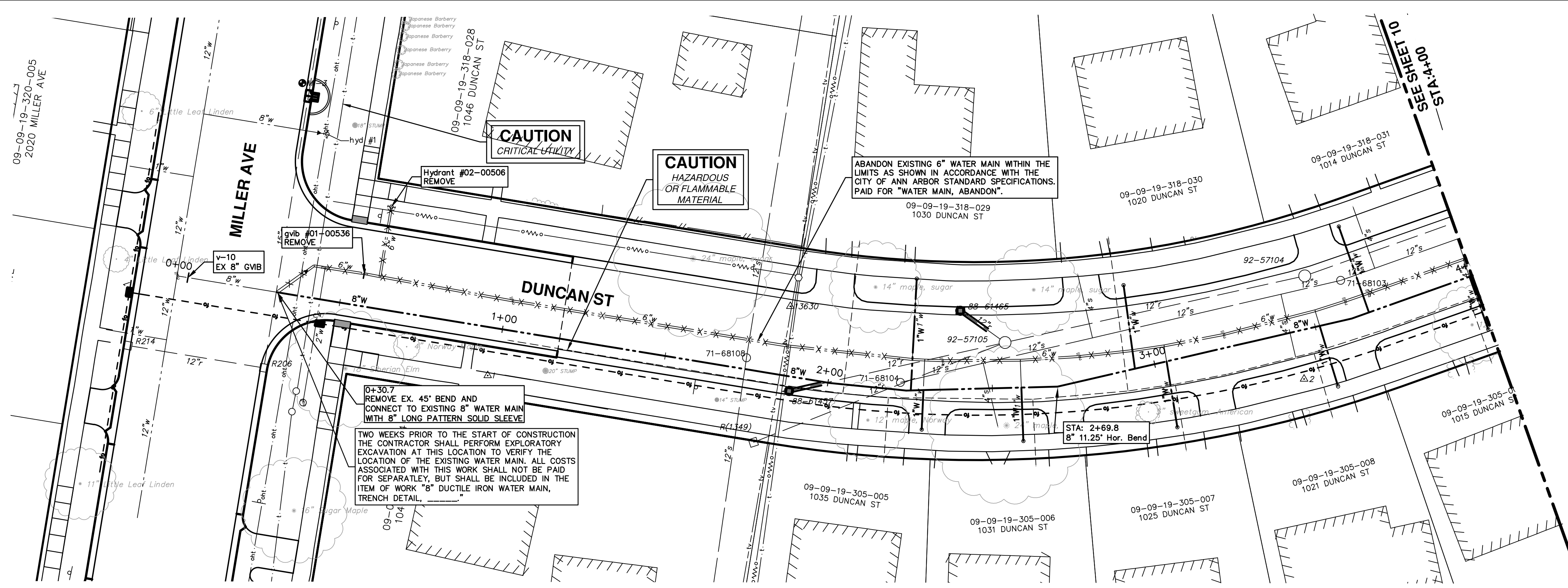
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CITY OF ANN ARBOR  
 MICHIGAN

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

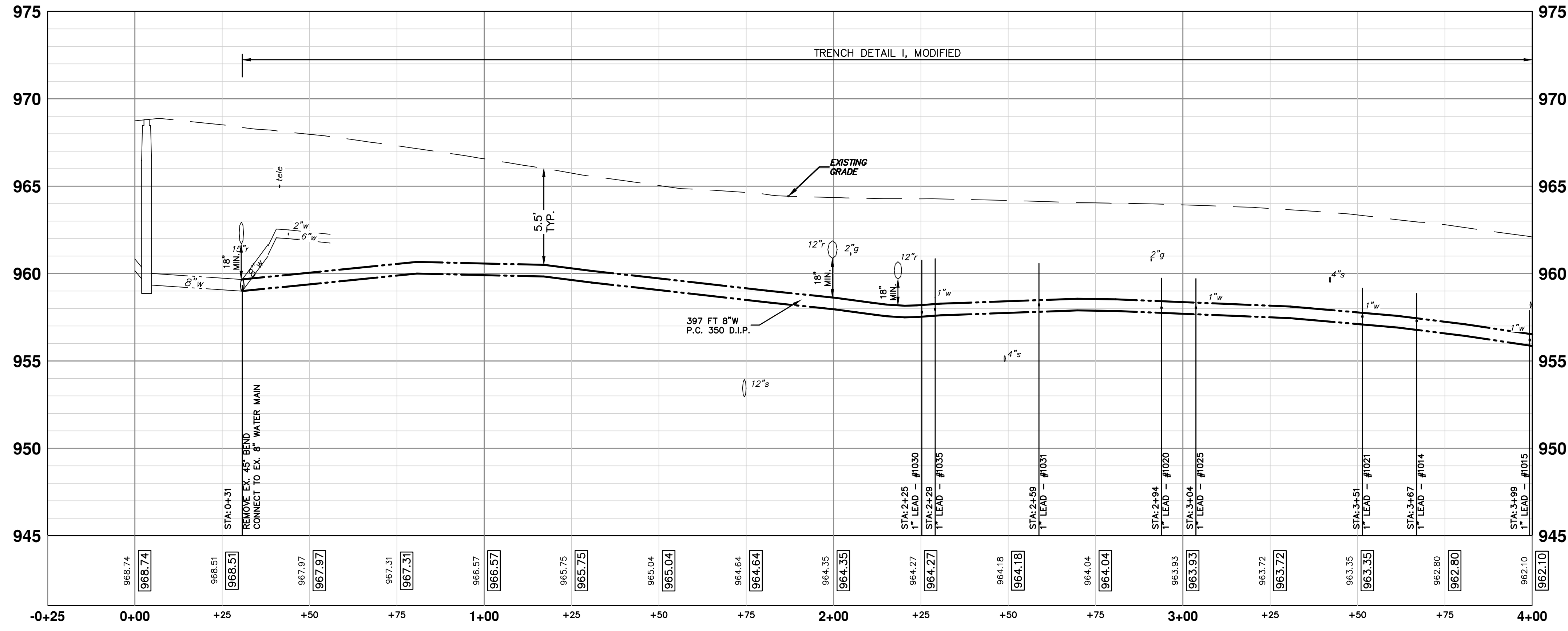


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**EX WATER MAIN STRUCTURE TABLE**

STRUCTURE	TYPE	STATION	RIM	DEPTH
v-10	EX 8" GVB	0+03	968.81	9.45
gvib #01-00536	REMOVE	0+42	967.95	6.20
Hydrant #02-00506	REMOVE	0+47	968.33	5.33



**PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR**

**DUNCAN STREET IMPROVEMENTS**

WATER MAIN PLAN & PROFILE  
WATER - STA. 0+00 TO 4+00

SCALE PLAN: 1/20  
PROFILE: 1" = 4'

DRAWING NO. 2013027-9

SHEET No. 9 OF 17

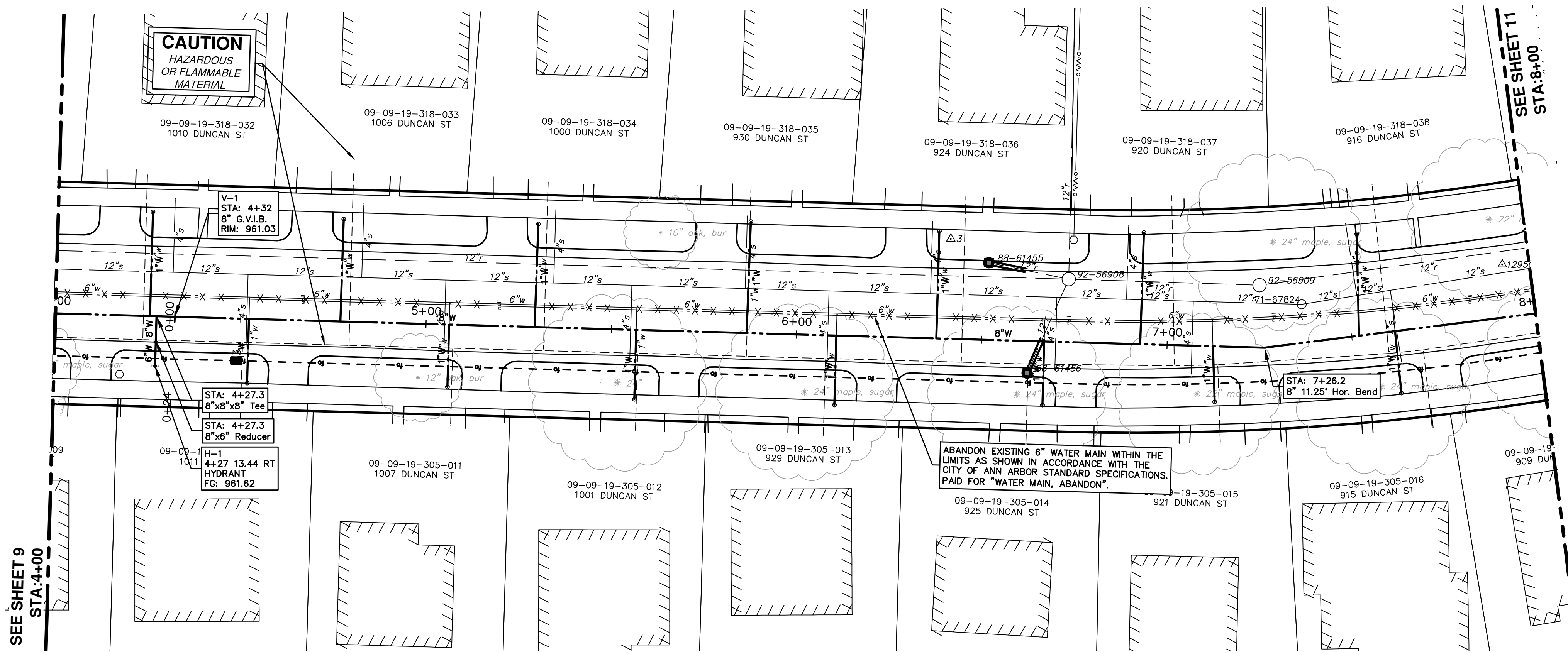
**811**  
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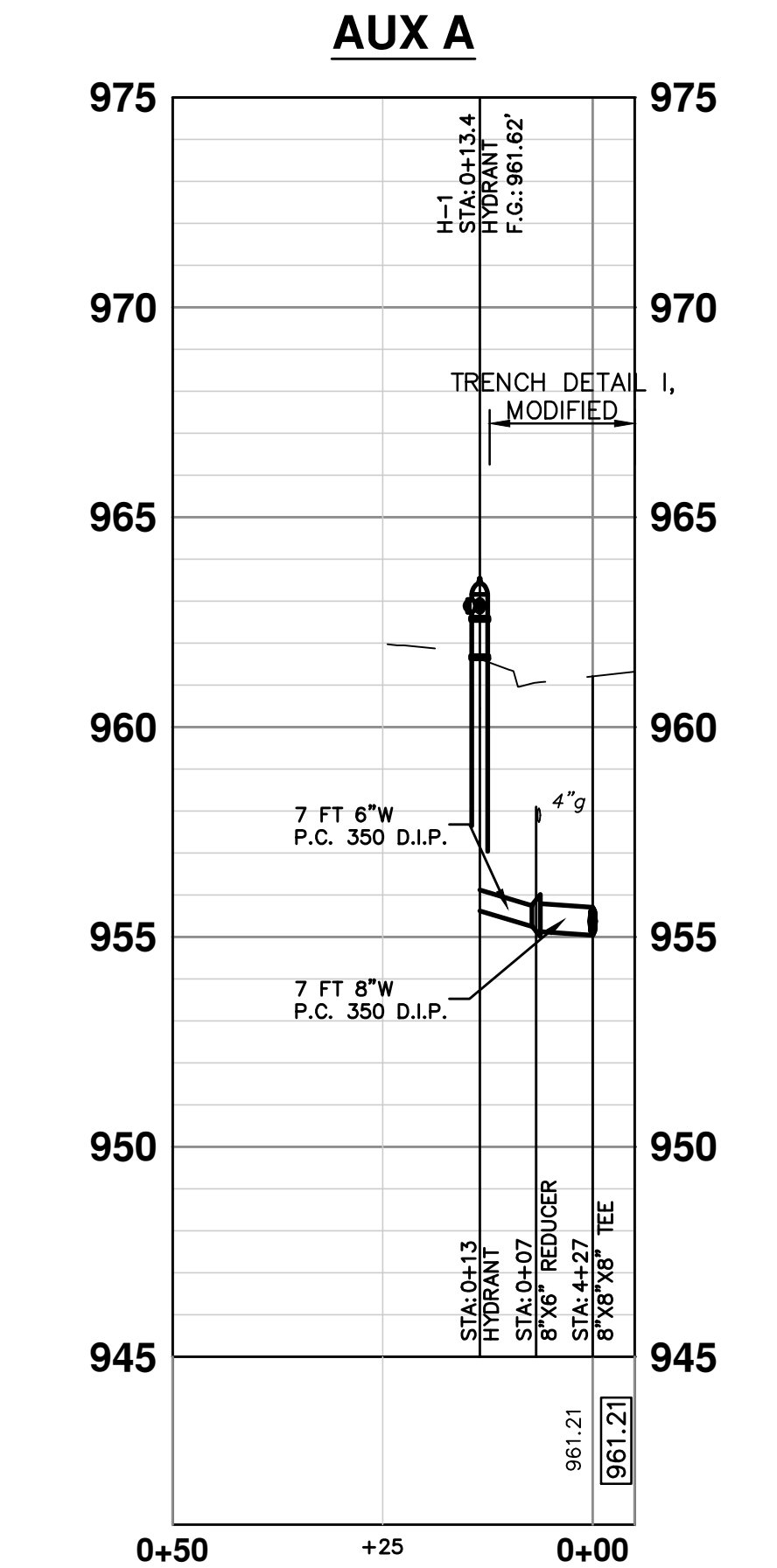
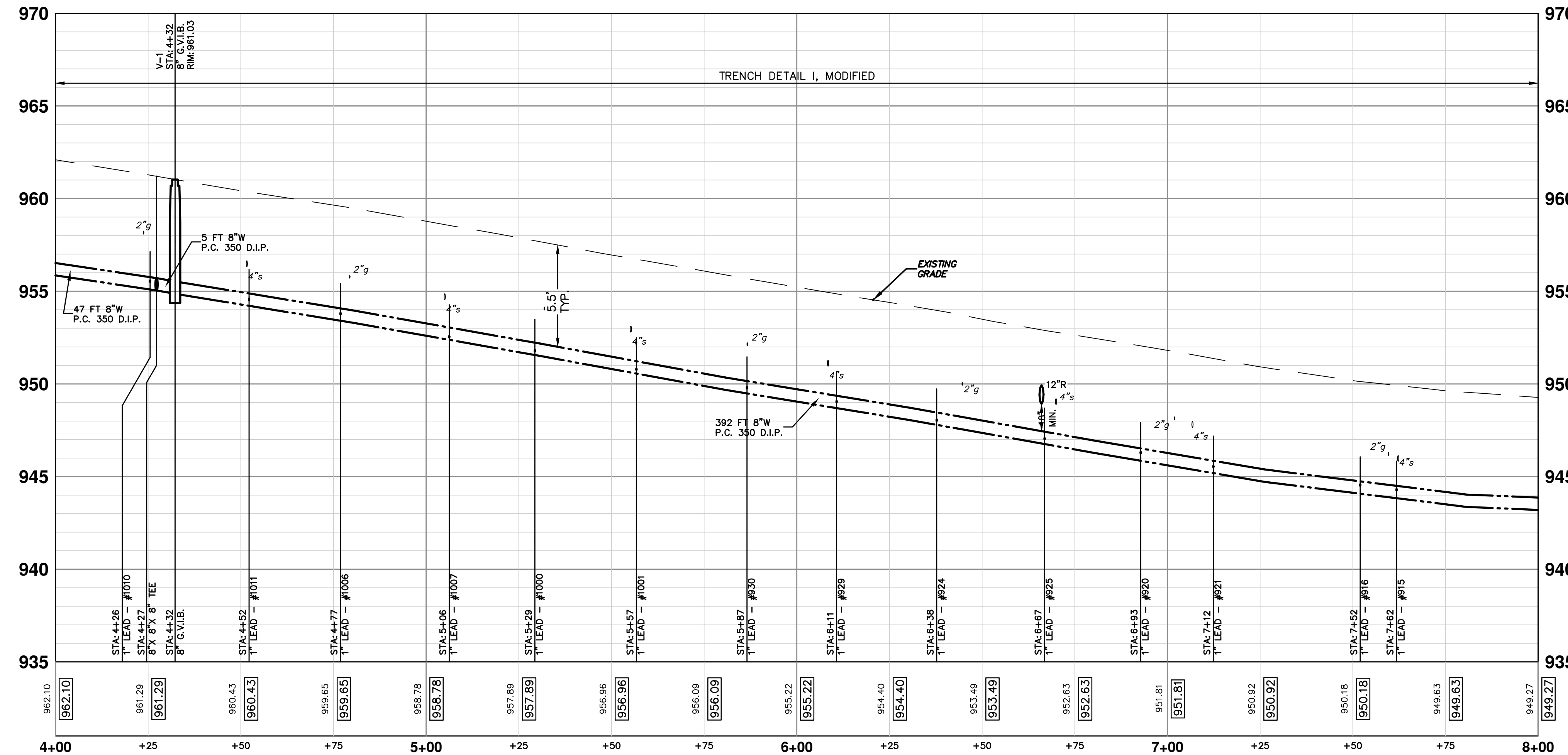
CITY OF ANN ARBOR  
MICHIGAN

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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WATER MAIN STRUCTURE TABLE				
STRUCTURE	TYPE	STATION	RIM	DEPTH
H-1	HYDRANT	0+13	961.62	6.00
V-1	8" G.V.I.B.	4+32	961.03	6.17



**811**  
Know what's below. Call Before you dig.

City of Ann Arbor  
Public Service  
301 East Huron Street  
Ann Arbor, MI 48106-1667  
www.a2gov.org

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**PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR**

SCALE PLAN: 1"=20'  
DRAWING No. 2013027-10

**DUNCAN STREET IMPROVEMENTS**

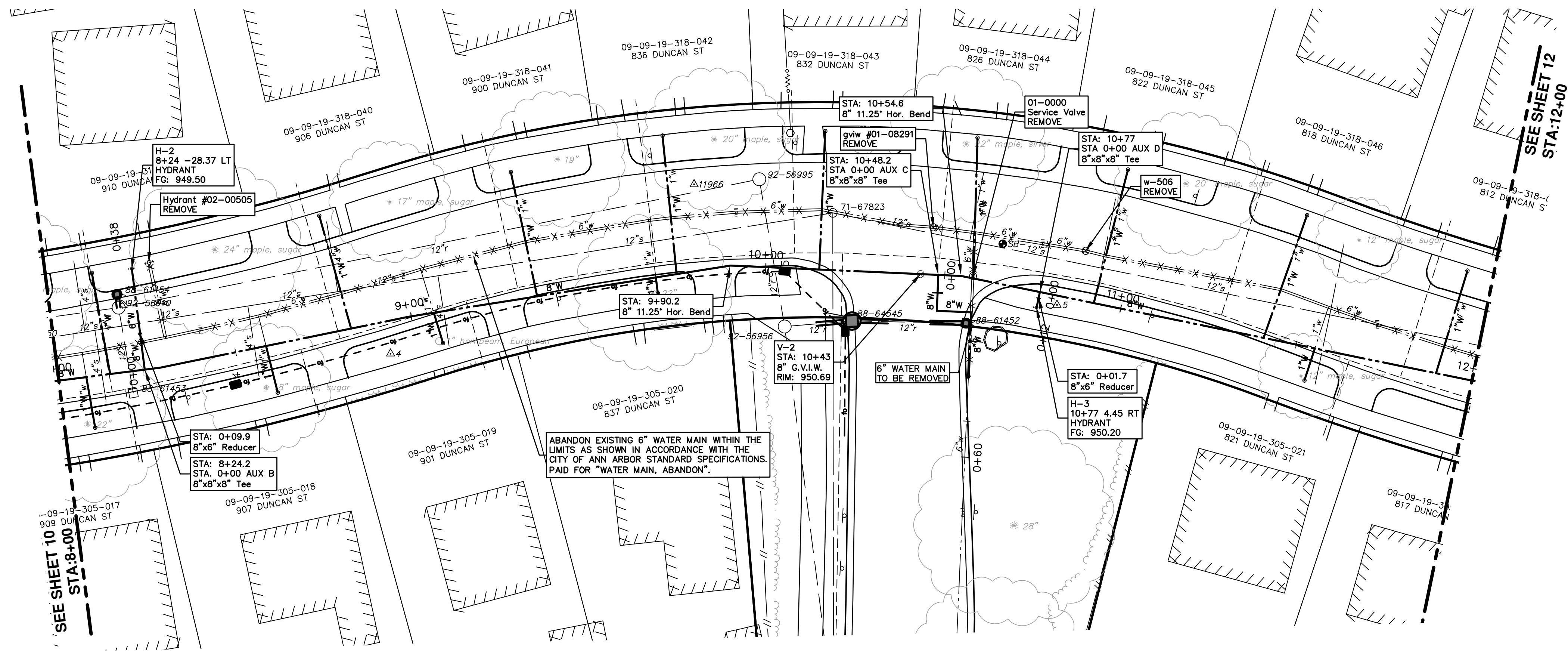
WATER MAIN PLAN & PROFILE  
WATER - STA. 4+00 TO 8+00

PROFILE: 1"=4'  
SHEET No. 10 OF 17

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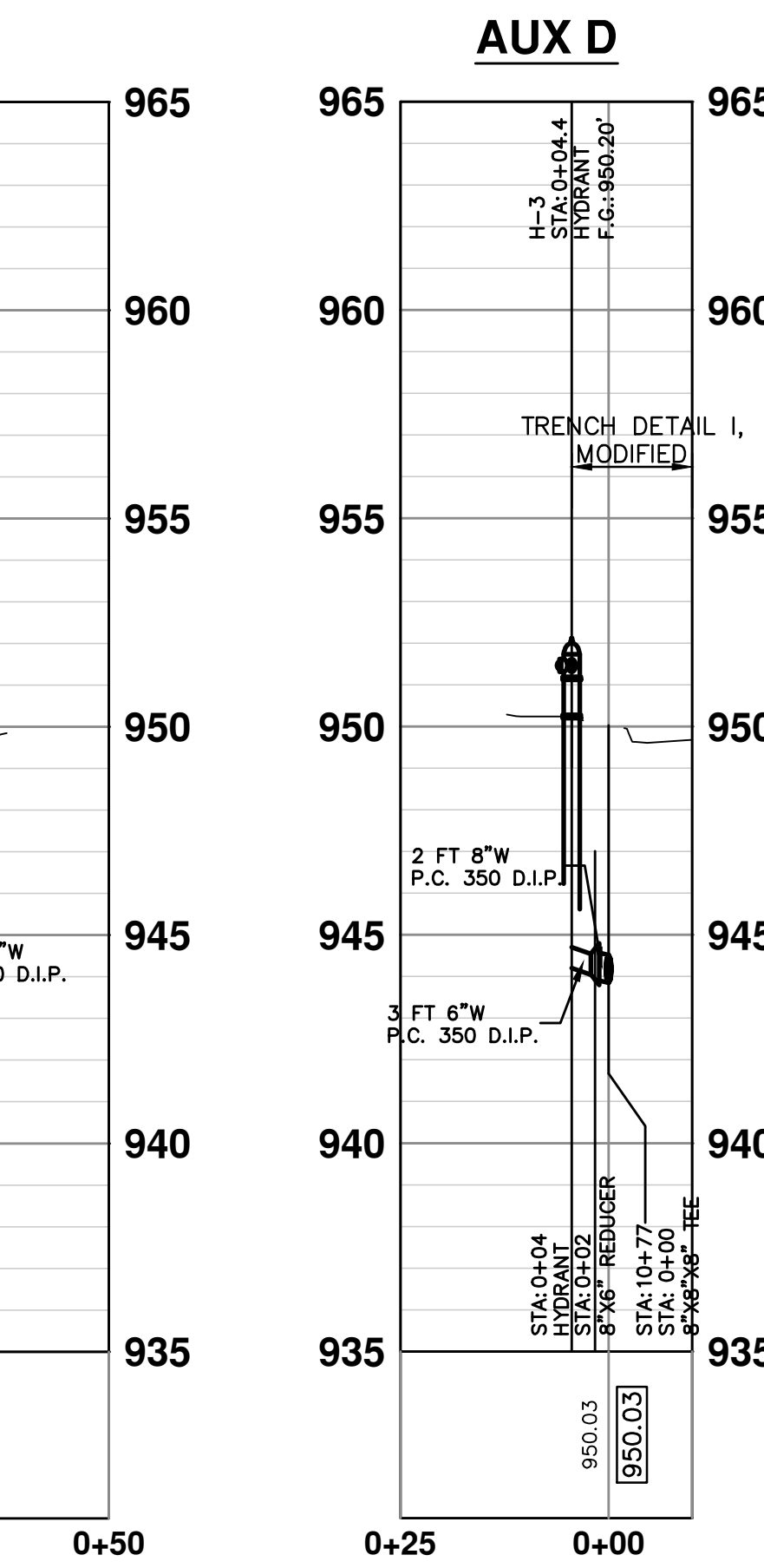
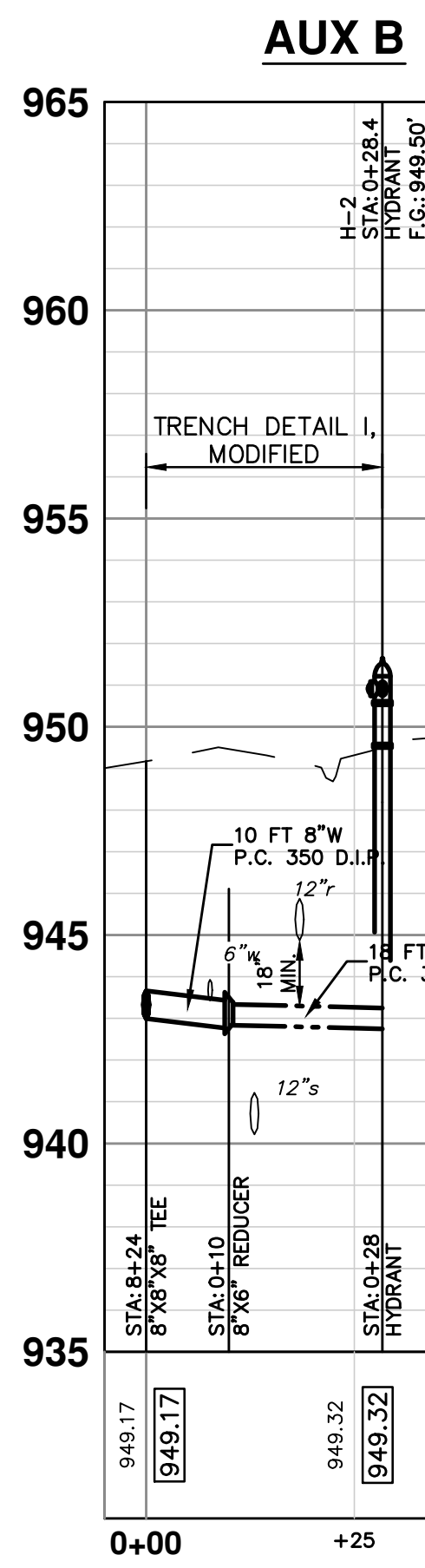
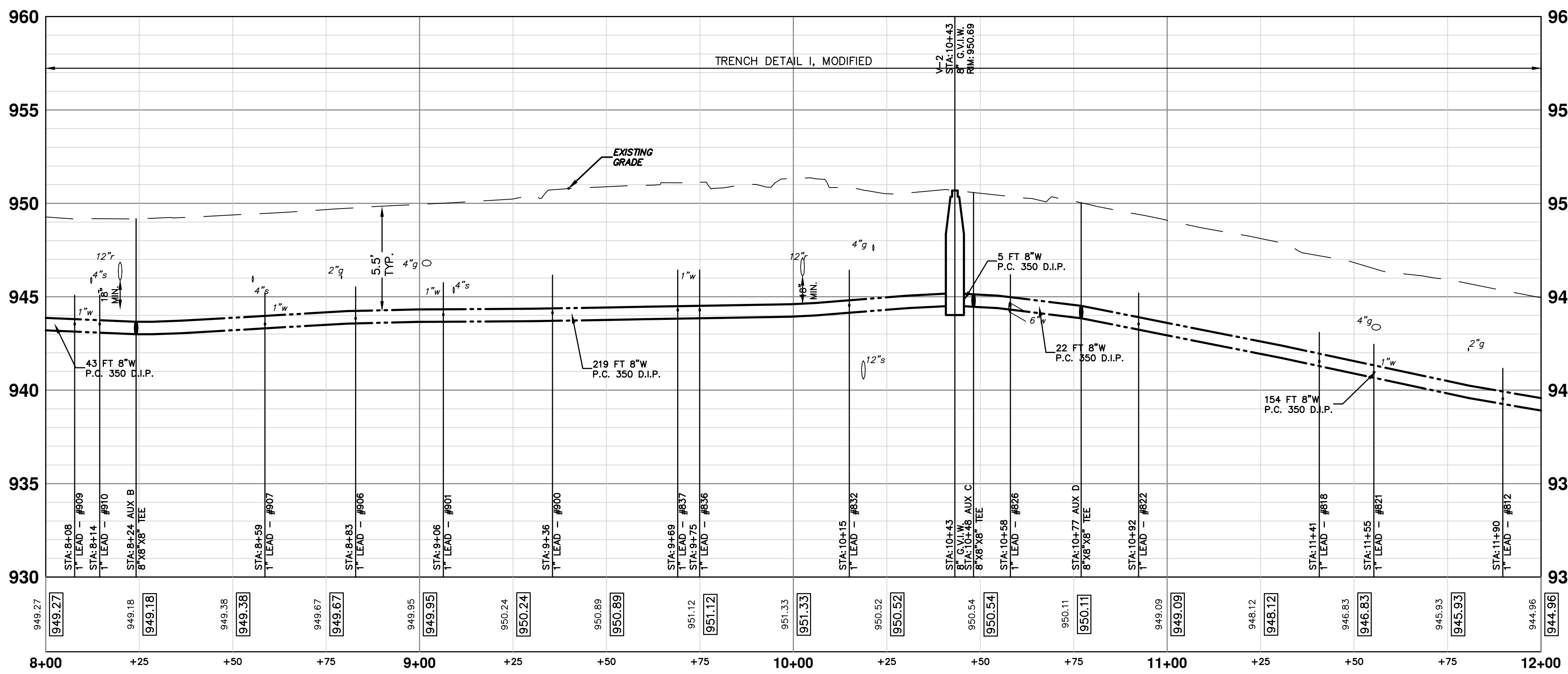
REV.	DESCRIPTION	DATE	DRAWN	CHECKED


S:\Project Management\Design\2013027 Duncan St\Source Drawings\Pipe Networks\2013027PNWatr.dwg Dwg Created: 8-Apr-14 - \_a2 standard bw.stb - Plot Date: 6-Feb-15



WATER MAIN STRUCTURE TABLE				
STRUCTURE	TYPE	STATION	RIM	DEPTH
H-3	HYDRANT	0+04	950.20	6.00
V-3	8" G.V.I.B.	0+05	950.55	6.71
H-2	HYDRANT	0+28	949.50	6.75
V-2	8" G.V.I.W.	10+43	950.69	6.16


EX WATER MAIN STRUCTURE TABLE				
STRUCTURE	TYPE	STATION	RIM	DEPTH
Hydrant #02-00505	REMOVE	8+12	949.56	6.95
g.v.w. #01-08291	REMOVE	10+31	950.70	9.60
01-0000	Service Valve REMOVE	10+43	950.37	6.17
w-506	REMOVE	10+74	949.42	6.24





Know what's below.  
Call Before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED



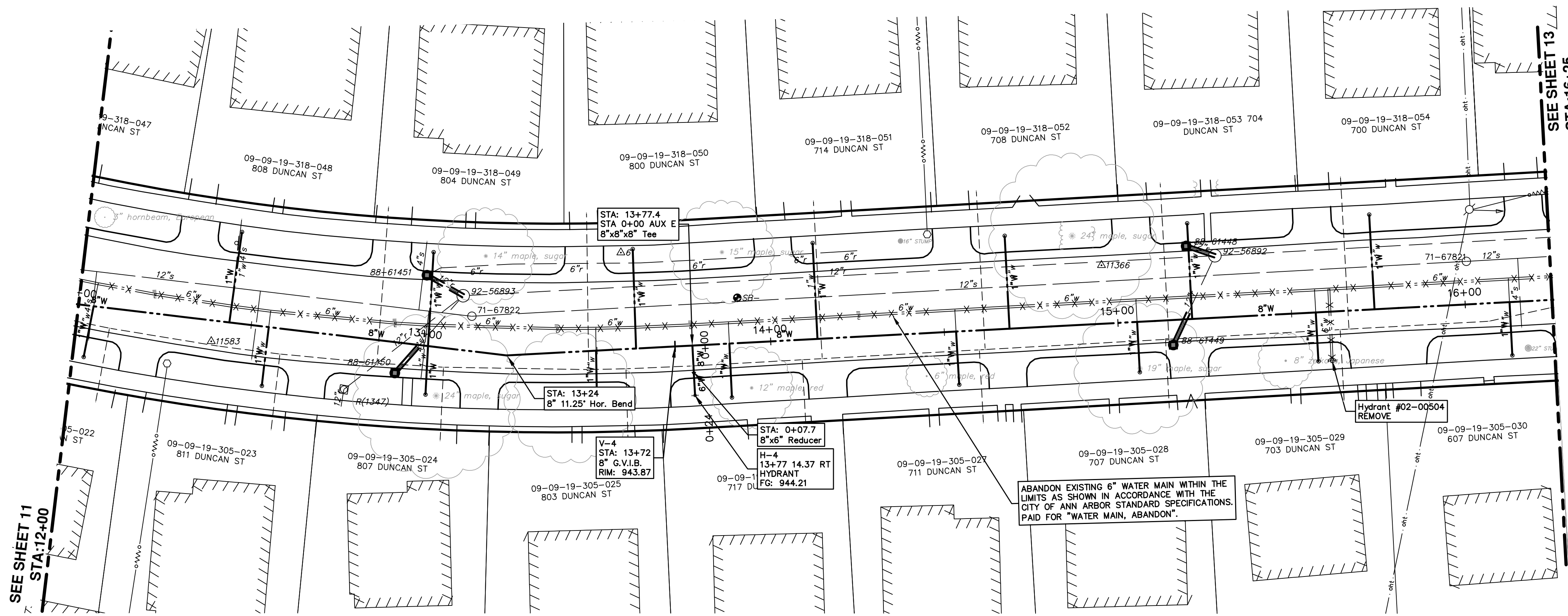
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**PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR**  
DUNCAN STREET IMPROVEMENTS  
WATER MAIN PLAN & PROFILE  
WATER - STA. 8+00 TO 12+00

SCALE PLAN: 1"=20'  
PROFILE: 1"=4'

DRAWING NO.  
**2013027-11**

SHEET NO.  
**11 OF 17**

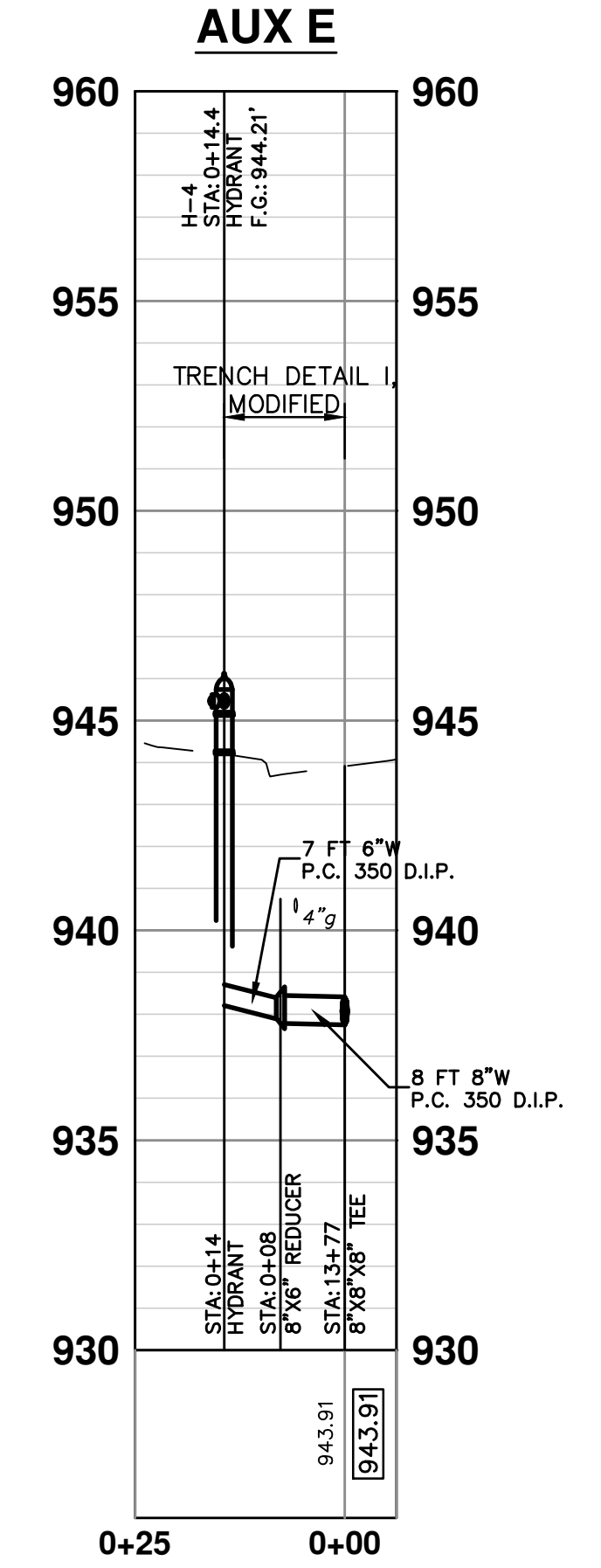
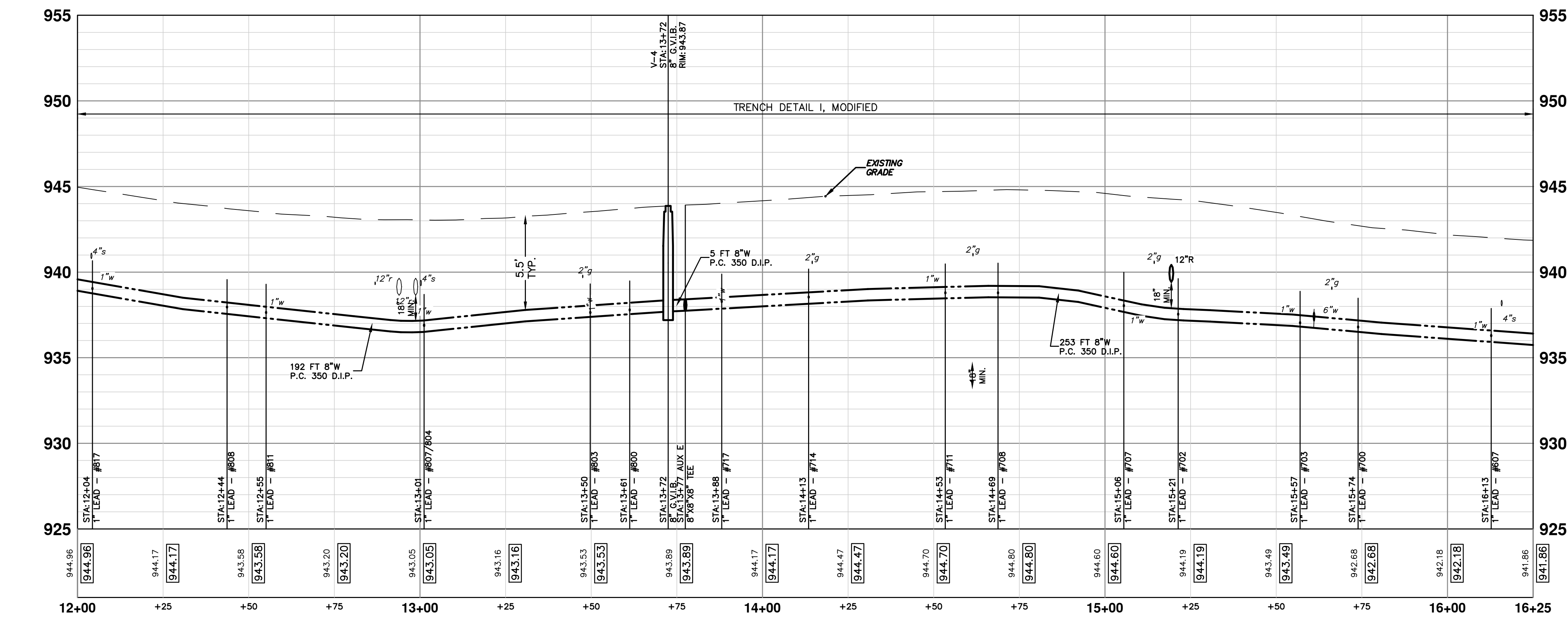



**WATER MAIN STRUCTURE TABLE**

STRUCTURE	TYPE	STATION	RIM	DEPTH
H-4	HYDRANT	0+14	944.21	6.00

**EX WATER MAIN STRUCTURE TABLE**


STRUCTURE	TYPE	STATION	RIM	DEPTH
Hydrant #02-00504	REMOVE	15+47	943.14	6.40





Know what's below.  
Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED



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**DUNCAN STREET IMPROVEMENTS**  
WATER MAIN PLAN & PROFILE  
WATER - STA. 12+00 TO 16+00

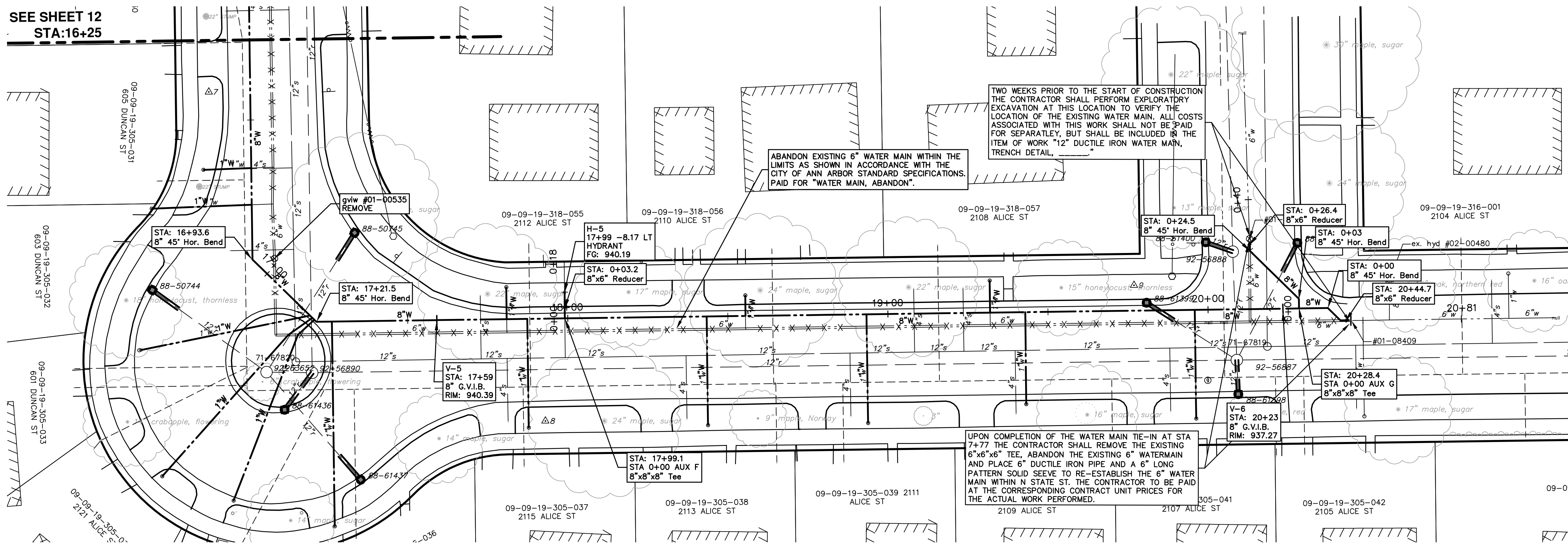
SCALE PLAN: 1"=20'  
PROFILE: 1"=4'

DRAWING No. 2013027-12

SHEET No. 12 OF 17

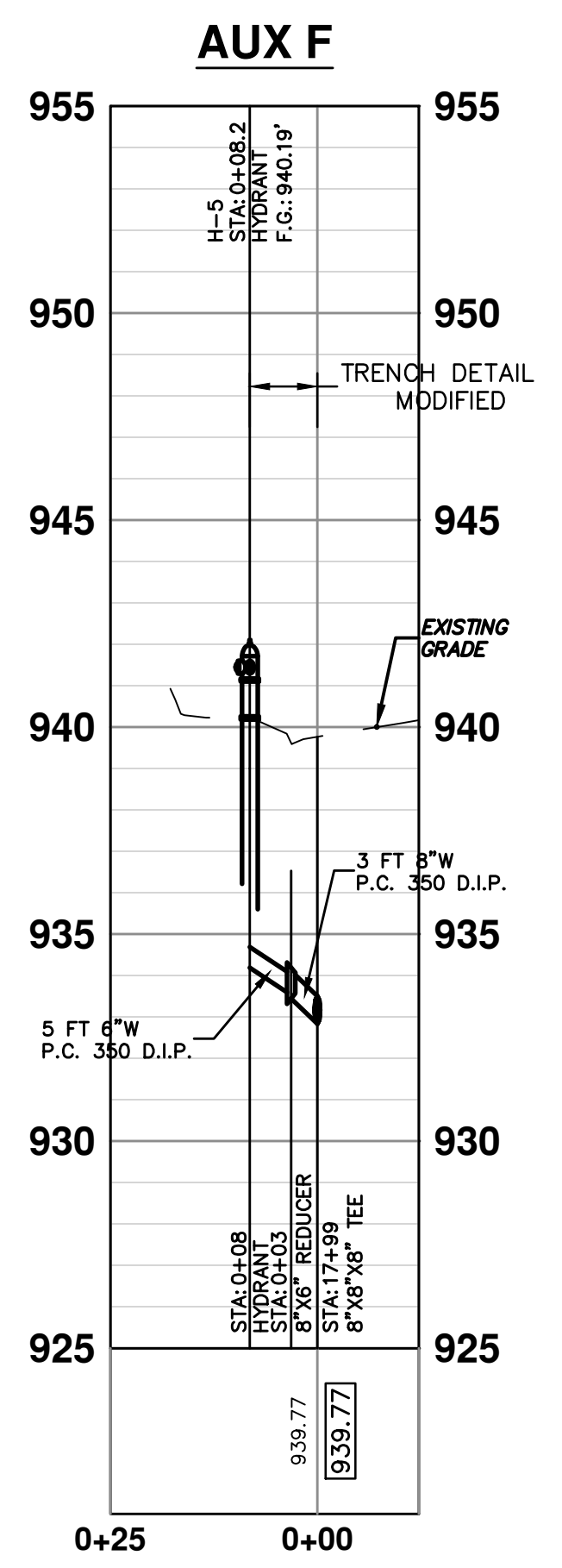
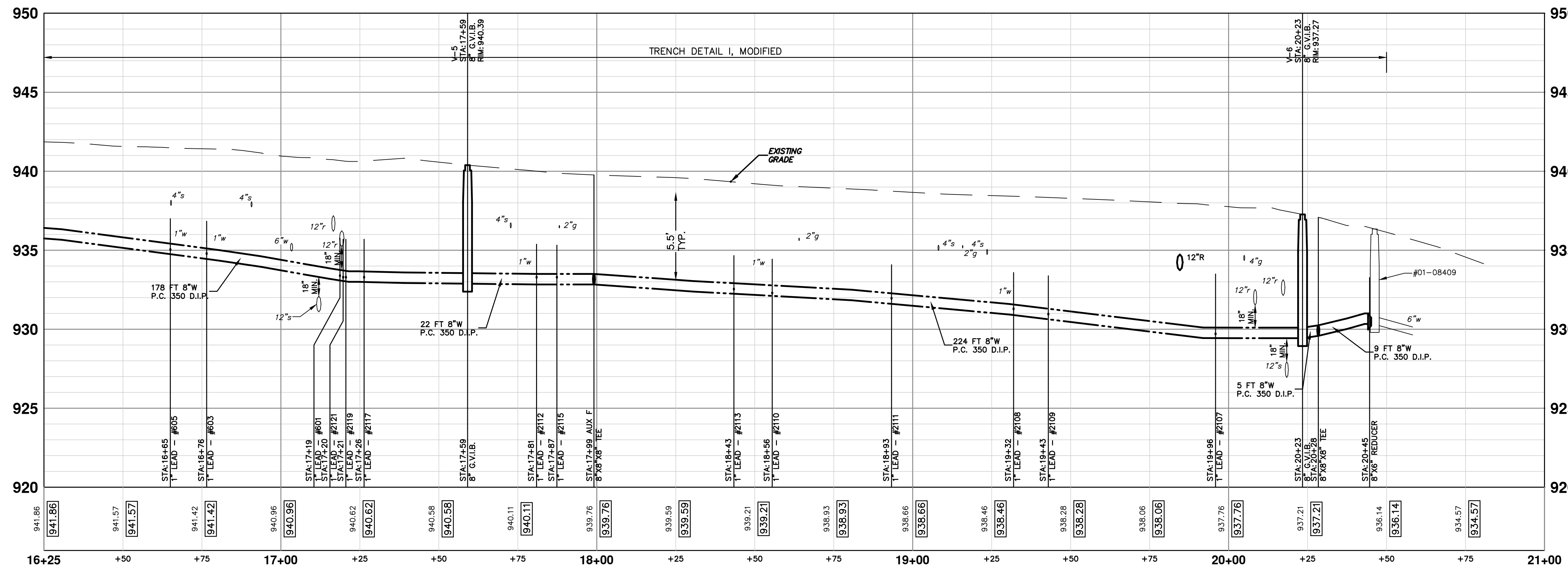
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SEE SHEET 12  
STA: 16+25



WATER MAIN STRUCTURE TABLE				
STRUCTURE	TYPE	STATION	RIM	DEPTH
H-5	HYDRANT	0+08	940.19	6.00
V-6	8" G.V.I.B.	20+23	937.27	7.84

EX WATER MAIN STRUCTURE TABLE				
STRUCTURE	TYPE	STATION	RIM	DEPTH
gviw #01-00535	REMOVE	16+76	940.96	6.04
#01-00264	gviw #01-00264	19+84	937.69	6.17
#01-08409	gviw #01-08409	20+16	936.34	6.04



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NO.	DESCRIPTION	DATE	DRAWN	CHECKED

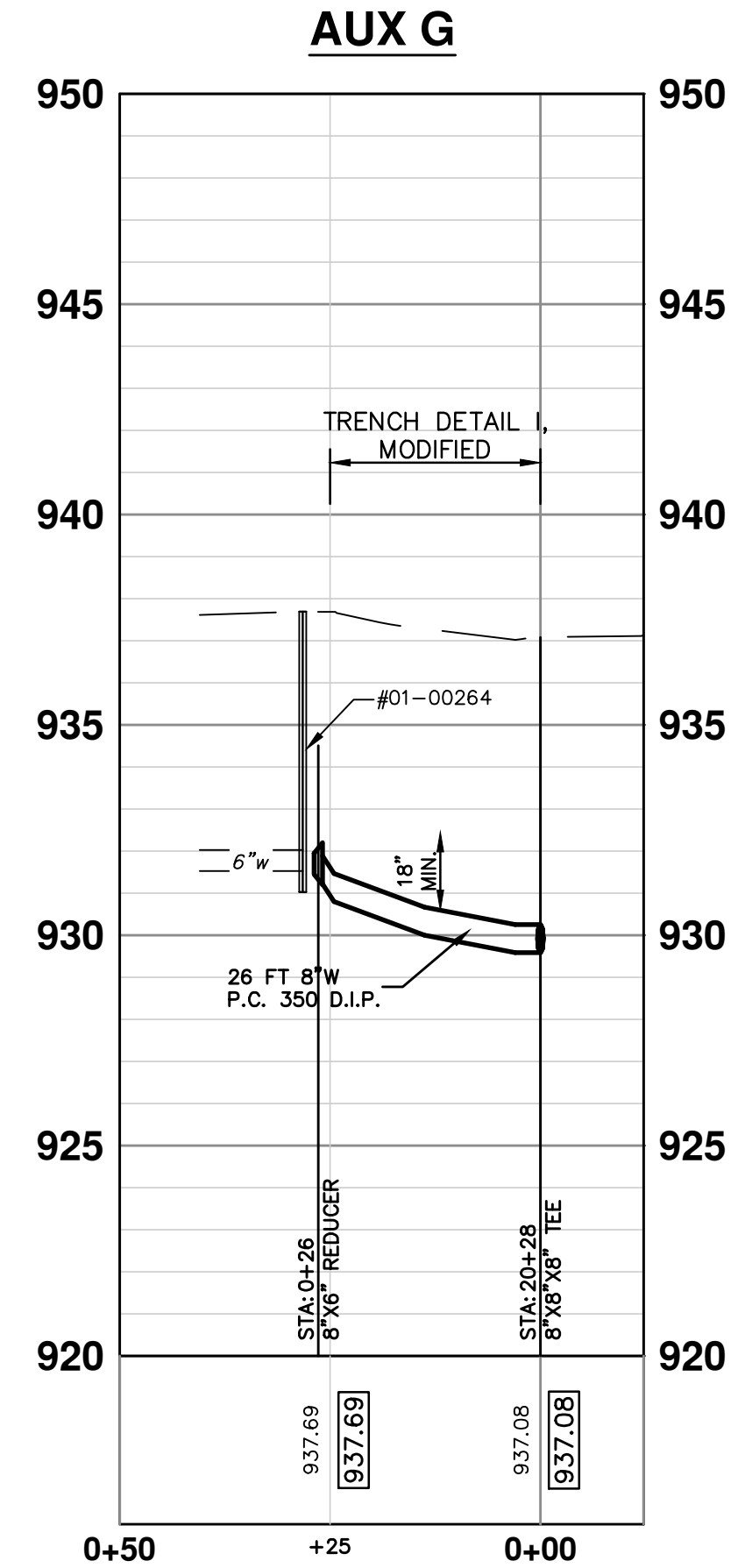
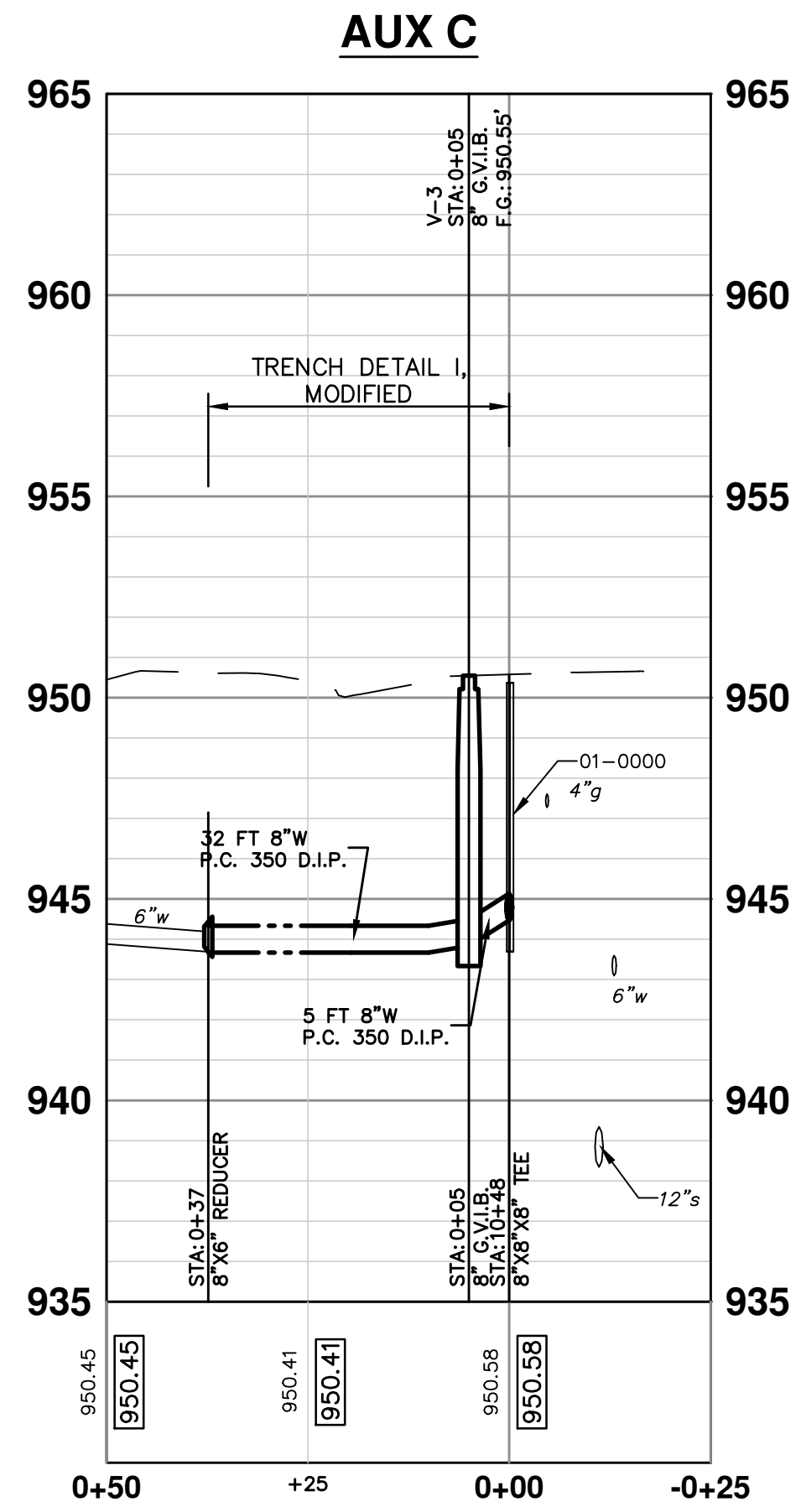
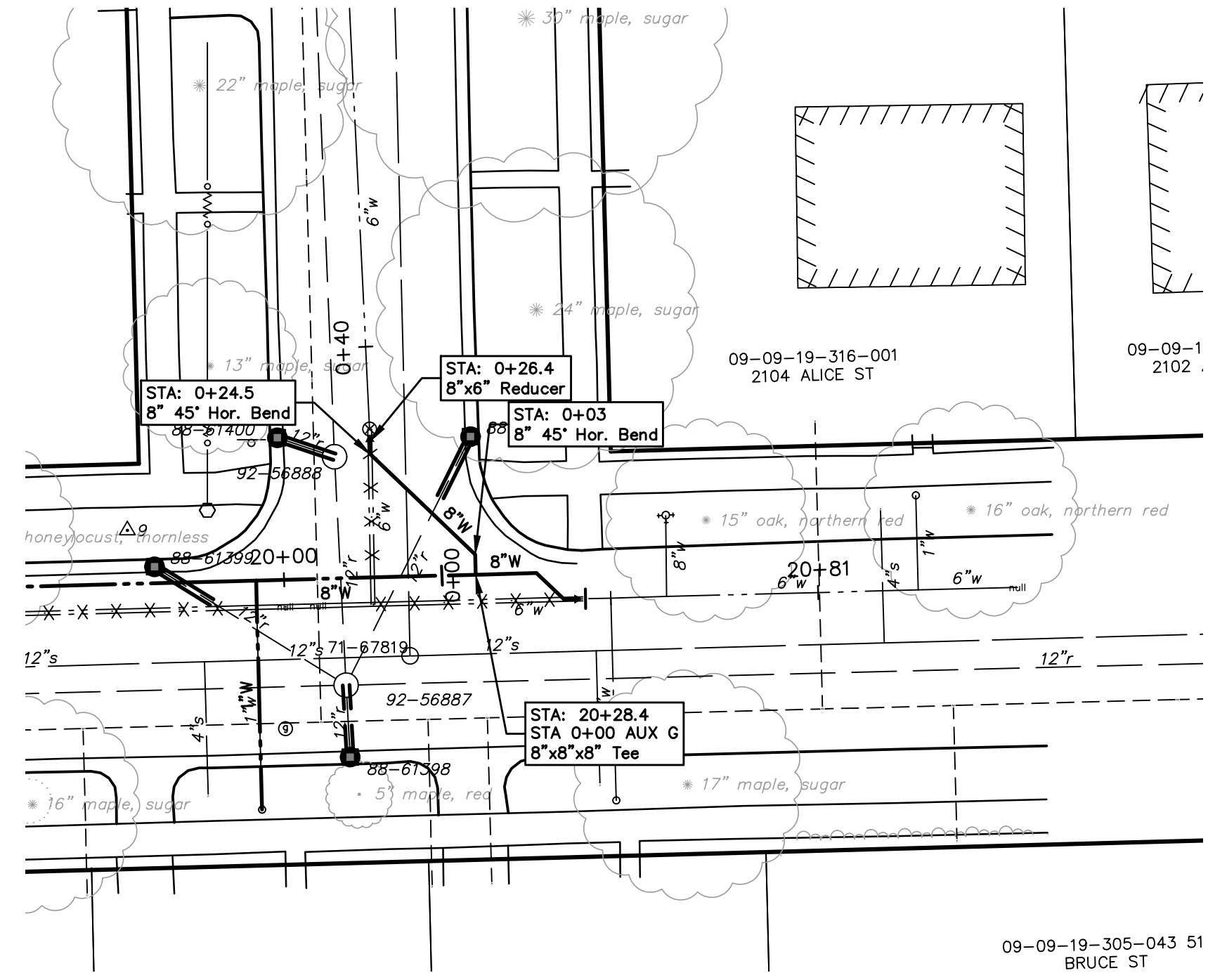
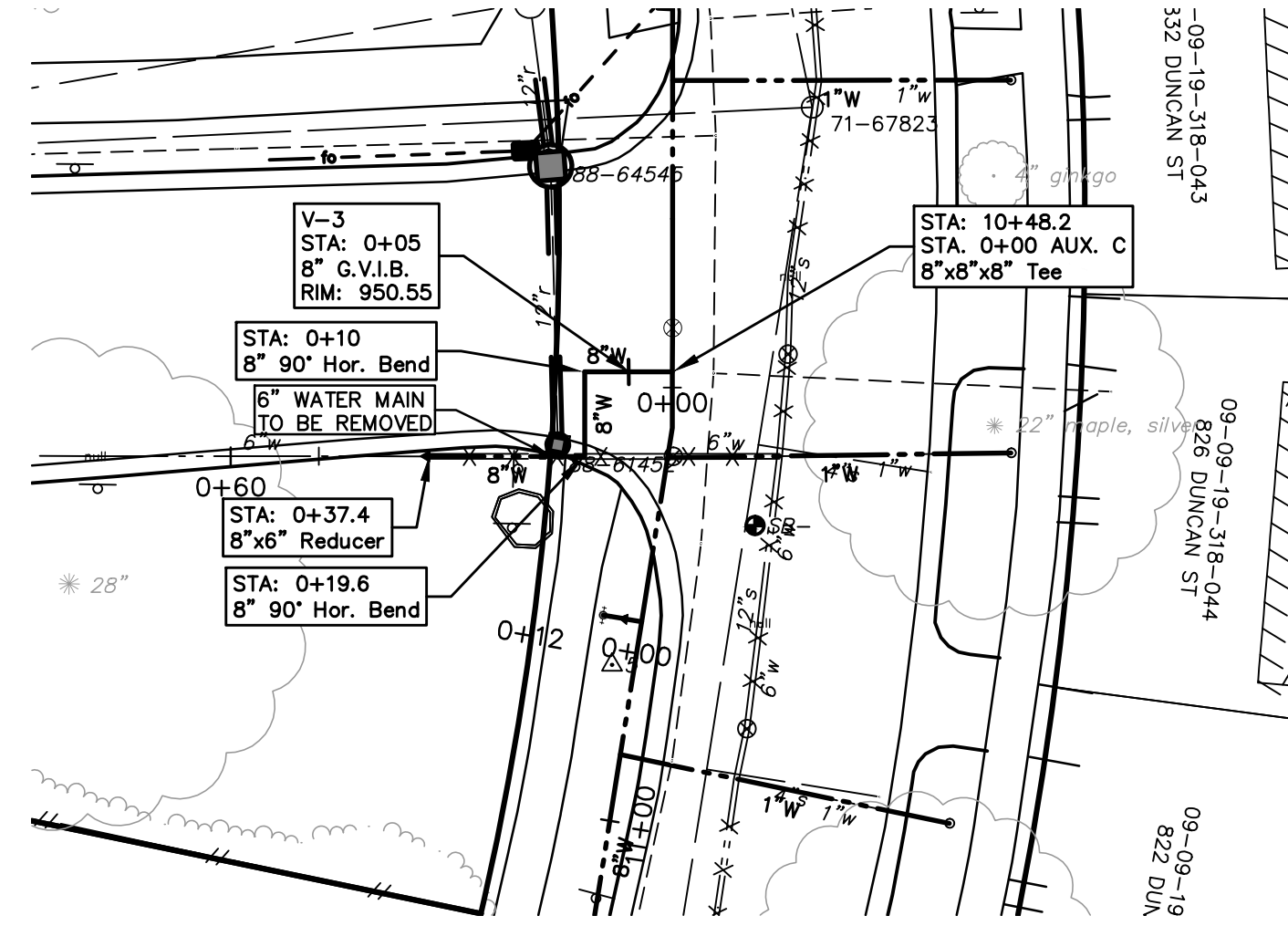
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WATER MAIN PLAN & PROFILE  
WATER - STA. 16+00 TO 21+00

SCALE PLAN: 1"=20'  
PROFILE: 1"=4'

DRAWING NO.  
**2013027-13**

SHEET NO.  
**13 OF 17**



**PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR**  
**DUNCAN STREET IMPROVEMENTS**  
 WATER MAIN PLAN & PROFILE  
 WATER - AUXILIARY C & G

SCALE PLAN: 1"=20'  
 PROFILE: 1"=4'

DRAWING No. **2013027-14**

**811**  
 Know what's below.  
 Call Before you dig.

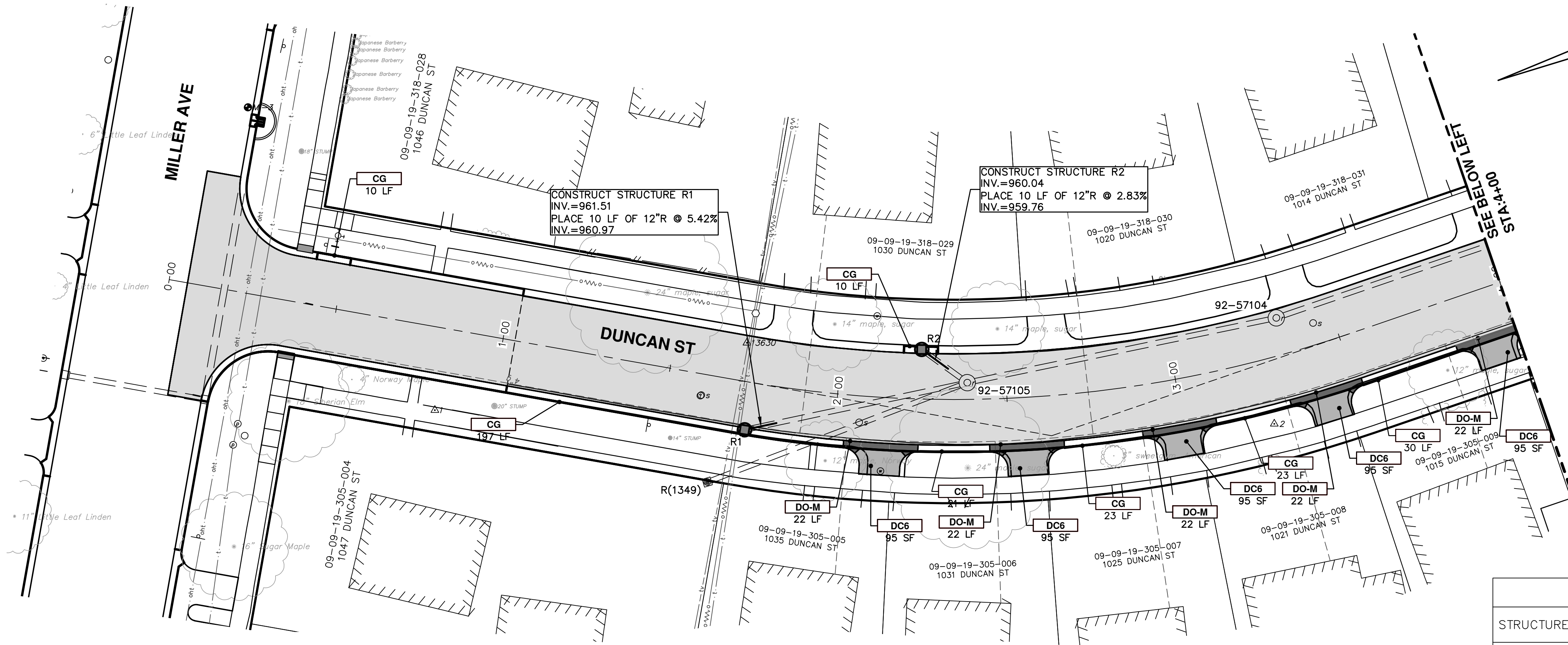
CITY OF ANN ARBOR  
 PUBLIC SERVICES  
 301 EAST HURON STREET  
 ANN ARBOR, MI 48106-8647  
 ANN ARBOR: 734.754.4410  
 www.a2gov.org

CITY OF ANN ARBOR MICHIGAN

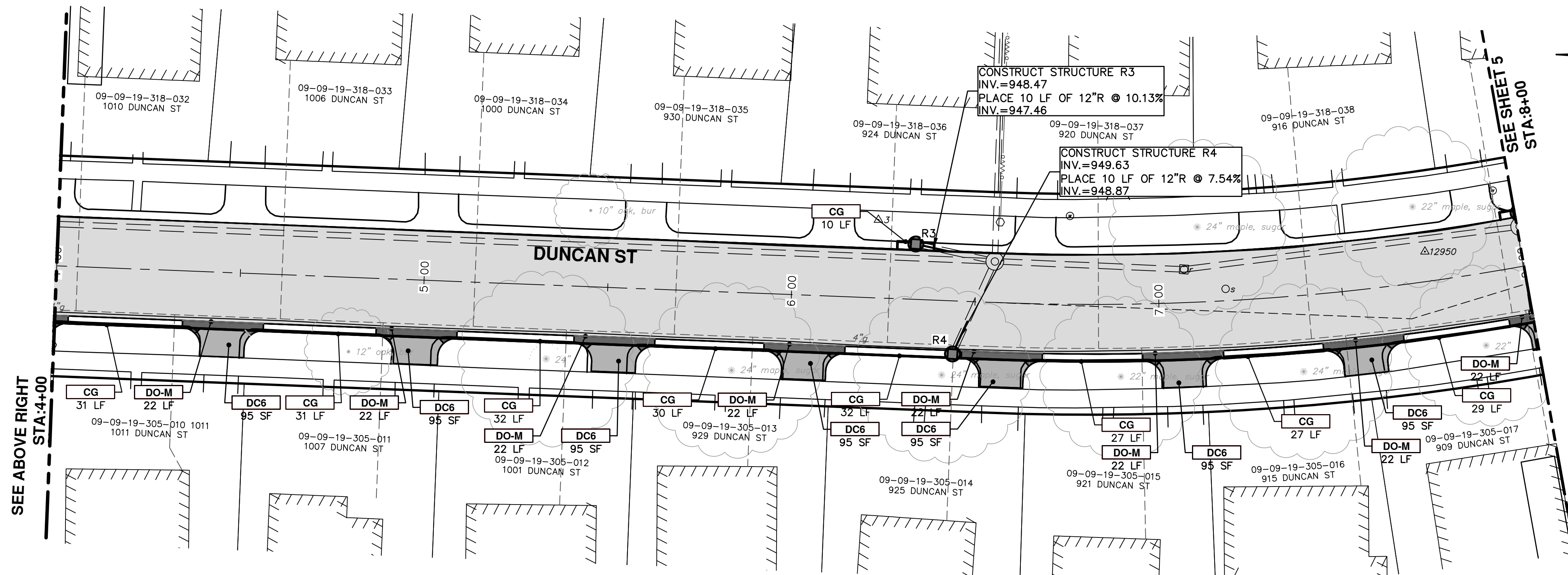
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

SHEET No. **14 OF 17**

S:\Project Management\Design\2013027 Duncan St\Plan Production\Primary\2013027PPRD.dwg Dwg Created: 28-Aug-14 - \_02 standard bw.stb - Plot Date: 6-Feb-15



STRUCTURE	ROAD STATION	RIM	DEPTH	SUMP ELEVATION	TYPE	INVERTS
R1	1+75 14.08RT	963.97	4.46	959.51	Prop. 2' Dia. Str.	12" S 961.51
R2	2+24 -14.62LT	963.64	5.60	958.04	Prop. 2' Dia. Str.	12" SW 960.04
R3	6+33 -15.03LT	952.77	6.30	946.47	Prop. 2' Dia. Str.	12" S 948.47
R4	6+44 14.46RT	952.53	4.90	947.63	Prop. 2' Dia. Str.	12" E 949.63



KEY	DESCRIPTION
CG	PLACE CURB AND GUTTER, CONC. F4, SPECIAL
DO-M	PLACE DRIVEWAY OPENING, CONC. DETAIL M, P-NC
DC6	PLACE CONC. DRIVE APPROACH, NON-REINFORCED, P-NC, 6 INCH
SW4	PLACE 4" CONC. SIDEWALK
SW6	PLACE 6" CONC. ADA RAMP WITH DETECTABLE WARNING STRIP
1	ADJUST GATE VALVE BOX, MONUMENT BOX, OR GAS BOX.
2	ADJUST INLET STRUCTURE COVER
3	ADJUST MANHOLE COVER

**811**  
Know what's below. Call before you dig.

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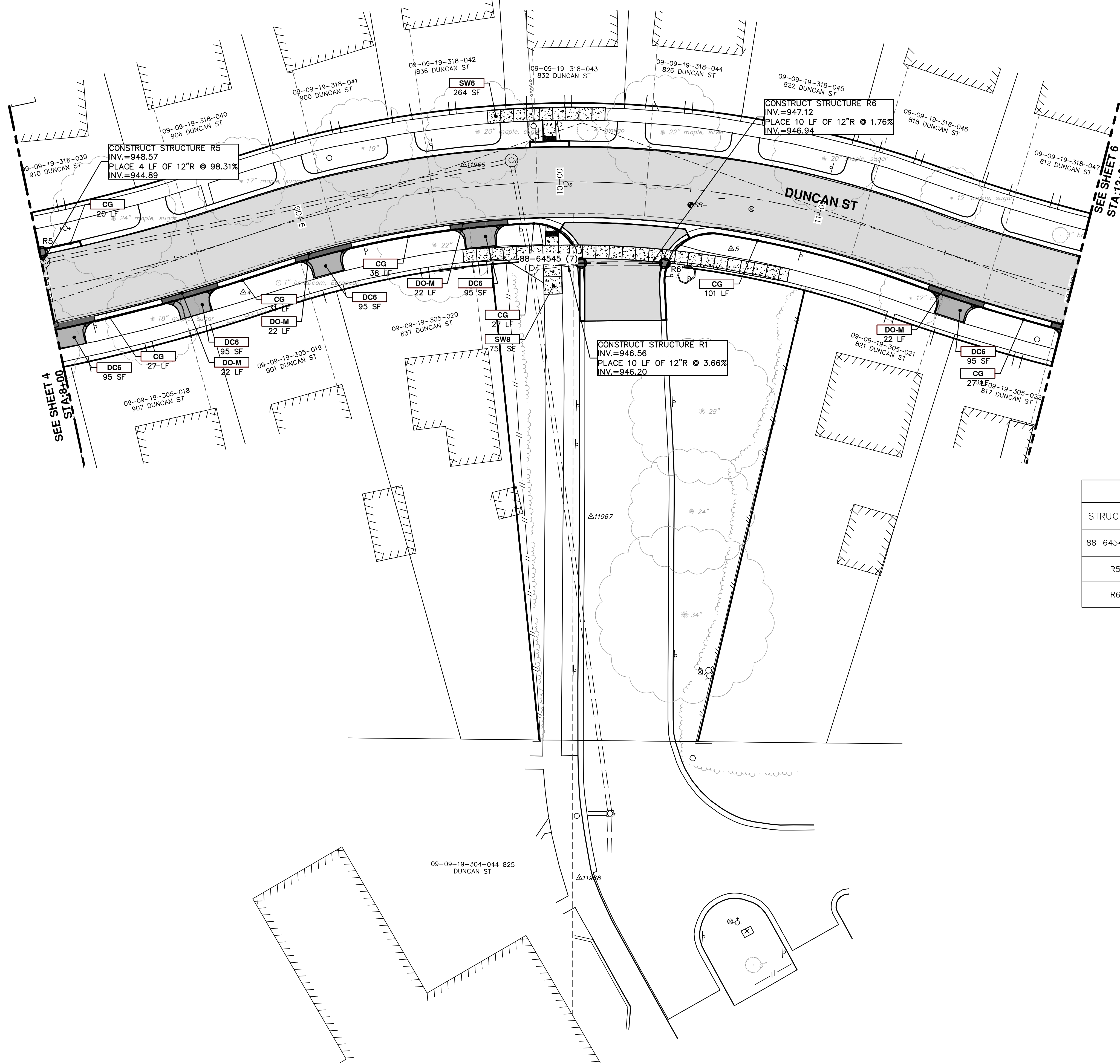
**PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR**  
DUNCAN STREET IMPROVEMENTS  
ROAD AND STORM SEWER

STA. 0+00 TO STA. 8+00

SHEET No. 15 OF 17

DRAWING No. 2013027-15

S:\Project Management\Design\2013027 Duncan St\Plan Production\Primary\2013027PPRD.dwg Dwg Created: 28-Aug-14 - \_02 standard bw.stb - Plot Date: 6-Feb-15



STRUCTURE	ROAD STATION	RIM	DEPTH	SUMP ELEVATION	TYPE	INVERTS
88-64545 (7)	10+08 30.89RT	949.96	5.40	944.56	Prop. 4' Dia. Str.	12" S 946.56 12" N 946.56
R5	8+01 -14.53LT	950.32	3.75	946.57	Prop. 2' Dia. Str.	12" W 948.57
R6	10+43 29.23RT	949.82	4.70	945.12	Prop. 2' Dia. Str.	12" N 947.12

KEY	DESCRIPTION
CG	PLACE CURB AND GUTTER, CONC. F4, SPECIAL
DO-M	PLACE DRIVEWAY OPENING, CONC. DETAIL M, P-NC
DC6	PLACE CONC. DRIVE APPROACH, NON-REINFORCED, P-NC, 6 INCH
SW4	PLACE 4" CONC. SIDEWALK
SW6	PLACE 6" CONC. ADA RAMP WITH DETECTABLE WARNING STRIP
1	ADJUST GATE VALVE BOX, MONUMENT BOX, OR GAS BOX.
2	ADJUST INLET STRUCTURE COVER
3	ADJUST MANHOLE COVER

**811**  
Know what's below.  
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REVISIONS

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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**PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR**  
**DUNCAN STREET IMPROVEMENTS**  
ROAD AND STORM SEWER  
STA. 8+00 TO STA. 12+00

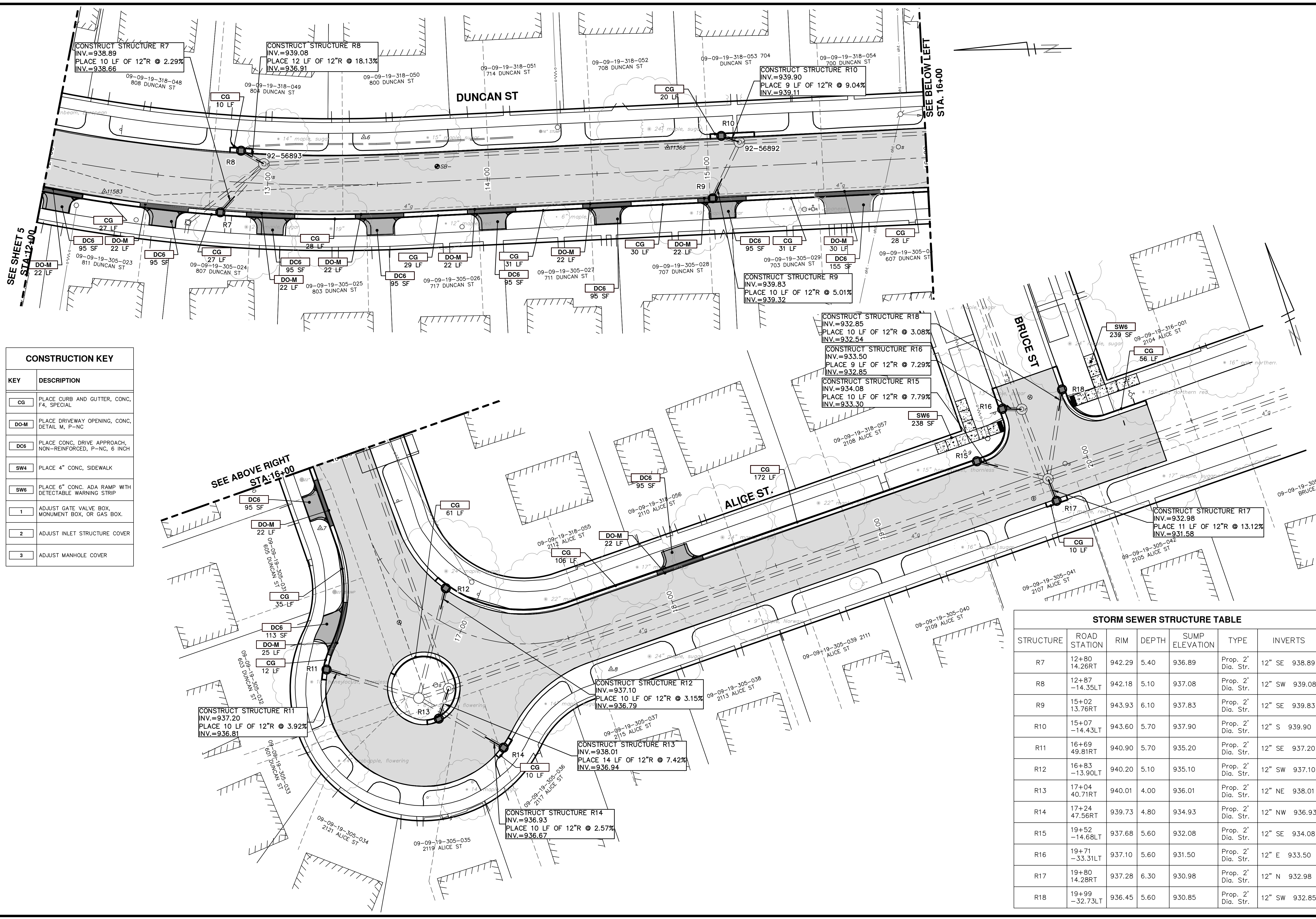
SCALE PLAN: 1" = 20'

DRAWING No. **2013027-16**

SHEET No. **16 OF 17**



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CONSTRUCTION KEY	
KEY	DESCRIPTION
CG	PLACE CURB AND GUTTER, CONC. F4, SPECIAL
DO-M	PLACE DRIVEWAY OPENING, CONC. DETAIL M, P-NC
DC6	PLACE CONC. DRIVE APPROACH, NON-REINFORCED, P-NC, 6 INCH
SW4	PLACE 4" CONC. SIDEWALK
SW6	PLACE 6" CONC. ADA RAMP WITH DETECTABLE WARNING STRIP
1	ADJUST GATE VALVE BOX, MONUMENT BOX, OR GAS BOX.
2	ADJUST INLET STRUCTURE COVER
3	ADJUST MANHOLE COVER

STORM SEWER STRUCTURE TABLE						
STRUCTURE	ROAD STATION	RIM	DEPTH	SUMP ELEVATION	TYPE	INVERTS
R7	12+80 -14.26RT	942.29	5.40	936.89	Prop. 2' Dia. Str.	12" SE 938.89
R8	12+87 -14.35LT	942.18	5.10	937.08	Prop. 2' Dia. Str.	12" SW 939.08
R9	15+02 13.76RT	943.93	6.10	937.83	Prop. 2' Dia. Str.	12" SE 939.83
R10	15+07 -14.43LT	943.60	5.70	937.90	Prop. 2' Dia. Str.	12" S 939.90
R11	16+69 49.81RT	940.90	5.70	935.20	Prop. 2' Dia. Str.	12" SE 937.20
R12	16+83 -13.90LT	940.20	5.10	935.10	Prop. 2' Dia. Str.	12" SW 937.10
R13	17+04 40.71RT	940.01	4.00	936.01	Prop. 2' Dia. Str.	12" NE 938.01
R14	17+24 47.56RT	939.73	4.80	934.93	Prop. 2' Dia. Str.	12" NW 936.93
R15	19+52 -14.68LT	937.68	5.60	932.08	Prop. 2' Dia. Str.	12" SE 934.08
R16	19+71 -33.31LT	937.10	5.60	931.50	Prop. 2' Dia. Str.	12" E 933.50
R17	19+80 14.28RT	937.28	6.30	930.98	Prop. 2' Dia. Str.	12" N 932.98
R18	19+99 -32.73LT	936.45	5.60	930.85	Prop. 2' Dia. Str.	12" SW 932.85

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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR  
DUNCAN STREET IMPROVEMENTS  
ROAD AND STORM SEWER  
STA. 12+00 TO P.O.E.

REV.	DATE	DRAWN	CHECKED	DESCRIPTION

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SCALE PLAN: 1" = 20'  
DRAWING NO.: 2013027-17  
SHEET NO.: 17 OF 17