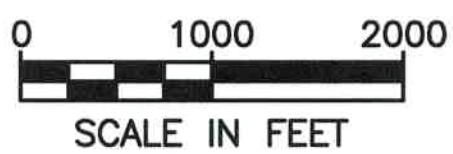


LOCATION MAP

LATITUDE: N39°49'50" LONGITUDE: E82°56'40"



PORTIONS TO BE IMPROVED -----

DESIGN DESIGNATION

CURRENT ADT (2008) 3,460
DESIGN YEAR ADT (2012) 5,350
DESIGN HOURLY VOLUME (2012) 340 VEH/HR
DIRECTIONAL DISTRIBUTION 48% NB/52% SB DAILY
TRUCK (24 HOUR B&C) 9%
DESIGN SPEED 35 M.P.H.
LEGAL SPEED 35 M.P.H. C.O.C.

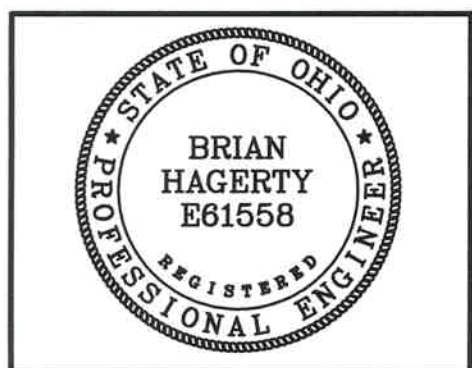
FUNCTIONAL CLASSIFICATION

SHOOK ROAD 3,460
STATE ROUTE 317 11,000 (2020)
14,000 (2040)
1,800 VEH/HR
59%/41%
17%
55 M.P.H.
55 M.P.H.
55 M.P.H.
PRINCIPAL ARTERIAL
(NORTH OF S.R. 317)
25 M.P.H.
(SOUTH OF S.R. 317)
MAJOR COLLECTOR
(NORTH OF S.R. 317)
LOCAL ROADS
(SOUTH OF S.R. 317)

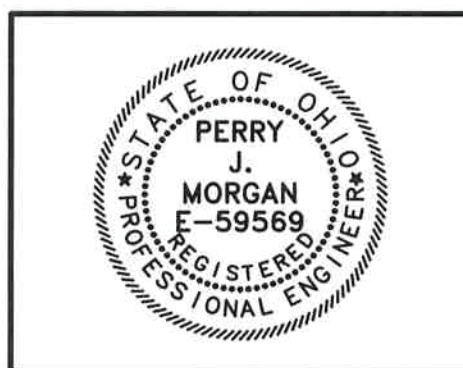
DESIGN EXCEPTIONS:

STATE ROUTE 317: NONE REQUIRED

SHOOK ROAD: NONE REQUIRED



Brian M Hagerty
REGISTERED ENGINEER (ROADWAY) 1-18-19
DATE



Perry J. Morgan
REGISTERED ENGINEER (SIGNALS) 1-18-19
DATE

CITY OF COLUMBUS, OHIO
DEPARTMENT OF PUBLIC SERVICE
DIVISION OF DESIGN AND CONSTRUCTION
STATE ROUTE 317
SHOOK ROAD - PHASE II
FROM ±1009 FEET WEST OF SHOOK ROAD
TO ±764 FEET EAST OF SHOOK ROAD
FROM ±725 FEET SOUTH OF STATE ROUTE 317
TO ±600 FEET NORTH OF STATE ROUTE 317

INDEX OF SHEETS

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CITY OF COLUMBUS STANDARD CONSTRUCTION DRAWINGS					
1441	4-22-19	AA-S102	12-6-13	L-1003	1-26-18
1500	9-15-15	AA-S106	7-9-12	L-1004	1-26-18
1540	9-15-15	AA-S107	7-9-12	L-6306	1-26-18
1550	9-15-15	AA-S112	12-6-13	L-6309A	1-26-18
2130	7-01-20	AA-S117	7-9-12	L-6309B	1-26-18
2179	7-01-20	AA-S119	8-8-14	L-6310	1-26-18
2185	3-30-18	AA-S133A	8-8-14	L-6311	1-26-18
2202	7-01-20	AA-S133B	8-8-14	L-6316A	1-26-18
2300	4-30-18	AA-S139	12-6-13	L-6409A	1-26-18
2319	7-01-20	AA-S149	10-15-14	L-6637A	1-26-18
		AA-S151	7-9-12	L-6640	1-26-18
		AA-S165	7-9-12	L-7401	11-14-18
				L-8502	1-26-18

SUPPLEMENTAL SPECIFICATIONS			
COLUMBUS			
	1551	3-1-04	
ODOT			
800	4-16-21	809	4-16-21

ODOT STANDARD CONSTRUCTION DRAWINGS			
TC-21.21	7-17-20	TC-84.20	10-18-13
TC-41.20	10-18-13	TC-85.10	4-17-20
TC-41.40	10-18-13	TC-85.21	4-17-20
TC-41.41	7-19-19		
TC-42.20	10-18-13	MT-101.90	7-17-20
		MT-110.10	7-19-13
TC-52.20	7-20-18		
TC-65.10	1-17-14	HL-30.11	7-17-20
TC-71.10	1-19-18		
TC-81.11	7-17-20		
TC-83.20	7-21-17		

PROJECT DESCRIPTION

WIDENING OF SHOOK ROAD (NORTH OF STATE ROUTE 317) TO PROVIDE A SOUTHBOUND RIGHT TURN LANE AND WIDENING OF S.R. 317 TO PROVIDE BOTH WESTBOUND AND EASTBOUND LEFT TURN LANES AT THE INTERSECTION. SIDEWALK ALONG BOTH SIDES OF SHOOK ROAD WILL BE EXTENDED FROM S.R. 317 NORTH TO THE EXISTING SIDEWALK LIMITS, AND A NEW BOX SPAN SIGNAL WILL BE INSTALLED AT THE INTERSECTION OF S.R. 317 AND SHOOK ROAD.

EARTH DISTURBED AREA

PROJECT EARTH DISTURBED AREA: 3.28 ACRES
PRE-CONSTRUCTION IMPERVIOUS AREA: 1.78 ACRES
POST-CONSTRUCTION IMPERVIOUS AREA: 2.52 ACRES

SPECIFICATIONS

THE CITY OF COLUMBUS CONSTRUCTION AND MATERIALS SPECIFICATIONS (CMSC), 2018 EDITION, INCLUDING ALL REVISIONS AND SUPPLEMENTS IN EFFECT AT THE TIME OF SIGNATURE BY THE DIRECTOR OF PUBLIC SERVICE, SHALL GOVERN ALL CONSTRUCTION ITEMS THAT ARE A PART OF THIS PLAN UNLESS NOTED OTHERWISE.

CITY OF COLUMBUS APPROVALS

CITY OF COLUMBUS SIGNATURES ON THIS PLAN SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSES AND GENERAL LOCATION OF THE PROJECT. ALL TECHNICAL DETAILS REMAIN WITH THE RESPONSIBILITY OF THE ENGINEER PREPARING THE PLANS.

<i>Steven Maschke</i>	6/1/2021
DESIGN SECTION ENGINEER, DIVISION OF DESIGN AND CONSTRUCTION	DATE
<i>Angie B. Wilfong</i>	5/31/2021
ADMINISTRATOR, DIVISION OF POWER	DATE
MDT RMV John Newcome	6/3/2021
ADMINISTRATOR, DIVISION OF OF SEWERAGE AND DRAINAGE	DATE
<i>TEH</i> <i>Byronne M. Thomas</i>	6/3/2021
ADMINISTRATOR, DIVISION OF WATER	DATE
<i>Tracie Davies by dml</i>	6/10/2021
DIRECTOR, DEPARTMENT OF PUBLIC UTILITIES	DATE
<i>Robert Comer</i>	6/4/2021
FIRE PREVENTION BUREAU, DIVISION OF FIRE	DATE
<i>Brian Mickley</i>	6/3/2021
ENGINEERING SUPERVISOR, DEPARTMENT OF TECHNOLOGY	DATE
<i>Don E. Evans for Paul Rakosky</i>	6/7/2021
DIRECTOR, DEPARTMENT OF RECREATION AND PARKS	DATE
<i>James Young</i>	6/11/2021
CITY ENGINEER/ADMINISTRATOR, DIVISION OF DESIGN AND CONSTRUCTION	DATE
<i>Jennifer Gallagher</i>	6/15/2021
DIRECTOR, DEPARTMENT OF PUBLIC SERVICE	DATE

FRANKLIN COUNTY ENGINEERS APPROVALS

SIGNATURES BELOW SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSE AND GENERAL LOCATION OF THE PROJECT. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE ENGINEER PREPARING THE PLANS. APPROVAL ON THE PART OF THE FRANKLIN COUNTY ENGINEER'S OFFICE IS GIVEN FOR WORK WITHIN THE FRANKLIN COUNTY R/W ONLY.

<i>BWF</i> <i>Carolee P. Pappas</i>	5/28/2021
FRANKLIN COUNTY ENGINEER	DATE
<i>W. Patsy Croasier</i>	5/27/2021
FRANKLIN COUNTY CHIEF DEPUTY ENGINEER	DATE



REV NUM	REVISION DESCRIPTION	SHEET(S)	INITIAL	DATE

SHOULINK, TODD L:\173608915\transportation\design\plan-set\173608915sc01.dwg SCHEMATIC PLAN Last Saved: Jul 18, 2019 11:38 AM Plotted: Jul 18, 2019 1:23 PM

BEGIN WORK
STATE ROUTE 317
STA. 153+24.65

BEGIN PROJECT
STATE ROUTE 317
STA. 154+08.50

ICON DP WH
COLUMBUS OWNER
POOL 3 MIDWEST, LLC
6241 SHOOK ROAD
495-286103-00

FOR SHOOK ROAD, SEE SHEET 3

BASIS OF BEARINGS:

BEARINGS ARE BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 83 (NSRS 2007), AS ESTABLISHED FROM A GPS SURVEY IN 2017, AND ARE BASED ON THE BEARING OF NORTH 03 DEG. 37 MIN. 38 SEC. EAST FOR THE CENTERLINE OF SHOOK ROAD, AS DETERMINED BY OCCUPYING FRANKLIN COUNTY GEODETIC CONTROL MONUMENTS "FCGS 9930" AND "FCGS 9927".

BASIS OF STATIONING:

BASIS OF $\frac{1}{2}$ R/W STATIONING ON STATE ROUTE 317 FROM ODOT FRA-317-16.71 (PLAN HAS NO PID). BASIS OF STATIONING ON SHOOK ROAD FROM 2582 DR. E.

REFERENCE POINTS				
STATION	DESCRIPTION	NORTHING	EASTING	
STATE ROUTE 317				
150+00	P.O.T.	667189.90	1842324.69	
158+72.21	P.C.	667097.46	1843197.00	
160+67.91	P.I.	667077.37	1843386.64	
162+58.57	P.T.	667063.57	1843576.84	
163+33.66 S.R. 317 = 10+00 SHOOK ROAD	P.I.	667058.14	1843651.73	
175+00	P.O.T.	666977.78	1844815.30	

CURVE DATA
STATE ROUTE 317
CURVE NO. 1
P.I. STA. 160+67.91
 $\Delta = 01^{\circ}54'00''$ LT.
 $D_c = 0^{\circ}29'54''$
 $R = 11,500'$
 $T = 190.70'$
 $L = 381.36'$
 $E = 1.58'$
P.C. STA. 158+77.21
P.T. STA. 162+58.57

THE COLUMBUS REGIONAL
AIRPORT AUTHORITY
LONDON GROVEPORT ROAD
NO ADDRESS
150-000429-00

ALL COORDINATES ARE GROUND COORDINATES.

SPC TO GROUND SCALE FACTOR: 1.0000640841
ABOUT FCGS MONUMENT #9930
(N = 667058.140, E = 1843651.730)

VERTICAL CONTROL

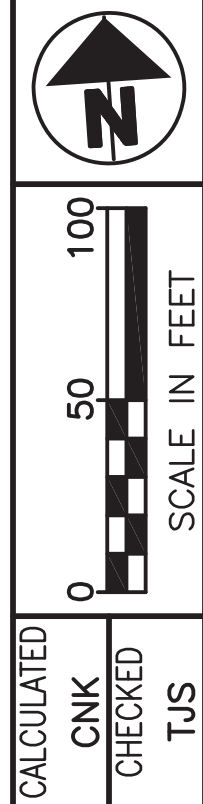
VERTICAL CONTROL IS SET USING THE FRANKLIN COUNTY SOURCE MONUMENT (BELOW), BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

BENCHMARK	DESCRIPTION	NORTHING	EASTING	ELEVATION
SOURCE BENCHMARK	FCGS MONUMENT 9930, AT THE CENTERLINE INTERSECTION OF S.R. 317 AND SHOOK ROAD, AT S.R. 317 CENTERLINE OF STATION 163+33.66, AND AT SHOOK ROAD STATION 10+00.00	667058.140	1843651.730	744.605
TBM #A	RAILROAD SPIKE IN POWER POLE #10818029, ON THE SOUTH SIDE OF S.R. 317, APPROXIMATELY 1060 FEET (\pm) WEST OF SHOOK ROAD, AND BEING 41 FEET RIGHT OF S.R. 317 CENTERLINE OF R/W STATION 152+77	667094.00	1842595.00	744.15
TBM #B	NORTHEAST CORNER OF CONCRETE PAD FOR TELEPHONE CONTROL BOX, ON THE SOUTH SIDE OF S.R. 317, APPROXIMATELY 580 FEET WEST OF SHOOK ROAD, AND BEING 68 FEET RIGHT OF S.R. 317 CENTERLINE OF R/W STATION 157+52	667032.00	1843066.00	742.67
TBM #C	CHISELED SQUARE ON THE NORTH EDGE OF CONCRETE SANITARY SEWER LIFT STATION, ON THE SOUTH SIDE OF S.R. 317, APPROXIMATELY 50 FEET EAST OF SHOOK ROAD, AND BEING 73 FEET RIGHT OF S.R. 317 CENTERLINE OF R/W STATION 163+84	666982.00	1843697.00	744.96
TBM #D	RAILROAD SPIKE IN POWER POLE #10819031, ON THE SOUTH SIDE OF S.R. 317, APPROXIMATELY 490 FEET EAST OF SHOOK ROAD, AND BEING 47 FEET RIGHT OF S.R. 317 CENTERLINE OF R/W STATION 168+23	666978.00	1844137.00	743.43
TBM #E	RAILROAD SPIKE IN POWER POLE #10819036, ON THE NORTH SIDE OF S.R. 317, APPROXIMATELY 1025 FEET EAST OF SHOOK ROAD, AND BEING 41 FEET (\pm) LEFT OF S.R. 317 CENTERLINE OF R/W STATION 173+57	667028.00	1844675.00	743.73

HORIZONTAL CONTROL

HORIZONTAL CONTROLS ARE TIED TO FRANKLIN COUNTY SURVEY SOURCE MONUMENTS (BELOW), BASED ON OHIO STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 83 (NSRS 2007)

CONTROL PT.	DESCRIPTION	NORTHING	EASTING
SOURCE MONUMENT	FCGS MONUMENT 9930, AT THE CENTERLINE INTERSECTION OF S.R. 317 AND SHOOK ROAD, AT S.R. 317 CENTERLINE OF STATION 163+33.66, AND AT SHOOK ROAD STATION 10+00.00	667058.140	1843651.730
CONTROL POINT #150	IRON PIN FOUND WITH "BRH" CAP, AND BEING 18.18 FEET RIGHT OF S.R. 317 CENTERLINE OF R/W STATION 155+93.67	667093.547	1842912.363
CONTROL POINT #500	IRON PIN SET WITH "STANTEC" CAP, AND BEING 45.70 FEET RIGHT OF S.R. 317 CENTERLINE OF R/W STATION 163+16.20	667013.820	1843631.006
CONTROL POINT #154	IRON PIN FOUND WITH "BRH" CAP, AND BEING 54.21 FEET RIGHT OF S.R. 317 CENTERLINE OF R/W STATION 169+96.54	666958.385	1844309.296

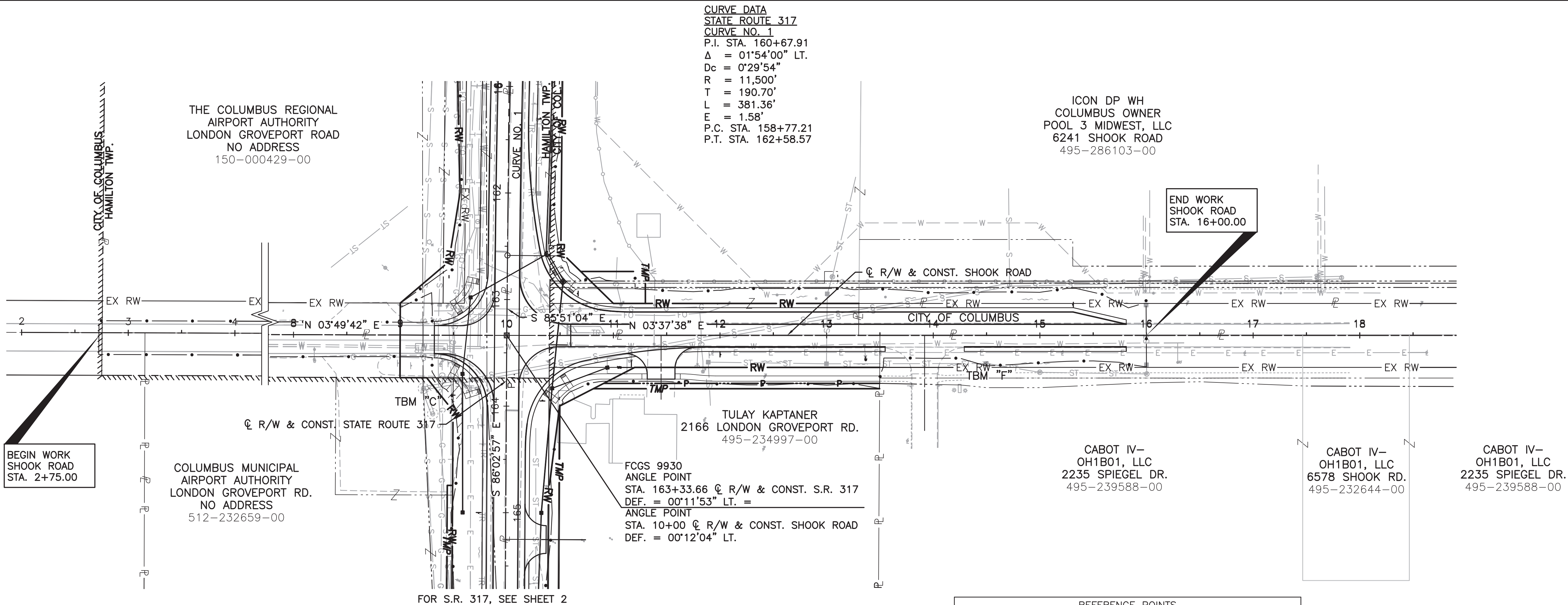


CALCULATED
CNK
CHECKED
TJS

SCHEMATIC PLAN
STATE ROUTE 317 - STA. 153+26.47 TO STA. 170+97.50

STATE ROUTE 317
SHOOK ROAD - PHASE II

SHOOLINK, TODD U:\173608915\transportation\design\plan_set\173608915sc02.dwg SCHEMATIC PLAN Last Saved: Jul 18, 2019 11:38 AM Plotted: Jul 18, 2019 1:23 PM



BASIS OF BEARINGS:
BEARINGS ARE BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM. SOUTH ZONE, NAD 83 (NSRS 2007), AS ESTABLISHED FROM A GPS SURVEY IN 2017, AND ARE BASED ON THE BEARING OF NORTH 03° DEG. 37 MIN. 38 SEC. EAST FOR THE CENTERLINE OF SHOOK ROAD, AS DETERMINED BY OCCUPYING FRANKLIN COUNTY GEODETIC CONTROL MONUMENTS "FCGS 9930" AND "FCGS 9927".

BASIS OF STATIONING:
BASIS OF \angle R/W STATIONING ON STATE ROUTE 317 FROM ODOT FRA-317-16.71 (PLAN HAS NO PID). BASIS OF STATIONING ON SHOOK ROAD FROM 2582 DR. E.

REFERENCE POINTS			
STATION	DESCRIPTION	NORTHING	EASTING
SHOOK ROAD			
5+00	P.O.T.	666559.26	1843618.35
10+00 SHOOK ROAD = 163+33.66 S.R. 317	P.I.	667058.14	1843651.73
20+00	P.O.T.	668056.14	1843714.99

ALL COORDINATES ARE GROUND COORDINATES.

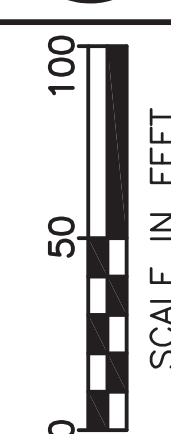
SPC TO GROUND SCALE FACTOR: 1.0000640841
ABOUT FCGS MONUMENT #9930
(N = 667058.140, E = 1843651.730)

VERTICAL CONTROL

VERTICAL CONTROL IS SET USING THE FRANKLIN COUNTY SOURCE MONUMENT (BELOW), BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).				
BENCHMARK	DESCRIPTION	NORTHING	EASTING	ELEVATION
SOURCE BENCHMARK	FCGS MONUMENT 9930, AT THE CENTERLINE INTERSECTION OF S.R. 317 AND SHOOK ROAD, AT S.R. 317 CENTERLINE OF STATION 163+33.66, AND AT SHOOK ROAD STATION 10+00.00	667058.140	1843651.730	744.605
TBM #C	CHISELED SQUARE ON THE NORTH EDGE OF CONCRETE SANITARY SEWER LIFT STATION, ON THE SOUTH SIDE OF S.R. 317, APPROXIMATELY 50 FEET EAST OF SHOOK ROAD, AND BEING 73 FEET RIGHT OF S.R. 317 CENTERLINE OF R/W STATION 163+84	666982.00	1843697.00	744.96
TBM #F	CHISELED SQUARE ON THE SOUTH EDGE OF CONCRETE CATCH BASIN, ON THE EAST SIDE OF SHOOK ROAD, APPROXIMATELY 450 FEET NORTH OF S.R. 317, AND BEING 26 FEET RIGHT OF SHOOK ROAD CENTERLINE OF R/W STATION 14+49	667504.00	1843707.00	741.74

HORIZONTAL CONTROL

HORIZONTAL CONTROLS ARE TIED TO FRANKLIN COUNTY SURVEY SOURCE MONUMENTS (BELOW), BASED ON OHIO STATE PLANE COORDINATE SYSTEM. SOUTH ZONE, NAD 83 (NSRS 2007)			
CONTROL PT.	DESCRIPTION	NORTHING	EASTING
SOURCE MONUMENT	FCGS MONUMENT 9930, AT THE CENTERLINE INTERSECTION OF S.R. 317 AND SHOOK ROAD, AT S.R. 317 CENTERLINE OF STATION 163+33.66, AND AT SHOOK ROAD STATION 10+00.00	667058.140	1843651.730
CONTROL POINT #502	MAGNETIC NAIL SET, BEING 15.60 FEET LEFT OF SHOOK ROAD CENTERLINE OF R/W STATION 4+01.10	666461.617	1843596.172
CONTROL POINT #500	IRON PIN SET WITH "STANTEC" CAP, AND BEING 17.72 FEET LEFT OF SHOOK ROAD CENTERLINE OF R/W STATION 9+54.40	667013.820	1843631.006
CONTROL POINT #501	MAGNETIC NAIL SET, BEING 37.51 FEET RIGHT OF SHOOK ROAD CENTERLINE OF R/W STATION 15+09.56	667564.310	1843721.404

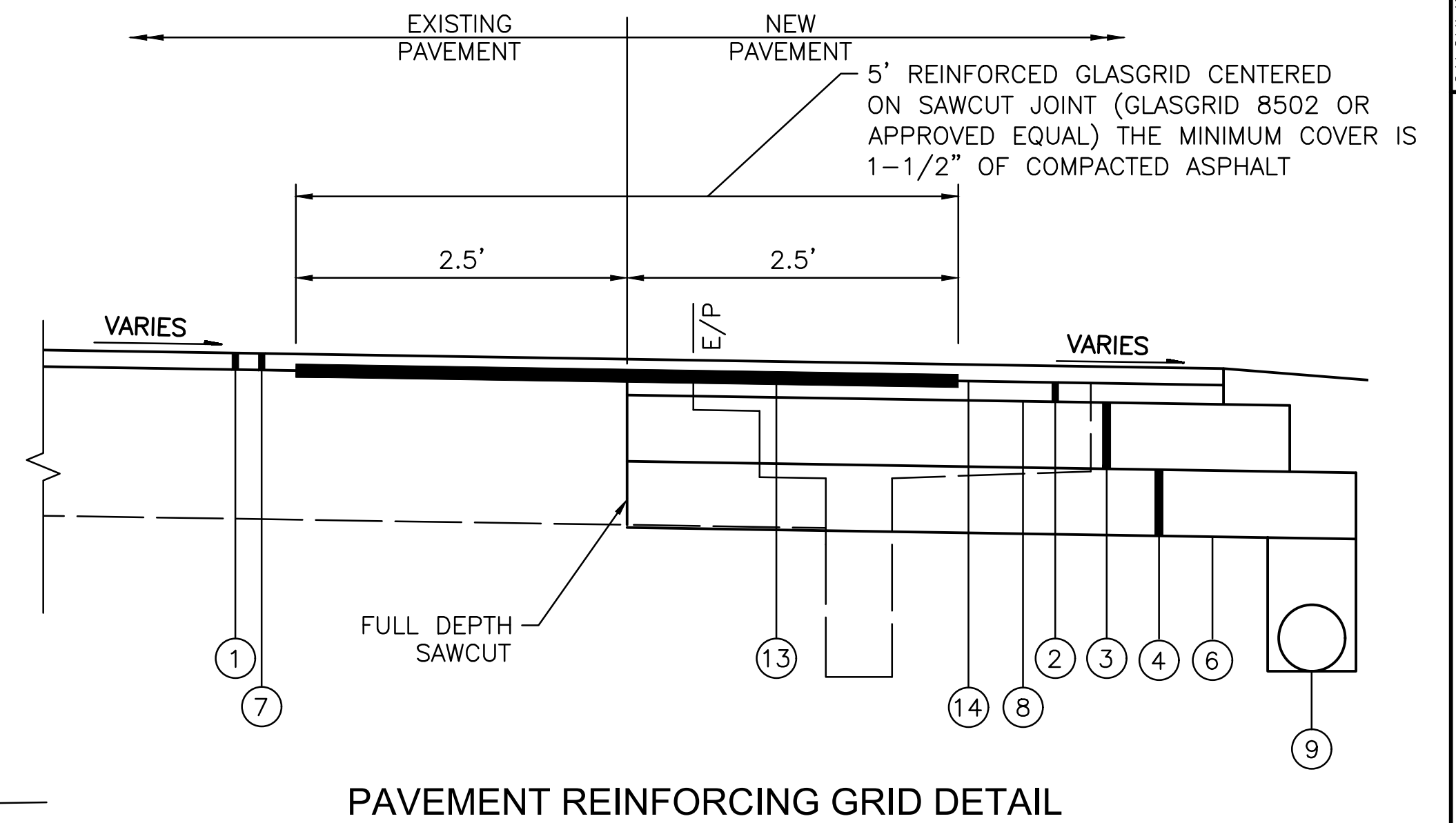
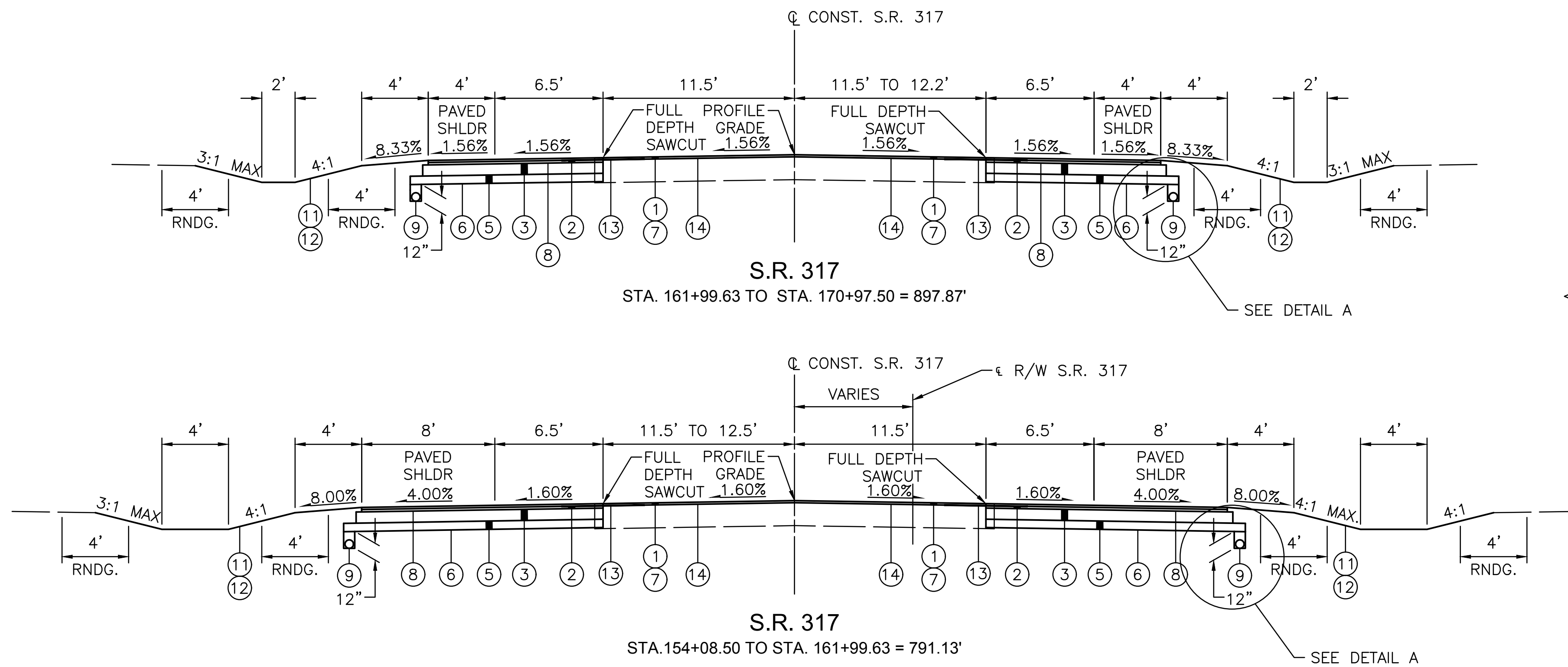


CALCULATED
CNK
CHECKED
TJS

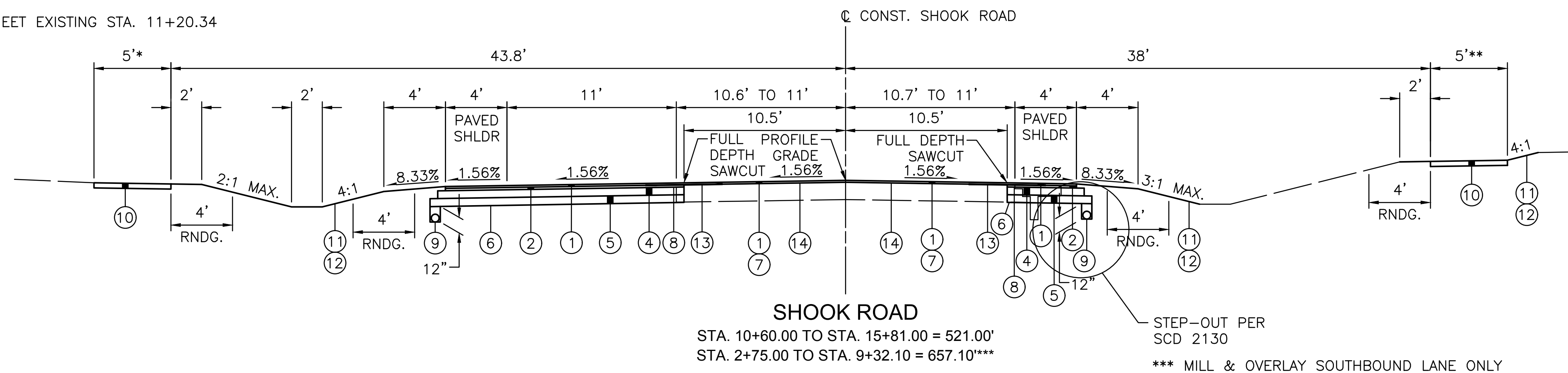
SCHEMATIC PLAN
SHOOK ROAD - STA. 2+75.00 TO STA. 15+81.00

STATE ROUTE 317
SHOOK ROAD - PHASE II

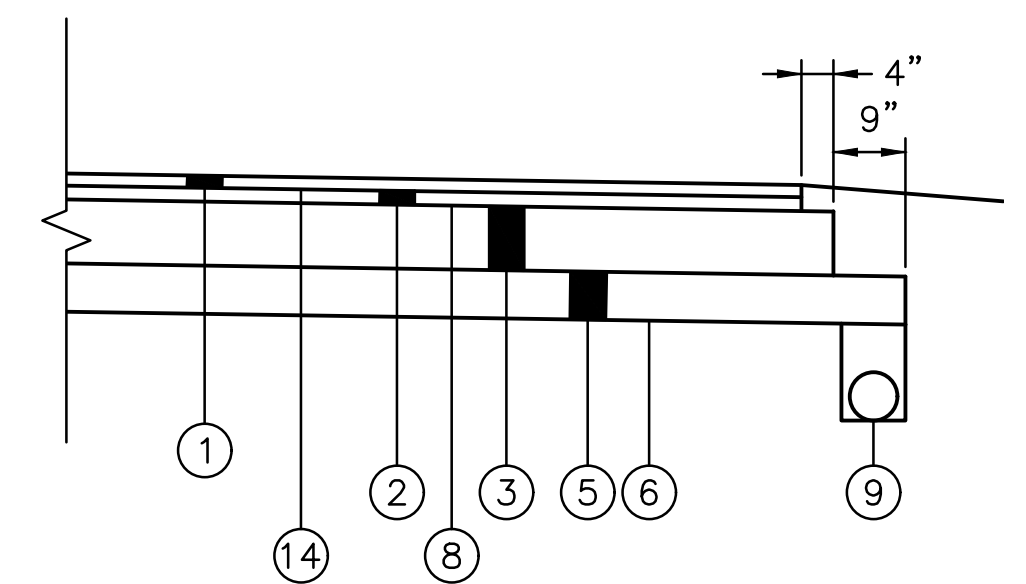
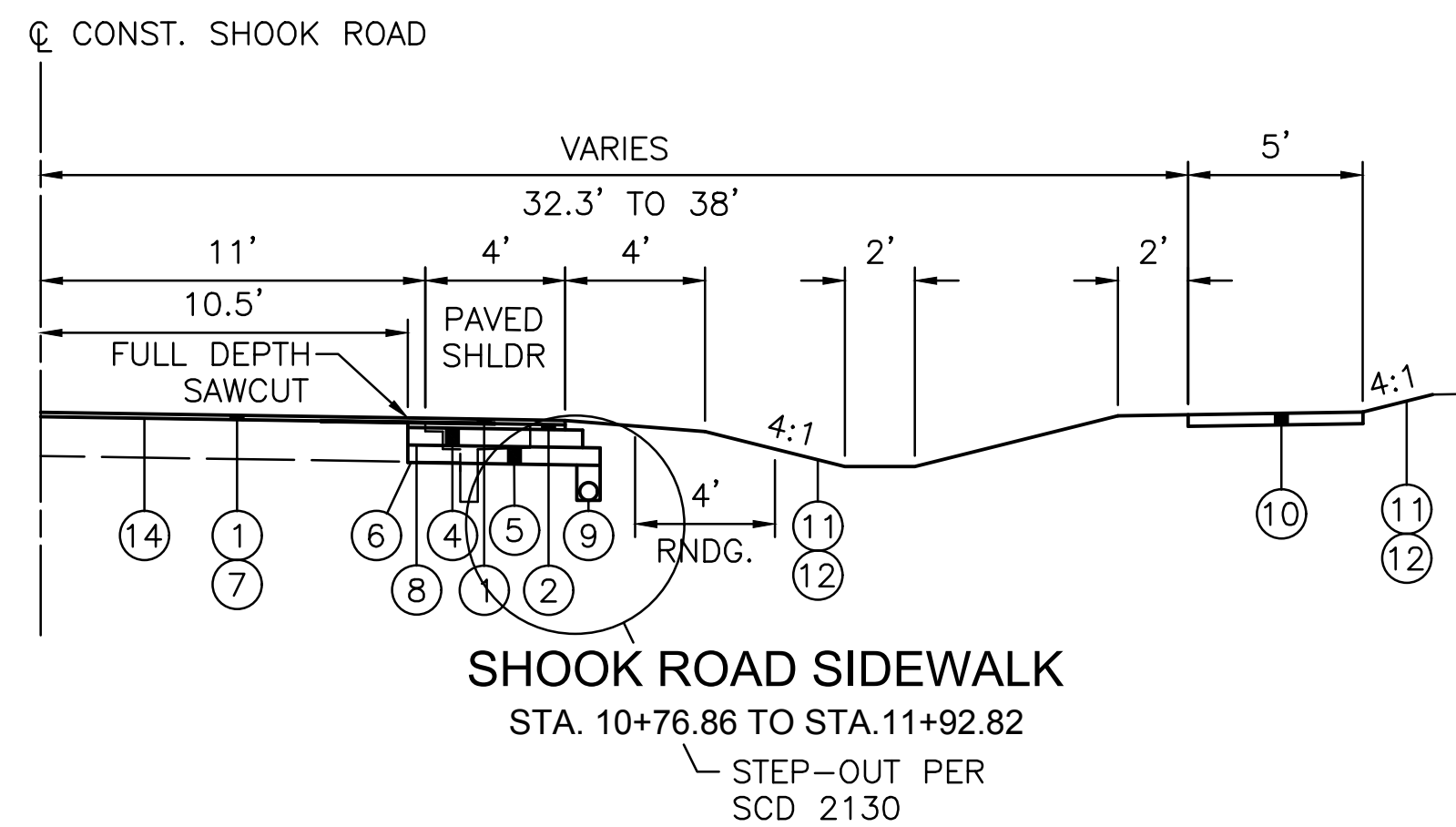
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* MEET EXISTING STA. 11+20.34



** MEET EXISTING STA. 13+49.88



LEGEND

- ① ITEM 441 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M
- ② ITEM 441 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), PG70-22M
- ③ ITEM 301 - 9" ASPHALT CONCRETE BASE, PG64-22
- ④ ITEM 301 - 6" ASPHALT CONCRETE BASE, PG64-22
- ⑤ ITEM 304 - 6" (MIN.) AGGREGATE BASE (SEE NOTE ON SHEET 6)

- ⑥ ITEM 204 - SUBGRADE COMPACTION
- ⑦ ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (VARIABLE DEPTH) (SEE NOTE ON SHEET 6)
- ⑧ ITEM 407 - TACK COAT (BENEATH INTERMEDIATE COURSE)
- ⑨ ITEM 605 - 6" SHALLOW PIPE UNDERDRAIN
- ⑩ ITEM 608 - 4" CONCRETE WALK

- ⑪ ITEM 653 - 4" TOPSOIL FURNISHED AND PLACED
- ⑫ ITEM 659 - SEEDING AND MULCHING
- ⑬ ITEM SPECIAL - PAVEMENT REINFORCING GRID (GLASGRID 8502 OR APPROVED EQUAL)
- ⑭ ITEM 407 - NON-TRACKING TACK COAT (BENEATH SURFACE COURSE)

TYPICAL SECTIONS

STATE ROUTE 317
SHOOK ROAD - PHASE II

K:\RLANGTIS_KC_U\173608915\transportation\design\plan_sst\173608915.pcd1.dwg GENERAL NOTES Last Saved: Apr. 23, 2021 12:16 PM Plotted: Apr. 23, 2021 12:30 PM

REFERENCE SPECIFICATIONS

THE CITY OF COLUMBUS CONSTRUCTION AND MATERIALS SPECIFICATIONS (CMSC), 2018 EDITION, INCLUDING ALL REVISIONS AND SUPPLEMENTS IN EFFECT AT THE TIME OF SIGNATURE BY THE DIRECTOR OF PUBLIC SERVICE, SHALL GOVERN ALL CONSTRUCTION ITEMS THAT ARE A PART OF THIS PLAN UNLESS NOTED OTHERWISE.

PERMITS

WHEN EXCAVATING WITHIN COLUMBUS PUBLIC RIGHT OF WAY LIMITS, THE CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT FROM CITY OF COLUMBUS, DEPARTMENT OF PUBLIC SERVICE – PERMIT OFFICE BETWEEN THE HOURS OF 7:30AM AND 4:00PM MONDAY THROUGH FRIDAY. PHONE (614) 645–7497, FAX (614) 645–1876, EMAIL: COLSPERMITS@COLUMBUS.GOV

UTILITIES

THE IDENTITY AND LOCATION OF EXISTING UNDERGROUND UTILITIES LOCATED IN AND AROUND THE CONSTRUCTION AREA HAVE BEEN SHOWN AND LABELED ON THE PLANS BY USING INFORMATION PROVIDED BY THE RESPECTIVE UTILITY OWNERS. THE CITY OF COLUMBUS OR THE CONSULTING ENGINEER WILL NOT ASSUME RESPONSIBILITY FOR THE ACCURACY OF LOCATION OR DEPTH OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THE PLAN.

SUPPORT AND PROTECTION OF ALL UTILITIES AND APPURTENANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COSTS FOR THE REPAIR AND RESTORATION OF EXISTING UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CITY OF COLUMBUS UTILITIES WILL ONLY LOCATE AND MARK MAIN LINE FACILITIES. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICE LATERALS AND LINES. COSTS ASSOCIATED WITH THE ABOVE WORK AND RESPONSIBILITIES SHALL BE INCLUDED IN THE PRICE BID FOR VARIOUS ITEMS.

PRIOR TO EXCAVATION, THE CONTRACTOR SHALL GIVE A 48–HOUR NOTICE TO THE OHIO UTILITIES PROTECTION SERVICE (OUPS) BY CALLING 800–362–2764. A 48–HOUR NOTICE SHALL BE GIVEN TO THE OWNERS OF UNDERGROUND UTILITIES SHOWN ON THE PLANS WHO ARE NOT MEMBERS OF A REGISTERED UNDERGROUND PROTECTION SERVICE.

LISTED BELOW ARE UTILITY COMPANIES THAT HAVE FACILITIES LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT AND SUBSCRIBE TO OUPS.

AT&T
2932 6th ST
IRONTON, OHIO 45638
740–532–9943
DAMAGE PREVENTION: 1–937–296–3929
AT&T REPAIR & SERVICE: 1–888–611–4466
CHARLES JOHNSON
cj3237@att.com

COLUMBIA GAS OF OHIO
3350 JOHNNY APPLESEED COURT
COLUMBUS, OHIO 43231
614–818–2104
DAMAGE PREVENTION: 1–866–632–6243
CUSTOMER SERVICE: 1–800–344–4077
ROB CALWELL
rcaldwell@nisource.com

CHARTER COMMUNICATIONS/SPECTRUM
3760 INTERCHANGE ROAD
COLUMBUS, OHIO 43204
614–481–5047
SAM LUTZ
dl–moh–construction–frelø–team@charter.com

CITY OF COLUMBUS
TRAFFIC OPERATIONS MANAGER
TRAFFIC SIGNALS
1820 E. 17th AVE.
COLUMBUS, OH 43219
614–645–7799
ANDREW VOLENIK
amvolenik@columbus.gov

CITY OF COLUMBUS
DEPARTMENT OF TECHNOLOGY CABLE INTERCONNECT SECTION
1355 MCKINLEY AVENUE
BUILDING C
COLUMBUS, OH 43222
CONTRACTOR LINE: 614–645–7756
DAVE McNALLY
dwmcnally@columbus.gov

CITY OF COLUMBUS
DIVISION OF POWER
3568 INDIANOLA AVE.
COLUMBUS, OHIO 43214
614–645–7360

EMERGENCY PROVISIONS

THE CONTRACTOR SHALL PROVIDE TO THE CITY OF COLUMBUS PROJECT REPRESENTATIVE A LIST OF 24 HOUR EMERGENCY TELEPHONE NUMBERS (IN WRITING) PRIOR TO THE START OF CONSTRUCTION.

SECURING EXCAVATIONS & TRENCHES FOR NON–WORKING HOURS

EXCAVATIONS AND TRENCHES OVER 24 INCHES DEEP SHALL BE SECURELY PLATED OR BACKFILLED DURING NON–WORKING HOURS.

CONSTRUCTION LIMITS

THE CONSTRUCTION LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE OF THESE CONSTRUCTION LIMITS.

MISCELLANEOUS WORK ITEMS

THE CONTRACTOR SHALL PERFORM ALL ITEMS OF WORK CALLED FOR ON THE PLANS, FOR WHICH NO SPECIFIC METHOD OF PAYMENT IS PROVIDED. THE COST OF THESE ITEMS SHALL BE INCLUDED IN THE VARIOUS UNIT PRICES BID FOR THE PROJECT IMPROVEMENT.

BENCHMARKS AND SURVEY MONUMENTS

DO NOT DISTURB ANY FRANKLIN COUNTY CERTIFIED BENCHMARKS (VERTICAL AND/OR HORIZONTAL) LOCATED WITHIN THE CONSTRUCTION LIMITS OF THE PROJECT. CONTRACTOR SHALL CONTACT THE FRANKLIN COUNTY SURVEY DEPARTMENT (614) 525–2489, PRIOR TO CONSTRUCTION, TO COORDINATE THE PROPER PROCEDURES FOR THE RESETTING, RELOCATION, OR REPLACEMENT OF ANY FRANKLIN COUNTY CERTIFIED BENCHMARK OR SURVEY MONUMENT.

SAW CUTTING

THE COST OF SAW CUTTING FOR THE REMOVAL OF PAVEMENT, CURB, WALKS, ETC. SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 202 WORK ITEMS. SAW CUTTING IS REQUIRED TO PROVIDE SMOOTH STRAIGHT EDGES FOR REMOVAL PURPOSES.

SHOULD THE SAWCUT SHOWN ON THE PLANS NOT EXPOSE FULL–DEPTH EXISTING PAVEMENT, THE CONTRACTOR SHALL SAWCUT FAR ENOUGH FROM THE EDGE OF PAVEMENT TO EXPOSE SOUND FULL–DEPTH PAVEMENT. ADDITIONAL PAVEMENT QUANTITIES SHALL BE PAID AT THE CONTRACT BID PRICE.

WHERE THE SAWCUT IS LOCATED WITHIN THE WHEELPATH, PAVEMENT REINFORCEMENT AS DETAILED ON THE TYPICAL SECTIONS SHALL BE USED. THE FOLLOWING QUANTITY IS CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

ITEM SPECIAL – PAVEMENT REINFORCING GRID (GLASGRID 8502 OR APPROVED EQUAL)
1300 SQ. YD.

PAVEMENT CUTTING, SAWING AND EXCAVATION OPERATIONS

ALL PUBLIC AGENCIES AND PRIVATE CONTRACTORS PERFORMING PAVEMENT–CUTTING OPERATIONS ON CITY OF COLUMBUS STREETS AND ROADWAYS SHALL PROTECT THE ENVIRONMENT FROM DISCHARGES CREATED BY THEIR PAVEMENT CUTTING OPERATIONS. NOTE THAT COLUMBUS CITY CODE 1145 PROHIBITS NON–STORMWATER DISCHARGE INTO THE CITY OF COLUMBUS SEWER SYSTEM, CURB INLETS AND ANY PART OF ITS MS4 (MUNICIPAL SEPARATE STORM SEWER SYSTEM).

THE REQUIREMENT INCLUDES BUT IS NOT LIMITED TO WET OR DRY SAW–CUTTING, JACK HAMMERING, EXCAVATION EQUIPMENT USE, ETC. THE PUBLIC AGENCY AND/OR PRIVATE CONTRACTOR WORK CREWS SHALL RECOVER AND DISPOSE OF DETRITUS, POLLUTED WATERS, OR OTHER SUCH DISCHARGES RESULTING FROM THEIR PAVEMENT CUTTING OPERATIONS AND PROTECT ALL STORM SEWER INLETS FROM RECEIVING ANY DISCHARGES FROM THE CONSTRUCTION OPERATIONS. THE AGENCY OR CONTRACTOR RESPONSIBLE FOR EACH PAVEMENT CUTTING ACTIVITY SHALL BE SOLELY LIABLE FOR NOTICE OF VIOLATIONS (NOV’S) AND FINES ISSUED BY THE CITY OF COLUMBUS AND/OR STATE OF OHIO AUTHORITIES.

EQUIPMENT, MATERIALS AND METHODS SHALL BE PROVIDED BY THE RESPONSIBLE PUBLIC AGENCY AND/OR PRIVATE CONTRACTOR TO WORK CREWS PERFORMING THE PAVEMENT CUTTING ACTIVITY AND MADE AVAILABLE TO WORK CREWS FOR USE IN CLEARING UP DISCHARGES RESULTING FROM SUCH CUTTING ACTIVITIES AND PREVENTING RUNOFF. ALL WORK CREWS SHALL BE TRAINED TO EXERCISE AND EMPLOY EQUIPMENT, MATERIALS, AND ENVIRONMENTAL PROTECTIVE MEASURES TO PREVENT POLLUTED DISCHARGES FROM ENTERING THE CITY OF COLUMBUS STORM SEWER SYSTEM AND WATERS OF THE STATE OF OHIO.

THE PUBLIC AGENCY AND/OR PRIVATE CONTRACTOR IS SOLELY RESPONSIBLE FOR ENSURING THAT THE INLET PROTECTION IS ADEQUATE. THE MOST STRINGENT PROJECT PLANS, NOTES AND/OR DRAWINGS INCLUDING STORMWATER POLLUTION PREVENTION PLAN (SW3P) OR SPILL PREVENTION/REMEDIATION PLAN SHALL APPLY TO ALL PAVEMENT CUTTING, SAWING OR EXCAVATION OPERATIONS.

DIRECT DISCHARGE OF SEDIMENT LADEN WATER TO THE CITY’S SEWER SYSTEM OR A RECEIVING STREAM IS A VIOLATION OF OHIO EPA AND CITY OF COLUMBUS REGULATIONS; THE CONTRACTOR WILL BE HELD LIABLE FOR THE VIOLATION AND SUBSEQUENT FINES.

GAS SERVICE VALVES ADJUSTED TO GRADE

THE CONTRACTOR SHALL CONTACT COLUMBIA GAS AT 614–460–2244 TO COORDINATE THE ADJUSTMENT OF GAS SERVICE VALVES.

NEW PIPE CONNECTION TO AN EXISTING SEWER STRUCTURE

WHERE THE PLANS PROVIDE FOR NEW PIPE TO BE CONNECTED TO AN EXISTING SEWER STRUCTURE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CREATING AN OPENING AT THE PROPER SIZE, ALIGNMENT, AND ELEVATION FOR THE CONNECTION. THE OPENING SHALL BE MADE LARGE ENOUGH TO RECEIVE AND JOINT THE PROPOSED PIPE AS PER ITEM 604. IF THE STRUCTURE ALREADY HAS AN OPENING, THE CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF THE OPENING AND REPORT ANY DIFFERENCES FROM PLAN TO THE ENGINEER. ALL COSTS ASSOCIATED WITH THIS WORK, INCLUDING ADJUSTING LINE AND GRADE OF THE NEW PIPE TO MEET THE EXISTING STRUCTURE, SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM 901, PIPE SEWERS COMPLETE IN PLACE.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK SHOWN, LABELED, OR LISTED AS ‘CONTINGENCY’ OR REFERENCED BY PLAN NOTE TO BE USED ‘AS DIRECTED BY THE ENGINEER,’ UNLESS AUTHORIZED BY THE ENGINEER, OR A REPRESENTATIVE OF THE CITY OF COLUMBUS, DIVISION OF DESIGN AND CONSTRUCTION.

EROSION AND SEDIMENT CONTROL

EROSION AND SEDIMENT CONTROL MEASURES ARE REQUIRED AS PART OF THIS PROJECT. EROSION AND SEDIMENT CONTROL MEASURES SPECIFIC TO THIS SITE MAY BE FOUND ON SHEETS 14–17 OF THIS PLAN. LAND–DISTURBING ACTIVITIES MUST COMPLY WITH ALL PROVISIONS OF THE DIVISION OF SEWERAGE AND DRAINAGE EROSION AND SEDIMENT POLLUTION CONTROL REGULATION. ALL LAND–DISTURBING ACTIVITIES SHALL BE SUBJECT TO INSPECTION AND SITE INVESTIGATION BY THE CITY OF COLUMBUS AND/OR THE OHIO EPA.

ALL EROSION SEDIMENTATION CONTROL PRACTICES ARE SUBJECT TO FIELD MODIFICATIONS AT THE DISCRETION OF THE CITY OF COLUMBUS ENGINEER AND/OR THE OHIO EPA.

IT IS THE RESPONSIBILITY OF THE SITE OWNER TO NOTIFY THE CITY OF COLUMBUS TWO (2) WORKING DAYS PRIOR TO COMMENCEMENT OF INITIAL SITE LAND DISTURBANCE ON ANY SITE OF ONE (1) OR MORE ACRES. THIS INCLUDES SITE CLEARING, GRUBBING AND ANY EARTH MOVING. PRIMARY EROSION AND SEDIMENT CONTROL PRACTICES ARE MANDATED BY REGULATIONS TO BE IN PLACE FROM THE BEGINNING OF THE CONSTRUCTION ACTIVITY. PLEASE CONTACT THE STORMWATER MANAGEMENT OFFICE @ (614) 645–6700 OR FAX @ (614) 645–1506. DETAILS OF THIS REQUIREMENT MAY BE FOUND IN THE EROSION AND SEDIMENT POLLUTION CONTROL REGULATION (ADOPTED JUNE 1, 1994). FAILURE TO COMPLY MAY RESULT IN ENFORCEMENT ACTION AS DETAILED IN THE COLUMBUS CITY CODES SECTION 1145.80.

THE NPDES PERMIT HOLDER SHALL PROVIDE QUALIFIED PERSONNEL TO CONDUCT SITE INSPECTIONS ENSURING PROPER FUNCTIONALITY OF THE EROSION AND SEDIMENTATION CONTROLS. ALL EROSION AND SEDIMENTATION CONTROLS ARE TO BE INSPECTED ONCE EVERY SEVEN (7) CALENDAR DAYS OR WITHIN 24 HOURS OF A 1/2–INCH STORM EVENT OR GREATER. RECORDS OF THE SITE INSPECTIONS SHALL BE KEPT BY THE CONTRACTOR AND MADE AVAILABLE TO JURISDICTIONAL AGENCIES IF REQUESTED.

POST CONSTRUCTION STORM WATER TREATMENT

STRUCTURAL BEST MANAGEMENT PRACTICES (BMP’S) FOR POST CONSTRUCTION STORM WATER TREATMENT ARE INCLUDED IN MASTER DRAINAGE PLAN CC–15204. WATER QUANTITY AND QUALITY ARE TO BE TREATED BY THE PONDS IMMEDIATELY NORTHWEST OF THE STORM SEWER OUTLET AT APPROXIMATE STATION 153+25 LEFT. THESE PONDS ARE TO BE MAINTAINED BY THE DEVELOPER.

WATERING PERMANENT SEEDED AREAS

THE FOLLOWING ESTIMATED QUANTITY IS TO BE USED AS DIRECTED BY THE ENGINEER TO PROMOTE GROWTH FOR THE PERMANENT SEEDED AREAS AS PER 659.17.

ITEM 659 – WATER 23 M GAL.

ITEM 653 – TOPSOIL FURNISHED AND PLACED

THIS ITEM IS TO BE USED IN THE AREAS OF PAVEMENT REMOVAL TO BRING THE SITE TO GRADE AND PROVIDE A GOOD SEEDBED FOR THE SEEDING AND MULCHING IN THESE AREAS. THE ITEM IS ALSO TO BE USED AS DIRECTED BY THE ENGINEER TO PROVIDE SEEDBED IN AREAS WHERE EXISTING SOIL PROVIDES AN INADEQUATE SEEDBED.

ITEM 653 – TOPSOIL FURNISHED AND PLACED 910 CU. YD.

MAINTAIN DRAINAGE

THE FLOW IN ALL SEWERS, DRAINS, FIELD TILES, AND WATERCOURSES ENCOUNTERED SHALL BE MAINTAINED BY THE CONTRACTOR AT HIS OWN EXPENSE, AND WHENEVER SUCH WATERCOURSES AND DRAINS ARE DISTURBED OR DESTROYED DURING THE PROSECUTION OF THE WORK, THEY SHALL BE RESTORED BY THE CONTRACTOR AT HIS OWN COST AND EXPENSE TO A CONDITION SATISFACTORY TO THE ENGINEER.

REPLACEMENT OF DRAIN TILE AND STORM SEWER

ALL DRAIN TILE AND STORM SEWERS DAMAGED, DISTURBED, OR REMOVED AS A RESULT OF THE CONTRACTOR’S OPERATIONS SHALL BE REPLACED WITH THE SAME QUALITY PIPE OR BETTER, MAINTAINING THE SAME GRADIENT AS THE EXISTING. THE DRAIN TILE AND/OR STORM SEWER SHALL BE CONNECTED TO THE CURB SUB–DRAIN, STORM SEWER SYSTEM OR PROVIDED WITH AN OUTLET INTO THE ROADWAY DITCH AS APPLICABLE. REPLACEMENT DRAIN TILE/STORM SEWER SHALL BE LAID ON COMPACTED BEDDING EQUAL IN DENSITY TO SURROUNDING STRATUM. REPLACEMENT WORK SHALL BE DONE AT THE TIME OF THE BACKFILL OPERATION. COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE PROJECT IMPROVEMENTS.

ITEM SPECIAL – CONTAMINATED MATERIAL REMOVED AND DISPOSED OF

IF DIRECTED BY THE ENGINEER BASED ON VISUAL OR ODORIFEROUS EVALUATION OF THE EXCAVATED MATERIAL WHICH IS SUSPECTED TO BE POTENTIALLY CONTAMINATED WITH PETROLEUM PRODUCTS SUBSTANCES, IT SHALL BE STOCKPILED IN AN AREA PROVIDED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER, THE LEVELS OF CHLORIDE SOLVENTS THAT MAY BE HAZARDOUS ARE BELOW THE LEVELS THAT WOULD BE NOTICEABLE BY VISUAL OR ODORIFEROUS EVALUATION, THEREFORE, THE AREAS DESIGNATED ON THE PLANS AS BEING POTENTIALLY CONTAMINATED BY CHLORIDE SOLVENTS IS REQUIRED TO BE STOCK PILED AND SAMPLED BEFORE DISPOSITION FOR DISPOSAL IS DETERMINED. THE MATERIAL SHALL REMAIN ON–SITE UNTIL THE ENGINEER RECEIVES ANALYTICAL TEST RESULTS.

THE ENGINEER MAY PERMIT TEMPORARY STORAGE OF SUSPECTED CONTAMINATED SOILS ON AN IMPERMEABLE MEMBRANE. THE MEMBRANE SHOULD BE SURROUNDED BY BALES OF STRAW TO PREVENT THE SOILS FROM COMING IN CONTACT WITH THE ORIGINAL STOCKPILE TO PREVENT CONTACT WITH PRECIPITATION AND/OR SURFACE RUN–OFF.

IF THE EXCAVATED MATERIAL IS DETERMINED BY TESTING TO BE ENVIRONMENTALLY CONTAMINATED, THE EXCAVATED MATERIAL SHALL BE DISPOSED OF AT THE NEAREST DISPOSAL SITE THAT HAS EITHER OHIO AND/OR U.S. EPA APPROVAL TO HANDLE THE IDENTIFIED CONTAMINATED MATERIAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TESTING REQUIRED BY THE LANDFILL ACCEPTING THE CONTAMINATED MATERIAL.

THE COST FOR TESTING, STOCKPILING AND ALL OTHER COSTS ASSOCIATED WITH CONTAMINATED MATERIAL REMOVAL SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM SPECIAL – CONTAMINATED MATERIAL REMOVED AND DISPOSED OF (CHLORINATED SOLVENTS) OR OF (PETROLEUM PRODUCTS)

AN ESTIMATED QUANTITY OF 310 CUBIC YARDS HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR THIS PURPOSE.

IF THE EXCAVATED MATERIAL IS DETERMINED TO BE NON–CONTAMINATED MATERIAL, PAYMENT FOR STORAGE SHALL BE MADE UNDER ITEM SPECIAL – STOCKPILING OF NON–CONTAMINATED MATERIAL PER CUBIC YARD, PAYMENT FOR TESTING OF THE NON–CONTAMINATED MATERIAL SHALL BE MADE UNDER ITEM SPECIAL – TESTING OF NON–CONTAMINATED MATERIAL PER EACH.

ITEM SPECIAL – TESTING OF NON–CONTAMINATED MATERIAL

WHEN EXCAVATED MATERIAL IS TESTED AND DETERMINED TO BE NON–CONTAMINATED MATERIAL, THE TESTING SHALL BE PAID FOR UNDER ITEM SPECIAL – TESTING OF NON–CONTAMINATED MATERIAL. AN ESTIMATED QUANTITY OF 2 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR THIS PURPOSE.

ITEM SPECIAL – STOCKPILING OF NON–CONTAMINATED MATERIAL

IF MATERIAL IS SUSPECTED, BY VISUAL OR ODORIFEROUS EVALUATION, OF BEING CONTAMINATED IT SHALL BE STOCKPILED IN A LOCATION SECURE BY THE CONTRACTOR AND TESTED FOR CONTAMINATION. PAYMENT SHALL BE MADE UNDER ITEM SPECIAL – STOCKPILING OF NON–CONTAMINATED MATERIAL MAY BE USED ON THE PROJECT SITE OR DISPOSED OF AND PAID FOR UNDER THE APPROPRIATE ITEM 203 PLAN ITEM. ALL OTHER COSTS SHALL BE INCLUDED IN ITEM SPECIAL – STOCKPILING OF NON–CONTAMINATED MATERIAL.

AN ESTIMATED QUANTITY OF 310 CUBIC YARDS HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR THIS PURPOSE.

CALCULATED
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GENERAL NOTES

STATE ROUTE 317
SHOOK ROAD - PHASE II

5
71

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CONCRETE WALKS

ALL EXISTING CONCRETE SIDEWALKS BEING REPLACED WITH NEW CONCRETE SIDEWALKS SHALL BE REMOVED AT AN EXISTING JOINT AND REPLACED PER STANDARD DRAWING 2300. INSTALL EXPANSION JOINT WHERE NEW CONCRETE ADJOINS EXISTING SIDEWALK.

ALL EXISTING CONCRETE SIDEWALKS NOT SCHEDULED FOR REPLACEMENT BUT BEING CROSSED BY THE INSTALLATION OF TRAFFIC ITEMS, ELECTRICAL CONDUIT, PIPING, ETC. SHALL BE FULLY REMOVED AT AN EXISTING JOINT AND REPLACED PER STANDARD DRAWING 2300 UNLESS NOTED OTHERWISE.

PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 608 WORK ITEMS.

STORMWATER FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE OWNER, THE ENGINEER AND THE CONTRACTOR SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. THE ENGINEER SHALL KEEP RECORDS OF THE INSPECTION IN WRITING.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED OR RECONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE OWNER.

ALL EXISTING MANHOLES, CATCH BASINS, DRAINS, SEWERS, AND APPURTENANCES INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. THE CONTRACTOR SHALL CORRECT ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS TO THE SATISFACTION OF THE ENGINEER. THE ABOVE IS NOT APPLICABLE FOR STRUCTURES TO BE ABANDONED. THE CONTRACTOR SHALL REMOVE DEBRIS, SILT, ETC. FROM THE EXISTING MANHOLES AND CATCH BASINS THAT HAVE BEEN AFFECTED BY CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL MAINTAIN SERVICE IN EXISTING SEWERS DURING CONSTRUCTION.

DIVISION OF SEWERAGE AND DRAINAGE UTILITIES

CITY OF COLUMBUS LOCATORS WILL ONLY LOCATE AND MARK MAIN LINE SEWERS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICE LATERALS AND FIELD VERIFYING THE LOCATION OF MAIN SEWER LINES. ANY DAMAGE AND/OR REPAIRS TO THE MAIN SEWER LINES OR SERVICE LATERALS ARE THE RESPONSIBILITY OF THE SEWER CONTRACTOR. REPAIRS MUST BE COMPLETED BY A LICENSED SEWER CONTRACTOR UNDER A SEPARATE SEWER PERMIT.

CLEAN WATER CONNECTIONS TO SANITARY SEWERS

ROOF DRAINS, FOUNDATION DRAINS, DRAIN TILES, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SYSTEM ARE PROHIBITED.

TRAFFIC SIGNS TO BE REPLACED

THE CONTRACTOR AS PART OF THIS PROJECT SHALL REPLACE ALL CITY OF COLUMBUS TRAFFIC SIGNS THAT ARE LOCATED INSIDE THE LIMITS OF THIS PROJECT. THE CONTRACTOR SHALL REMOVE ALL TRAFFIC SIGNS AND SIGN SUPPORTS AND DELIVER THEM TO THE TRAFFIC MAINTENANCE SHOP AT 1820 EAST 17TH. AVENUE (PHONE # (614) 645-7393). THE CONTRACTOR SHALL PURCHASE NEW SIGNS AND SIGN SUPPORTS TO INSTALL AS INDICATED ON THE PLANS OR IF NOT SHOWN THEN AT THE PREVIOUS LOCATION FOR THE SIGN BEING REPLACED. PERFORMANCE OF AND PAYMENT FOR THIS WORK SHALL BE AS PER ITEM 630 "TRAFFIC SIGNS AND SIGN SUPPORTS" FROM THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS.

ITEM 630 – GROUND MOUNTED SUPPORT, NO. 3, AS PER PLAN

GROUND MOUNTED SIGN SUPPORTS PLACED SHALL BE IN ACCORDANCE WITH ALL REQUIREMENTS OF ITEM 630 AND THE NOTES HEREIN.

ALL SIGN SUPPORTS SHALL BE TYPE S PER THE OHIO DEPARTMENT OF TRANSPORTATION'S STANDARD CONSTRUCTION DRAWING TC-41.20 USING THE ANCHOR BASE INSTALLATION METHOD. GROUND MOUNTED SUPPORT KNOCK OUTS SHALL NOT BE REMOVED.

THE LOCATION OF GROUND MOUNTED SIGN SUPPORTS MAY BE ADJUSTED Laterally TO AVOID IMPACTS WITH PROPOSED STORM PIPE AND ANY OTHER UNDERGROUND UTILITIES PRESENT IN THE AREA.

PAYMENT FOR THESE ITEMS WILL BE AT THE CONTRACT BID PRICE FOR THE INDIVIDUAL ITEMS.

ITEM 630 – SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ITEM 630, THE BACK OF ALL SIGNS, MOUNTING HARDWARE, AND SUPPORT ASSEMBLIES MOUNTED ON EITHER SIGNAL SUPPORTS, PEDESTAL SUPPORTS, OR LIGHTING POLES SHALL BE COATED TO MATCH ITS RESPECTIVE SUPPORT. FINISH REQUIREMENTS SHALL BE IN ACCORDANCE WITH THAT LISTED FOR THE SUPPORT, PEDESTAL, OR LIGHT POLE USED FOR ATTACHMENT.

PAYMENT SHALL BE PER ITEM 630.

ITEM 621 – RAISED PAVEMENT MARKER REMOVED

REMOVE RAISED PAVEMENT MARKERS IN ACCORDANCE WITH THE SPECIFICATIONS. DO NOT RECYCLE USED RPM'S. THE FOLLOWING QUANTITY IS PROVIDED FOR THE REMOVAL OF RPM'S ALONG THE LENGTH OF THE PROJECT:

ITEM 621 – RAISED PAVEMENT MARKER REMOVED 49 EACH

ROUNDING OF CORNERS

THE ROUNDED CORNERS SHOWN IN THE TYPICAL SECTION DETAILS SHALL APPLY TO ALL ROADWAY CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN IN THESE PLANS.

DIVISION OF POWER

THE DIVISION OF POWER (DOP) HAS UNDERGROUND STREET LIGHTING AT THIS WORK LOCATION. THE CONTRACTOR IS HEREBY REQUIRED TO CONTACT OUPS AT 811 OR 1-800-362-2764 FORTY-EIGHT (48) HOURS PRIOR TO CONDUCTING ANY ACTIVITY WITHIN THE CONSTRUCTION AREA.

ANY REQUIRED RELOCATION, SUPPORT, PROTECTION, OR ANY OTHER ACTIVITY CONCERNED WITH THE CITY'S ELECTRICAL FACILITIES IN THE CONSTRUCTION AREA IS TO BE PERFORMED BY THE CONTRACTOR UNDER THE DIRECTION OF DOP PERSONNEL AND AT THE EXPENSE OF THE PROJECT. THE CONTRACTOR SHALL USE MATERIAL AND MAKE REPAIRS TO A CITY OF COLUMBUS STREET LIGHTING SYSTEM BY FOLLOWING DOP'S "MATERIAL AND INSTALLATION SPECIFICATIONS" (MIS) AND THE CITY OF COLUMBUS "CONSTRUCTION AND MATERIAL SPECIFICATIONS" (CMSC). ANY NEW OR RE-INSTALLED UNDERGROUND STREETLIGHT SYSTEM SHALL REQUIRE TESTING AS REFERRED TO IN SECTION 1001.18 OF THE CMSC MANUAL. THE CONTRACTOR SHALL CONFORM TO DOP'S EXISTING CONDUCTOR SAFETY POLICY AND HOLD CARD SYSTEM, MIS-01, COPIES OF WHICH ARE AVAILABLE FROM DOP.

IF ANY ELECTRIC FACILITY BELONGING TO DOP IS DAMAGED IN ANY MANNER BY THE CONTRACTOR, ITS AGENTS, SERVANTS, OR EMPLOYEES, AND REQUIRES EMERGENCY REPAIRS, THE DOP DISPATCH OFFICE SHOULD BE CONTACTED IMMEDIATELY AT (614) 645-7627. DOP SHALL MAKE ALL NECESSARY REPAIRS, AND THE EXPENSE OF SUCH REPAIRS AND OTHER RELATED COSTS SHALL BE PAID BY THE CONTRACTOR TO THE DIVISION OF POWER, CITY OF COLUMBUS, OHIO.

ITEM 259 – PERMANENT PAVEMENT, TYPE I, AS PER PLAN

THE CONTRACTOR SHALL PERFORM WORK ACCORDING TO CMS ITEM 259, AND PROVIDE A PAVEMENT BUILD UP THAT MATCHES EXISTING.

ITEM 254 – PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN

THE CONTRACTOR IS TO PLANE THE EXISTING PAVEMENT AT VARIABLE DEPTHS TO PROVIDE A CONSTANT CROSS SLOPE TO THE STATE ROUTE 317 FINAL SURFACE TO MATCH THE TYPICAL SECTIONS (1-1/2" MIN.), AND A 1.56% CROSS SLOPE TO THE SHOOK ROAD FINAL SURFACE (1-1/2" MIN.).

THIS SHALL INCLUDE ALL EQUIPMENT, LABOR AND INCIDENTALS TO PERFORM WORK AND SHALL BE INCLUDED IN THE UNIT COST BID FOR ITEM 254 – PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN.

CLEARING AND GRUBBING

THE CITY HAS NOT MARKED INDIVIDUAL TREES AND STUMPS FOR REMOVAL. UNLESS SPECIFICALLY DESIGNATED AS "DND" IN THE PLANS, REMOVE ALL TREES AND STUMPS WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201 – CLEARING AND GRUBBING.

FRANKLIN COUNTY ENGINEER'S GENERAL NOTES

FRANKLIN COUNTY ENGINEER'S MONUMENTATION

THE CONTRACTOR SHALL CONTACT THE FRANKLIN COUNTY ENGINEER'S OFFICE, SURVEY DEPARTMENT AT (614-525-2489) TWO WORKING DAYS BEFORE DISTURBING ANY FRANKLIN COUNTY GEODETIC MONUMENTS (VERTICAL AND/OR HORIZONTAL) FOR REFERENCE AND REPLACEMENT.

FRANKLIN COUNTY PERMIT

THE CONTRACTOR SHALL SECURE A WRITTEN PERMIT FROM THE FRANKLIN COUNTY ENGINEER'S OFFICE, 970 DUBLIN RD, A MINIMUM OF TWO WORKING DAYS PRIOR TO BEGINNING WORK WITHIN FRANKLIN COUNTY MAINTAINED RIGHT-OF-WAY; CONTACT STEVE BUSKIRK AT (614) 525-3063. THE CONTRACTOR MAY BE REQUIRED TO POST A BOND WITH THE FRANKLIN COUNTY ENGINEER PRIOR TO ISSUANCE OF THE PERMIT TO INSURE PROPER RESTORATION OF THE PAVEMENT AND RIGHT-OF-WAY. THE CONTRACTOR SHALL PROVIDE THE FRANKLIN COUNTY ENGINEER'S OFFICE A 24-HOUR TELEPHONE NUMBER TO BE USED IN CASE OF AN EMERGENCY.

EXISTING/UNIDENTIFIED STORM SEWERS

IF ANY EXISTING STORM SEWERS OR FIELD TILES ARE ENCOUNTERED DURING CONSTRUCTION, LEAVE EXPOSED AND CONTACT THE FRANKLIN COUNTY DRAINAGE ENGINEER'S OFFICE AT (614) 525-7318 OR (614) 525-2787 TO HAVE THE EXISTING TILE'S, SIZE, COMPOSITION, HORIZONTAL LOCATION, AND FLOWLINE SURVEYED.

EROSION CONTROL

THE CONTRACTOR SHALL OBTAIN AN OEPA PERMIT AND NOI AS PER NPDES REQUIREMENTS INCLUDING ANY OFFSITE DUMPING OR BORROW AREAS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY HIS SUBCONTRACTORS OF THE OEPA REQUIREMENTS. FURNISH COPIES OF THE DOCUMENTS TO FCEO.

ITEM 304 – AGGREGATE BASE

THE CONTRACTOR IS TO ENSURE THAT THE SUBGRADE ELEVATION OF THE WIDENING IS AT OR BELOW THE ELEVATION OF THE EXISTING SUBGRADE. AS DIRECTED BY THE ENGINEER, ADDITIONAL ITEM 304 – AGGREGATE BASE SHALL BE PLACED BELOW THAT SHOWN ON THE TYPICAL SECTIONS. ADDITIONAL ITEM 203 – EXCAVATION AND ITEM 304 – AGGREGATE BASE REQUIRED TO MEET THIS CONDITION SHALL BE PAID AT THE CONTRACT BID PRICE.

ITEM 808 – 12" WATER MAIN LOWERING, AS PER PLAN

THIS CONTINGENCY ITEM SHALL INCLUDE THE LOWERING OF THE 12" WATER MAIN PER CMSC 808.03 AND SCD L-7401. ADDITIONALLY, THE COST OF REMOVING THE EXISTING 12" VALVE AND PLACING A NEW 12" VALVE SHALL BE INCLUDED IN THE COST OF THIS ITEM AS NECESSARY.

EXPOSE THE EXISTING 12" WATER MAIN PRIOR TO INSTALLING THE STORM SEWER CROSSING THE NORTH LEG OF SHOOK ROAD. IF THE CLEARANCE IS BETWEEN 12" AND 18", CONTACT DOW-DISTRIBUTION ENGINEERING AT 614-645-7677. IF 18" CLEARANCE CAN BE PROVIDED BETWEEN THE EXISTING WATER MAIN AND THE PROPOSED STORM SEWER, NON-PERFORM THIS ITEM. OTHERWISE, LOWER THE WATER MAIN TO PROVIDE THE REQUIRED 18" MINIMUM CLEARANCE.

UNDERDRAIN TABLE												
SHEET	REF NO.	STATION TO STATION	SIDE	OUTLET INFORMATION			603	603	605	605	901	REMARKS
							6" CONDUIT, TYPE F, FOR UNDERDRAIN OUTLETS	6" CONDUIT, TYPE F	6" PIPE UNDERDRAINS	6" UNCLASSIFIED PIPE UNDERDRAINS	6" PIPE, WITH TYPE I BEDDING	
				STATION	ELEV.	TYPE	FT	FT	FT	FT	FT	
18-19	1-UD	154+08.50 to 160+25	LT.	160+25	738.29	CB 4	17		609		1	PLUG AT STATION 154+08.50
18-19	2-UD	154+08.60 to 160+25	RT.	160+25	738.29	CB 16	17		609		1	PLUG AT STATION 154+08.50
19-20	3-UD	160+25 to 10+66.23	LT.	160+25	738.29	CB 4	17	20	256		1	PLUG AT STATION 10+66.23
19-20	4-UD	160+25 to 9+32.21	L/R	160+25	738.29	CB 16	17	20	295		1	PLUG AT STATION 9+32.21
20-21	5-UD	164+50 to 168+75	LT.	168+75	740.00	CB 10	15		238	70	112	UNCLASSIFIED UD 168+00 – 168+70
20	6-UD	9+32.10 to 9+61.90	RT.	9+61.90	742.10	CB 13	5	10	18		1	PLUG AT STATION 9+32.21
20	7-UD	9+61.90 to 164+50.00	RT.	9+61.90	742.32	TEE		10	79		1	
20-21	8-UD	164+50 to 168+75.00	RT.	168+75	740.00	CB 11	16					
21-22	9-UD	168+75 to 170+97.50	LT.	168+75	740.00	CB 10	15		171	16	32	UNCLASSIFIED UD 170+50 – 170+97.50 (PLUG)
21-22	10-UD	168+75 to 170+97.50	RT.	168+75	740.00	CB 11	16		170	48		UNCLASSIFIED UD 170+50 – 170+97.50 (PLUG)
33-34	11-UD	10+66.23 to 12+95	LT.	13+00	738.50	EX. CB	14		136	95	1	
20,33,34	12-UD	164+50 to 12+95	L/R	13+00	739.10	EX. CB	13	10	186	95	54	1
34	13-UD	13+00 to 15+00	LT.	13+00	738.50	EX. CB	14	20	175		1	
34	14-UD	13+00 to 13+54.86	RT.	13+00	739.10	EX. CB	13		50		1	MEET EXISTING AT 13+54.86
34	15-UD	15+00 to 16+00	LT.	16+00	739.90	EX. CB	23		83		1	
34	16-UD	14+29.06 to 15+00	RT.	14+29.06		EX. UD			71			MEET EXISTING AT 14+29.06
34	17-UD	15+00 to 16+00	RT.	16+00	739.98	EX. CB	23		81		1	
TOTALS CARRIED TO GENERAL SUMMARY							235	90	3227	324	198	

CALCULATED
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GENERAL NOTES

STATE ROUTE 317
SHOOK ROAD - PHASE II

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WATER

THE CITY OF COLUMBUS CONSTRUCTION AND MATERIALS SPECIFICATIONS (CMSC), 2018 EDITION, INCLUDING ALL REVISIONS AND SUPPLEMENTS IN EFFECT AT THE TIME OF SIGNATURE BY THE DIRECTOR OF PUBLIC SERVICE, SHALL GOVERN ALL CONSTRUCTION ITEMS THAT ARE A PART OF THIS PLAN UNLESS NOTED OTHERWISE.

ALL WATER MAIN MATERIALS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT RULES AND REGULATIONS OF THE CITY OF COLUMBUS, DIVISION OF WATER. ALL CITY OF COLUMBUS, DIVISION OF WATER STANDARD DRAWINGS SHALL APPLY TO THE PROJECT, UNLESS OTHERWISE NOTED.

FOR ANY EMERGENCIES INVOLVING THE WATER DISTRIBUTION SYSTEM, PLEASE CONTACT THE DIVISION OF WATER DISTRIBUTION MAINTENANCE OFFICE AT 614-645-7788.

ALL BRASS FITTINGS ASSOCIATED WITH WATER WORK, INCLUDING REPAIRS TO THE EXISTING SYSTEM, SHALL CONFORM TO THE REVISED ALLOWABLE LEAD EXTRACTION LIMIT PER THE UPDATED NSF/ANSI 61 STANDARD. THE DIVISION OF WATER'S APPROVED MATERIALS LIST HAS BEEN UPDATED TO REFLECT THIS REQUIREMENT.

IT SHALL BE UNLAWFUL FOR ANY PERSON TO PERFORM ANY WORK ON CITY OF COLUMBUS WATER MAIN SYSTEMS WITHOUT FIRST SECURING LICENSE TO ENGAGE IN SUCH WORK, AS INDICATED IN COLUMBUS CITY CODE SECTION 1103.02 AND 1103.06. THIS WORK INCLUDES ANY ATTACHMENTS, ADDITIONS TO OR ALTERATIONS IN ANY CITY SERVICE PIPE OR APPURTENANCES (INCLUDING WATER SERVICE LINES AND TAPS). THIS REQUIREMENT MAY BE MET BY UTILIZATION OF A SUBCONTRACTOR WHO HOLDS A CITY OF COLUMBUS WATER CONTRACTOR LICENSE OR A COMBINED WATER/SEWER CONTRACTOR LICENSE TO PERFORM THIS WORK. UTILIZATION OF A SUBCONTRACTOR MUST MEET THE LICENSING REQUIREMENTS OF CITY OF COLUMBUS BUILDING CODE, IN PARTICULAR SECTION 4114.119 AND 4114.529.

THE CONTRACTOR SHALL OBTAIN THE PROPER HYDRANT PERMIT(S), AND PAY ANY APPLICABLE FEES, FOR ANY APPROVED HYDRANT USAGE DEEMED NECESSARY FOR WORK UNDER THIS IMPROVEMENT. PERMITS MAY BE OBTAINED THROUGH THE DIVISION OF WATER PERMIT OFFICE (614-645-7330). THE CONTRACTOR SHALL ADHERE TO ALL RULES & REGULATIONS GOVERNING SAID PERMIT AND MUST HAVE THE ORIGINAL PERMIT ON SITE ANYTIME IN WHICH THE HYDRANT IS IN USE. PERMITS MAY BE OBTAINED BY ACCESSING HTTP://PORTAL.COLUMBUS.GOV/PERMITS/. COST TO BE INCLUDED IN THE VARIOUS BID ITEMS.

FOR FIRE HYDRANTS WITHIN THE TOWNSHIP, WRITTEN PERMISSION MUST BE OBTAINED FROM THE TOWNSHIP. THIS WRITTEN PERMISSION MUST BE PROVIDED TO THE CITY OF COLUMBUS PERMIT OFFICE WHEN APPLYING FOR A FIRE HYDRANT PERMIT WITHIN A TOWNSHIP.

ALL FIRE HYDRANTS TO BE INSTALLED IN THE CITY OF COLUMBUS SHALL BE PAINTED WITH THE COLOR "SAFETY ORANGE". THE FIRE HYDRANTS SHALL BE PROVIDED WITH TWO COATS IN A GLOSS ENAMEL OF THE "SAFETY ORANGE" COLOR FOR THE ENTIRE HYDRANT. THE TOPS OF THE FIRE HYDRANTS ARE NO LONGER REQUIRED TO BE PAINTED BLACK. AFTER INSTALLATION OF FIRE HYDRANTS, THE CONTRACTOR IS RESPONSIBLE TO APPLY TOUCH UP PAINT TO ANY DAMAGE TO THE FACTORY APPLIED HYDRANT PAINT. HYDRANTS WILL NOT BE ACCEPTED UNTIL ANY PAINT DAMAGE FROM SHIPPING OR INSTALLATION HAS BEEN REPAIRED. USE HYDRANT TOUCH UP PAINT IN ACCORDANCE WITH THE APPROVED MATERIALS LIST.

MAINTAIN EIGHTEEN (18) INCHES VERTICAL AND TEN (10) FEET HORIZONTAL SEPARATION BETWEEN ANY SANITARY OR STORM SEWER PIPING AND ALL PROPOSED WATER MAINS.

WHEN CROSSING THE EXISTING WATER MAIN, AND LOW STRENGTH MORTAR (ITEM 613) IS TO BE USED AS BACKFILL, THE CONTRACTOR SHALL PROVIDE SIZE NO. 57 CRUSHED CARBONATE STONE (CCS) 1 FOOT BELOW TO 1 FOOT ABOVE THE EXISTING WATER MAIN.

"SURVEY COORDINATES" SHALL INCLUDE ALL MATERIAL, EQUIPMENT, AND LABOR NECESSARY TO OBTAIN HORIZONTAL AND VERTICAL (NORTHING, EASTING, AND CENTERLINE ELEVATION) SURVEY COORDINATES FOR THE WATER MAIN IMPROVEMENTS. THE SURVEY COORDINATES SHALL BE OBTAINED FOR THE COMPLETED WATER MAIN CONSTRUCTION AND SHALL INCLUDE ALL VALVES, TEES, CROSSES, BENDS, HORIZONTAL DEFLECTIONS, PLUGS, REDUCERS, TAPPING SLEEVES, FIRE HYDRANTS, AIR RELEASES, CURB STOPS, AND CASING PIPE TERMINI. ADDITIONAL SURVEY COORDINATES ARE REQUIRED ON THE WATER MAIN EVERY 200 FEET WHERE NO FITTING OR OTHER WATER MAIN STRUCTURE IS BEING INSTALLED WITHIN THAT LENGTH OF THE IMPROVEMENT.

ALL SURVEY COORDINATES SHALL BE REFERENCED TO THE APPLICABLE COUNTY ENGINEER'S MONUMENTS, AND SHALL BE BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD 83) WITH THE (NSRS2007) ADJUSTMENT, WITH FURTHER REFERENCE MADE TO THE OHIO STATE PLANE SOUTH COORDINATE SYSTEM, SOUTH ZONE, WITH ELEVATIONS BASED ON NAVD 88 DATUM. ALL COORDINATES (NORTHING, EASTING, CENTERLINE ELEVATION) SHALL BE REFERENCED TO THE NEAREST HUNDREDTH (N xxxxxx.xx, E xxxxxx.xx, C/L ELEV. xxx.xx). ALL SURVEY COORDINATES SHALL BE ACCURATE TO WITHIN 1.0 FOOT HORIZONTAL AND A TENTH OF A FOOT (0.10) OR LESS VERTICAL.

THE COORDINATES SHALL BE DOCUMENTED TO THE ENGINEER IN DIGITAL SPREADSHEET FORM AND SHALL INCLUDE THE APPLICABLE ITEM, STATION, NORTHING, EASTING, AND CENTERLINE ELEVATION. COORDINATES SHALL BE SUBMITTED TO THE ENGINEER ON A BI-WEEKLY BASIS. COORDINATES SHALL ALSO BE REQUIRED TO BE SUBMITTED TO THE DIVISION OF WATER AS PART OF THE REQUEST FOR CHLORINATION.

LUMP SUM PAYMENT IS FULL COMPENSATION FOR ALL WORK INVOLVED IN OBTAINING AND DOCUMENTING THE SURVEY COORDINATES AS DESCRIBED IN THIS SPECIFICATION.

ANY SECTION OF WATER MAIN THAT IS LONGER THAN 20 FEET IN LENGTH SHALL BE CHLORINATED. HAND SWABBING METHODS WILL ONLY BE PERMITTED FOR SECTION LESS THAN OR EQUAL TO 20 FEET IN LENGTH. USE UNSCENTED HOUSEHOLD BLEACH FOR HAND SWABBING OF PIPE AND FITTINGS. PLEASE NOTE THAT CUT-IN-TEES, SLEEVES AND ANY OTHER REQUIRED FITTINGS OR PIPING SHALL BE TAKEN INTO ACCOUNT AND ARE INCLUDED IN THE TOTAL LENGTH OF THE SECTION (OUT TO CUT).

CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS OF THE OHIO ADMINISTRATIVE CODE CHAPTER 3745-83-02 WATER DISRUPTION OF SERVICE RULE. EXCAVATE PITS SUFFICIENTLY BELOW THE AREA TO BE CONNECTED TO IN ORDER TO MAINTAIN WATER LEVELS BELOW THE WATER MAIN. IF WATER FROM THE PIT ENTERS THE EXISTING MAIN, CONTACT DIVISION OF WATER IMMEDIATELY. ENSURE THAT SUFFICIENTLY SIZED PUMPS ARE UTILIZED TO REMOVE WATER FROM THE TRENCH AND BACKUP PUMPS ARE KEPT ON SITE FOR REDUNDANCY.

ALL WATER MAIN VALVE BOXES, WATER TAP BOXES, TEST STATIONS, PITOMETER TAP STRUCTURES, METER PIT COVERS, AND OTHER SURFACE UTILITY STRUCTURES WITHIN THE DISTURBED AREA SHALL BE ADJUSTED TO GRADE. ANY OF THESE STRUCTURES LOCATED WITHIN PAVEMENT, DRIVEWAYS, OR OTHER TRAVELED AREAS, WHETHER EXISTING OR PROPOSED, SHALL BE EQUIPPED WITH A TRAFFIC RATED, HEAVY DUTY VALVE BOX AND/OR COVER IN ACCORDANCE WITH THE STANDARD DRAWINGS. EXISTING WATER TAP BOXES TO REMAIN THAT ARE ENCOUNTERED WITHIN THE PROJECT LIMITS SHALL BE CLEANED OUT, CENTERED OVER THE CURB STOP, AND ADJUSTED TO THE PROPOSED GRADE.

IF, DURING EXCAVATION, THE POLYETHYLENE ENCASEMENT ON THE EXISTING WATER MAIN BECOMES DAMAGED, THE CONTRACTOR SHALL REPAIR THE POLYETHYLENE ENCASEMENT PER MANUFACTURER'S SPECIFICATIONS AND DOW STANDARD DRAWINGS L-1003 AND L-1004, AT THEIR OWN EXPENSE. ENSURE THAT THE ENTIRE EXPOSED AREA IS COVERED WITH NEW POLYETHYLENE ENCASEMENT AND SECURELY TAPED PRIOR TO BACKFILLING.

WHERE NEW CONDUIT IS PROPOSED TO CROSS AN EXISTING OR PROPOSED WATER MAIN OR WATER TAP/SERVICE LINE, A MINIMUM OF 12-INCHES OF VERTICAL CLEARANCE SHALL BE MAINTAINED BETWEEN THE CONDUIT AND THE WATER MAIN OR TAP/SERVICE LINE. A MINIMUM OF 3- FEET OF HORIZONTAL CLEARANCE (OUT TO OUT) IS REQUIRED AT LOCATIONS WHERE THE CONDUIT IS PARALLEL TO THE WATER MAIN AND AT LOCATIONS OF WATER MAIN THRUST BLOCKS.

A MINIMUM OF 3 FEET OF HORIZONTAL CLEARANCE (OUT TO OUT) SHALL BE MAINTAINED BETWEEN ALL EXISTING WATER MAINS AND FOUNDATIONS FOR POLES, PULL BOXES, PUSH BUTTON PEDESTALS, AND ANY OTHER MISCELLANEOUS ELECTRICAL STRUCTURE.

FIRE HYDRANT RELOCATIONS SHALL CONFORM TO APPLICABLE SECTIONS OF ITEM 809 OF THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS. WORK SHALL CONSIST OF REMOVING THE EXISTING HYDRANT, INSTALLING NEW 6" PIPE AND FITTING AS REQUIRED TO LOCATE THE FIRE HYDRANT 2 FEET FROM BACK OF PROPOSED CURB OR 8 FEET OFF EDGE OF PAVEMENT, RESETTNG HYDRANT AND BLOCKING AS REQUIRED. ALL 6" PIPE SHALL BE INSTALLED AT 4'-0" MINIMUM COVER. HYDRANT EXTENSIONS SHALL BE PROVIDED PER ITEM 810, AS REQUIRED. RELOCATED FIRE HYDRANTS SHALL BE ADJUSTED TO PROPER GRADE AND FACED IN THE PROPER DIRECTION. WHEN A HYDRANT IS RELOCATED FIFTEEN (15) FEET OR MORE FROM THE "TYPICAL HYDRANT SETTING" VALVE LOCATION (SEE L-6409 & L-6637), AN ADDITIONAL VALVE SHALL BE INSTALLED, AND RESTRAINED, WITHIN TWO (2) FEET OF THE RELOCATED HYDRANT. PAYMENT IS TO BE INCLUDED UNDER ITEM 809, FIRE HYDRANT RELOCATED.

RELOCATED FIRE HYDRANTS SHALL BE PUT BACK IN SERVICE AS SOON AS POSSIBLE. THE CONTRACTOR SHALL NOTIFY THE DIVISION OF FIRE ALARM OFFICE, 614-221-3132, WHENEVER FIRE HYDRANTS ARE TAKEN OUT OF SERVICE AND PLACED BACK IN SERVICE. NO TWO (2) ADJACENT FIRE HYDRANTS SHALL BE TAKEN OUT OF SERVICE CONCURRENTLY.

THE CONTRACTOR SHALL COORDINATE HIS WORK SUCH THAT NO WATER CUSTOMER WILL HAVE THEIR SERVICE DISRUPTED MORE THAN TWO (2) TIMES THROUGHOUT THE DURATION OF THIS PROJECT.

CONDUIT BANK WATER LINE CROSSING

CONTRACTOR TO MAINTAIN 12" MINIMUM VERTICAL CLEARANCE AT ALL CONDUIT BANK CROSSINGS WITH WATERLINE.

ITEM SPECIAL -- MAILBOX SUPPORT

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS, AND ATTACHING AN OWNER-SUPPLIED MAILBOX AT LOCATIONS SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

WOOD POSTS SHALL BE NOMINAL 4" BY 4" SQUARE OR 4-1/2" DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2" I.D., AND CONFORM TO AASHTO M 181.

HARDWARE (PLATES, SCREWS, BOLTS, ETC.) SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.11. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR ITEM SPECIAL -- MAILBOX SUPPORT SYSTEM, SINGLE.

UTILITY PULL BOXES AND MANHOLES ADJUSTED TO GRADE

THE CONTRACTOR SHALL COORDINATE THE ADJUSTMENT OF PULL BOXES AND MANHOLES WITH THE RESPECTIVE UTILITY OWNERS.

LEGEND

Mag Nail Set	●MN #xx	Electric Manhole	Ⓢ	Guy wire anchor	⋈
Iron Pin Set	●IP #xx	Electric Pull Box	Ⓢ	Power Pole	Ⓢ
Benchmark	✕	Transformer, pad mounted	Ⓢ	Power Pole with Telephone	Ⓢ
Survey Monument in Concrete	▲	Telephone Pull Box	Ⓢ	Power Pole with Telephone and Light	Ⓢ
Water Valve	⊗	Telephone Handhole	Ⓢ	Traffic Signal Strain Pole	Ⓢ
Water Valve(proposed)	⊗	Telephone Pedestal	Ⓢ	Street Light (unspecified type)	Ⓢ
Fire Hydrant(existing)	Ⓢ	Telephone Manhole	Ⓢ	Power Pole with Light	Ⓢ
Fire Hydrant(proposed)	Ⓢ	Fiber Optic Manhole	Ⓢ	Telephone Pole with Light	Ⓢ
Water Well	Ⓢ	Push Button on Post	Ⓢ	Telephone Pole with Light	Ⓢ
Water Service Valve-Found	Ⓢ	Mailbox	Ⓢ	Lamp Post	Ⓢ
Water Service Valve-(Proposed)	Ⓢ	Post	Ⓢ	Pavement Reflector	Ⓢ
Water Service Valve-Not Found	Ⓢ	Bollard	Ⓢ	Mile Post	Ⓢ
Gas Gate Valve	Ⓢ	Parking Meter	Ⓢ	Sign	Ⓢ
Gas Service Valve	Ⓢ	Irrigation Sprinkler	Ⓢ	Bush (leaves)	Ⓢ
Gas Meter	Ⓢ	Ex. Concrete	Ⓢ	Shrub (needles)	Ⓢ
Combined Sewer Manhole	Ⓢ	Ex. Electric	— E —	Tree w/ leaves	Ⓢ
Sanitary Sewer Cleanout	Ⓢ	Ex. Overhead Electric	— OE —	Tree w/ needles	Ⓢ
Sanitary Sewer Manhole	Ⓢ	Ex. Water	— W —	Rock	Ⓢ
Curb Inlet	Ⓢ	Ex. Traffic	— TR —	Storm Esmt.	—ST----
Curb Inlet	Ⓢ	Ex. Gas	— G —	Permanent Esmt.	—P----
Circle Catch Basin	Ⓢ	Ex. Telephone	— T —	Prop. R/W	—RW—
Square Catch Basin	Ⓢ	Ex. Fiber Optic Cable	—FOC—	DND -- DO NOT DISTURB	
Storm Drain Manhole	Ⓢ	Ex. Storm	— —	TBR -- TO BE REMOVED	
		Ex. Sanitary	— S —	TBRO -- TO BE REMOVED BY OWNER	
		Ex. R/W	—EX RW—	ATG -- ADJUST TO GRADE	
		Constr. Limits	—•—		
		Prop. Walk	=====		
		Ex. Curb	====		
		Ex. E/P	---		

SHEET	DESCRIPTION	STATION	AS-BUILTS		
			NORTHING	EASTING	C/L ELEV.
18	EX. FIRE HYDRANT (TO BE RELOCATED)	156+47.69			
18	EX. 6" GATE VALVE (TO BE REMOVED)	156+47.42			
18	EX. 6" GATE VALVE ADJUSTED TO GRADE	156+47.61			
18	6" 90° HORIZONTAL BEND	156+47.55			
18	RELOCATED FIRE HYDRANT	156+42.60			
19	EX. 6" GATE VALVE ADJUSTED TO GRADE	160+40.54			
19	EX. FIRE HYDRANT (TO BE RELOCATED)	160+37.99			
19	6" 45° VERTICAL BEND (ROTATE AS NECESSARY)	160+37.99			
19	6" 90° HORIZONTAL BEND (ROTATE TO GRADE)	160+33.00			
19	6" GATE VALVE (FOR HYDRANT)	160+33.16			
19	RELOCATED FIRE HYDRANT	160+33.20			
33	EX. 6" GATE VALVE ADJUSTED TO GRADE	9+41.36			
33	EX. 6" GATE VALVE ADJUSTED TO GRADE	9+78.52			
33	12" GATE VALVE				
33	12" 22.5° VERTICAL BEND				
33	12" 22.5° VERTICAL BEND				
33	12" 22.5° VERTICAL BEND				
33	12" 22.5° VERTICAL BEND				
33	EX. 6" GATE VALVE ADJUSTED TO GRADE	10+39.92			
33	SERVICE BOX ADJUSTED TO GRADE	11+78.56			
33	EX. 6" GATE VALVE ADJUSTED TO GRADE	11+38.22			
33	EX. 6" GATE VALVE ADJUSTED TO GRADE	11+38.56			
33	EX. FIRE HYDRANT (TO BE RELOCATED)	11+15.02			
33	EX. 6" GATE VALVE ADJUSTED TO GRADE WITH COLUMBUS STANDARD HEAVY DUTY VALVE BOX	11+16.76			
33	EX. 6" GATE VALVE (TO BE REMOVED)	11+16.87			
33	6" 90° HORIZONTAL BEND	11+16.88			
33	6" GATE VALVE (FOR HYDRANT)	11+66.47			
33	RELOCATED FIRE HYDRANT	11+68.48			
34	EX. 6" GATE VALVE ADJUSTED TO GRADE	13+35.42			
34	EX. FIRE HYDRANT (TO BE RELOCATED)	13+36.36			
34	RELOCATED FIRE HYDRANT	13+36.65			

MCDANIEL, ARRON U:\173608915\Transportation\design\plan_sas\Main of Traffic\173608915.mxd - MAINTENANCE OF TRAFFIC Last Saved: Aug 20, 2018 11:23 AM Plotted: Jan 18, 2019 3:17 PM

MAINTAINING TRAFFIC NOTES

ALL TEMPORARY TRAFFIC CONTROL (TTC) DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (OMUTCD), CURRENT EDITION. COPIES ARE AVAILABLE FROM THE OHIO DEPARTMENT OF TRANSPORTATION, OFFICE OF CONTRACTS, 1980 WEST BROAD STREET, COLUMBUS, OHIO 43216. **NOTE:** ALL DEVICES SHALL COMPLY, FOR CONDITION AND LOCATION, WITH THE CURRENT EDITION OF THE NCHRP 350 CRASH TESTING GUIDELINES.

CONSTRUCTION OPERATIONS SHALL NOT BEGIN UNTIL ALL TRAFFIC CONTROL IS IN PLACE AND APPROVED BY THE DEPARTMENT OF PUBLIC SERVICE INSPECTOR. IF THE CONTRACTOR DOES NOT COMPLY WITH THE STANDARDS, INCLUDING THE INSTALLATION OF TEMPORARY PAVEMENT MARKINGS AND THE REMOVAL OF CONFLICTING TRAFFIC CONTROLS, THEIR PERMIT SHALL BE REVOKED AND ALL WORK SHALL BE TERMINATED. TEMPORARY PAVEMENT MARKINGS TO INCLUDE, BUT NOT LIMITED TO, CHANNELIZING LINES, EDGE LINES, AND CENTERLINES SHALL BE INSTALLED AND MAINTAINED ON ALL CONSTRUCTION OPERATIONS LASTING A MINIMUM OF 14 CALENDAR DAYS OR AS DIRECTED BY THE TEMPORARY TRAFFIC CONTROL COORDINATOR OR THE PROJECT ENGINEER.

THE CONTRACTOR SHALL GIVE ADVANCE NOTIFICATION (WRITTEN AND VERBALLY) TO THE TEMPORARY TRAFFIC CONTROL COORDINATOR AT 614-645-6269 OR 614-645-5845, WRITTEN NOTIFICATION TO PAVING THE WAY AT PAVINGTHEWAY@MORPC.ORG OR VERBAL TO 614-233-4200, PROJECT ENGINEER, AND THE SENIOR SERVICE PLANNER OF COTA AT 614-308-4373 OR FAX 614-275-5933, INFORMING THEM OF ALL UPCOMING MAINTENANCE OF TRAFFIC CHANGES ON A WEEKLY BASIS. NOTIFICATION SHALL INCLUDE, BUT NOT BE LIMITED TO, WHAT, WHERE, WHEN, AND HOW PEDESTRIAN AND VEHICULAR TRAFFIC WILL BE AFFECTED, AND THE TEMPORARY TRAFFIC CONTROL PROCEDURES THE CONTRACTOR IS PLANNING TO USE. THE TYPE OF TRAFFIC CHANGE SHALL DETERMINE THE LENGTH OF ADVANCE NOTIFICATION REQUIRED:

TYPE OF CHANGE	ADVANCE NOTIFICATION NEEDED
DETOURS/ROAD CLOSURES	30-DAY NOTIFICATION PRIOR TO CLOSURE
LANE CLOSURE LASTING TWO WEEKS OR MORE	2 WEEKS
LANE CLOSURE LESS THAN TWO WEEKS	3 DAYS
LANE CLOSURE OF TWO DAYS OR LESS	1 DAY

THE COTA SENIOR SERVICE PLANNER SHALL BE CONTACTED 30 DAYS PRIOR TO ANY PLANNED CLOSURE ON ASSIGNED COTA ROUTES. ANY OTHER UNFORESEEN IMPACTS TO TRAFFIC SHALL BE IMMEDIATELY REPORTED AS THEY OCCUR.

ACCESS FOR PEDESTRIAN AND VEHICULAR TRAFFIC TO ALL ADJOINING PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND SAFE MOVEMENT OF PEDESTRIANS THROUGH, AROUND, OR DETOURED AWAY FROM THE CONSTRUCTION SITE. TRAFFIC CONTROL FOR PEDESTRIAN MOVEMENT SHALL BE AS PER FIGURES 6H-28 (TA-28) AND 6H-29 (TA-29) OF PART VI OF THE OMUTCD. ALL SIDEWALK DIVERSIONS AND TEMPORARY MID-BLOCK CROSSINGS SHALL BE PRE-APPROVED BY THE PROJECT ENGINEER OR THE TEMPORARY TRAFFIC CONTROL COORDINATOR.

THE CONTRACTOR SHALL MAINTAIN ALL PERMANENT TRAFFIC CONTROLS NOT IN CONFLICT WITH THE TEMPORARY TRAFFIC CONTROLS THROUGHOUT THIS PROJECT. PERMANENT TRAFFIC CONTROLS MAY BE TEMPORARILY RELOCATED OR COVERED, AS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR MISSING, DAMAGED, OR IMPROPERLY PLACED SIGNS.

THE ROADWAY SHALL NOT BE OPENED TO NON-CONSTRUCTION TRAFFIC UNTIL THE CRITICAL PERMANENT TRAFFIC CONTROLS ARE IN PLACE, OR UNTIL TEMPORARY TRAFFIC CONTROLS, APPROVED BY THE ENGINEER, ARE INSTALLED. THE CRITICAL PERMANENT TRAFFIC CONTROLS ARE **STOP, YIELD, ONE-WAY, DO NOT ENTER, AND RESTRICTED TURN SIGNS**. OTHER CRITICAL SIGNS MAY BE NOTED ON THE PLANS AS WELL. THE CONTRACTOR ASSUMES ALL LIABILITY FOR THE PREMATURE REMOVAL OF TEMPORARY TRAFFIC CONTROLS.

ITEM 614 – MAINTAINING TRAFFIC, LUMP SUM

ALL COSTS THAT CONSIST OF MAINTAINING AND PROTECTING VEHICULAR AND PEDESTRIAN TRAFFIC ACCORDING TO THE LATEST EDITION OF THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS, THE OMUTCD, AND PER THE REQUIREMENTS DESIGNATED IN THE PLAN INCLUDING ALL LAW ENFORCEMENT OFFICER (LEO) AND FLAGGER HOURS SHALL BE INCLUDED IN THE LUMP SUM ITEM 614.

IN ADDITION TO THE REQUIREMENTS HEREIN, AND THE LATEST EDITION OF THE OMUTCD, A UNIFORMED LEO SHALL BE PROVIDED FOR CONTROLLING TRAFFIC UNDER THE FOLLOWING CONDITIONS:

- WORK WITHIN A SIGNALIZED INTERSECTION, DEFINED AS THE AREA BOUNDED BY THE REAR CROSSWALK LINES;
- WHEN FLAGGING WITHIN THE INTERSECTION OF TWO ARTERIAL ROADWAYS;
- WHEN SPECIFIED IN THE MAINTENANCE OF TRAFFIC PLAN OR AS DIRECTED BY THE PROJECT ENGINEER; AND
- WHEN SHIFTING TRAFFIC LEFT OF CENTER, THROUGH A SIGNALIZED INTERSECTION, WITHOUT SHIFTING SIGNAL HEADS.

A FLAGGER SHALL BE UTILIZED TO ASSIST IN CONTROLLING TRAFFIC WHILE EQUIPMENT IS ENTERING OR EXITING AN INTERSECTION OR WORK ZONE. THE CONTRACTOR MAY UTILIZE HIS OWN OR LEO UNDER PAY ITEM 614 MAINTAINING TRAFFIC, LUMP SUM.

FLAGGERS AND LEO’S SHALL BE EQUIPPED ACCORDING TO THE STANDARDS FOR FLAGGING TRAFFIC CONTAINED IN THE OMUTCD. FLAGGING OPERATIONS PERFORMED BY LEO’S OR DESIGNATED FLAGGERS SHALL ONLY BE PERMITTED AS LONG AS ALL TRAFFIC CONTROL IS IN PLACE ACCORDING TO FIGURE 6H-10 (TA-10) IN THE OHIO MANUAL.

IF THE CONTRACTOR WISHES TO UTILIZE LEO’S FOR TRAFFIC CONTROL OTHER THAN FOR THE CONDITIONS REQUIRED IN THE PLANS, THEY DO SO AT THEIR OWN EXPENSE. THE CONTRACTOR SHALL MAKE ARRANGEMENT THROUGH THE COLUMBUS POLICE DIVISION AT (614) 645-4795.

LEO’S SHALL BE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH EMPLOYED BY THE CONTRACTOR, THE CITY REPRESENTATIVE SHALL HAVE CONTROL OVER THEIR PLACEMENT. LEO’S SHALL NOT HAVE THE AUTHORITY TO CHANGE, EDIT, OR MODIFY ANY MAINTENANCE OF TRAFFIC SCHEME WITHOUT THE PERMISSION OF THE TEMPORARY TRAFFIC CONTROL COORDINATOR OR PROJECT ENGINEER UNLESS AN EMERGENCY DEVELOPS.

IF A SAFETY HAZARD DEVELOPS, A LEO MAY BE ASSIGNED BY THE COLUMBUS SAFETY AND SERVICE DIRECTOR AT THE CONTRACTOR’S EXPENSE.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING CONTINGENCY QUANTITY HAS BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616 – WATER	17 M GAL.
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TEMPORARY TRAFFIC CONTROL ITEMS

PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) SHALL BE INSTALLED A MINIMUM OF 7 DAYS PRIOR TO CLOSURE OF THE ROADWAY. THE MESSAGE SHALL ADVISE THE MOTORISTS OF THE DATES, TIMES, AND DURATION OF THE CLOSURE. THE PCMS SHALL REMAIN IN PLACE FOR 7 DAYS AFTER THE START OF THE CLOSURE, OR AS DIRECTED BY THE TEMPORARY TRAFFIC CONTROL COORDINATOR OR PROJECT ENGINEER.

A TTC PLAN (TTCP) INCLUDING PEDESTRIAN CONTROL SHALL BE SUBMITTED TO THE TTC COORDINATOR AT (614) 645-6269 OR (614) 645-5845 AT THE PRE-CONSTRUCTION MEETING OR A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO THE BEGINNING OF WORK. COPIES OF THE APPROVED TTCP SHALL BE GIVEN TO THE PROJECT ENGINEER AND KEPT ON SITE ALONG WITH THE STREET CLOSURE/OCCUPANCY PERMIT.

TYPE C STEADY-BURN OR TYPE D 360-DEGREE STEADY BURN WARNING LIGHTS SHALL BE REQUIRED ON ALL BARRICADES, DRUMS, AND SIMILAR TRAFFIC CONTROL DEVICES IN USE AT NIGHT. ONLY 42” REFLECTORIZED CHANNELIZING DEVICES (CONES) SHALL BE PERMITTED FOR NIGHTTIME WORK WITH THE APPROVAL OF THE TTC COORDINATOR AT (614) 645-6269 OR (614) 645-5845 PER ODOT STANDARDS.

A FLASHING ARROW PANEL (48”x96”-TYPE C) SHALL BE USED IN LANE CLOSURE AS PER THE OMUTCD.

ALL TRENCHES WITHIN THE ROAD RIGHT OF WAY SHALL BE BACKFILLED OR SECURELY PLATED PER (CITY OF COLUMBUS GENERAL POLICY ON STEEL PLATE USAGE DATES 11/15/2006 AND 2013 STD. DWG. 1441) DURING NON-WORKING HOURS.

ALL EXISTING TRAFFIC LANES SHALL BE OPEN TO TRAFFIC AT ALL TIMES ON ALUM CREEK DRIVE AND SPIEGEL AVENUE.

TWO-WAY TWO-LANE TRAFFIC (ONE-LANE EACH DIRECTION) SHALL BE MAINTAINED AT ALL TIMES ON STATE ROUTE 317 BY USE OF EXISTING, PROPOSED, OR TEMPORARY PAVEMENT PER FIGURE 6H-32 TYPICAL APPLICATION 32 (TA-32) OF THE OMUTCD.

SIGNAL CONDUIT CLEARANCE FROM ADJACENT UTILITIES SHALL BE MAINTAINED AT ALL TIMES, THE SIGNAL CONDUIT CLEARANCE TABLE CAN BE FOUND IN THE CITY OF COLUMBUS TRAFFIC SIGNAL DESIGN MANUAL TABLE 13.2, MINIMUM CONDUIT CLEARANCE.

THE ROADWAY OR ANY SECTION OF ROADWAY SHALL NOT BE OPENED TO NON-CONSTRUCTION TRAFFIC UNTIL ALL TEMPORARY, NON-REFLECTIVE, BLACKOUT TAPE HAS BEEN COMPLETELY REMOVED FROM NON-CONFLICTING PERMANENT PAVEMENT MARKINGS FOR THAT AREA OF THE ROADWAY, OR UNLESS OTHERWISE DIRECTED IN WRITING BY THE ENGINEER. THIS IS SUPPLEMENTAL TO THE CMS-614.11F, AND SHALL BE PAID FOR THROUGH THE 614-LUMP SUM.

WHENEVER YELLOW CENTERLINES OR TURN-LANE LINE ARE PAVED OVER, REMOVED, OR OTHERWISE UNSERVICEABLE, THE CONTRACTOR SHALL INSTALL CLASS II TEMPORARY STRIPING (MINIMUM 4’ LONG SEGMENTS). TEMPORARY PAINT SHALL BE USED ON ALL MILLED SURFACES. TEMPORARY TAPE SHALL BE USED ON ALL FINAL COURSES OF ASPHALT. PAINT OR TAPE MAY BE USED ON ALL INTERMEDIATE COURSES OF ASPHALT, IF APPROVED BY THE ENGINEER, DRUMS WITH STEADY BURNING TYPE C OR TYPE D 360 DEGREE WARNING LIGHTS AND "KEEP RIGHT" SIGNS MAY BE SUBSTITUTED FOR CENTERLINE MARKINGS.

CLASS II TEMPORARY STRIPING (MINIMUM 4’ LONG SEGMENTS) SHALL BE AS ITEM 614-WORK ZONE PAVEMENT MARKINGS AND SHALL BE PLACED WITH ONE (1) FOOT LONGITUDINAL TOLERANCE OF THE PERMANENT STRIPE(S). ALL STRIPING NOT TO WITHIN ONE (1) FOOT TOLERANCE SHALL BE REMOVED AND REPLACED IN THE PROPER LOCATION BY THE CONTRACTOR. CLASS II TEMPORARY STRIPING SHALL BE OF THE APPROPRIATE COLOR AND SPACED AT A MAXIMUM OF FORTY (40) FEET CENTER TO CENTER.

EXISTING PERMANENT TRAFFIC CONTROL ITEMS

ANY WORK DONE BY THE DEPARTMENT OF PUBLIC SERVICE, INCLUDING INSTALLATION, RELOCATION, REMOVAL AND/OR REPLACEMENT OF PERMANENT TRAFFIC CONTROL DEVICES AS A RESULT OF WORK DONE BY THE CONTRACTOR OR AS A RESULT OF NEGLIGENCE OF THE CONTRACTOR, SHALL BE AT THE CONTRACTOR’S EXPENSE.

EXISTING PERMANENT TRAFFIC CONTROL ITEMS (CONTINUED)

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REINSTALLATION AND/OR REPLACEMENT OF ALL PERMANENT TRAFFIC CONTROL DEVICES DAMAGED OR REMOVED DURING CONSTRUCTION. PERMANENT TRAFFIC CONTROL NO LONGER IN CONFLICT WITH TEMPORARY TRAFFIC CONTROL SHALL BE REPLACED IMMEDIATELY.

ALL OVERHEAD CABLE, DOWN GUYS OR BACK GUYS SHALL NOT BLOCK ANY PORTION OF A TRAFFIC SIGNAL, TRAFFIC CONTROL SIGN, OR OTHER TRAFFIC CONTROL DEVICE SUCH THAT VISIBILITY OR OPERATION OF THE TRAFFIC CONTROL DEVICE IS IMPAIRED.

ALL PERMANENT PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS AS SHOWN ON THIS PLAN SHALL BE INSTALLED BY THE CONTRACTOR AT THE PROJECTS EXPENSE. THE PROJECT ENGINEER SHALL BE NOTIFIED TO DIRECT APPROPRIATE PERSONNEL A MINIMUM OF FORTY-EIGHT (48) HOURS (EXCLUDING SAT. & SUN.) PRIOR TO THE INSTALLATION OF PERMANENT MARKINGS TO INSPECT AND APPROVE THE PAVEMENT MARKING LAYOUT PRIOR TO PLACING THE PERMANENT MARKINGS.

PERMANENT STRIPING OR CLASS I TEMPORARY STRIPING SHALL BE INSTALLED NO LATER THAN FOURTEEN (14) CALENDAR DAYS AFTER THE FINAL PAVING COURSE IS COMPLETED. THE PAVING CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY THE STRIPING CONTRACTOR TO INSURE THE PERMANENT STRIPING IS INSTALLED WITHIN THE FOURTEEN (14) CALENDAR DAY LIMIT.

SEQUENCE OF CONSTRUCTION

PHASE 1

PERFORM THE SIGNAL INSTALLATION AT S.R. 317 AND SHOOK ROAD AND PERMANENT TRAFFIC CONTROL ITEMS. A MINIMUM OF TWO LANES (ONE LANE OF TRAFFIC IN EACH DIRECTION) SHALL BE MAINTAINED DURING NON-WORKING HOURS, AND PEAK PERIODS (7AM-9AM AND 3PM-6PM). TWO-WAY ONE-LANE TRAFFIC IS PERMITTED DURING WORKING AND NON-PEAK HOURS. TWO-WAY ONE-LANE TRAFFIC SHALL BE MAINTAINED AS PER THE OMUTCD EXCEPT THAT LEO’S SHALL BE SUBSTITUTED FOR EACH FLAG PERSON.

PHASE 2

THE CONTRACTOR SHALL CONTACT THE COUNTY TRAFFIC DESIGN ENGINEER, BILL BIELEK, AT 614-525-3054 ONE WEEK PRIOR TO THE BEGINNING OF PHASE 2 CONSTRUCTION, TO MODIFY ALUM CREEK & SPIEGEL SIGNAL TIMING.

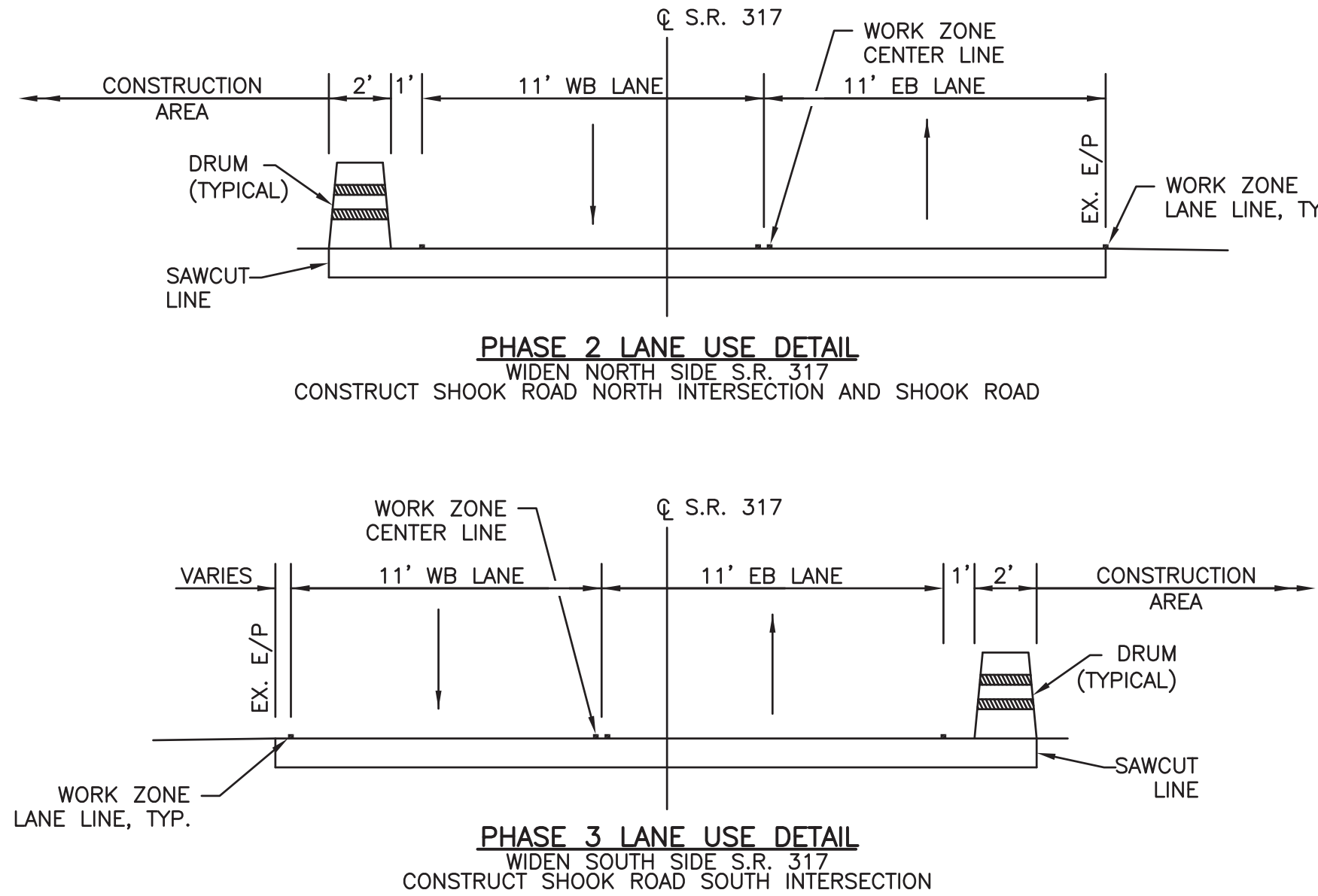
CONSTRUCT SHOOK ROAD NORTH FROM S.R. 317 AND NORTH SIDE S.R. 317 WIDENING UP TO THE INTERMEDIATE PAVEMENT COURSE. CLOSE AND DETOUR SHOOK ROAD TRAFFIC USING ALUM CREEK DRIVE AND SPIEGEL ROAD, AS SHOWN ON SHEET 9. S.R. 317 TRAFFIC TO BE MAINTAINED PER CITY OF COLUMBUS STD. DWG. 1500, AND ODOT STD. DWG. MT-101.90 USING EXISTING PAVEMENT AND THE DETAIL BELOW.

PHASE 3

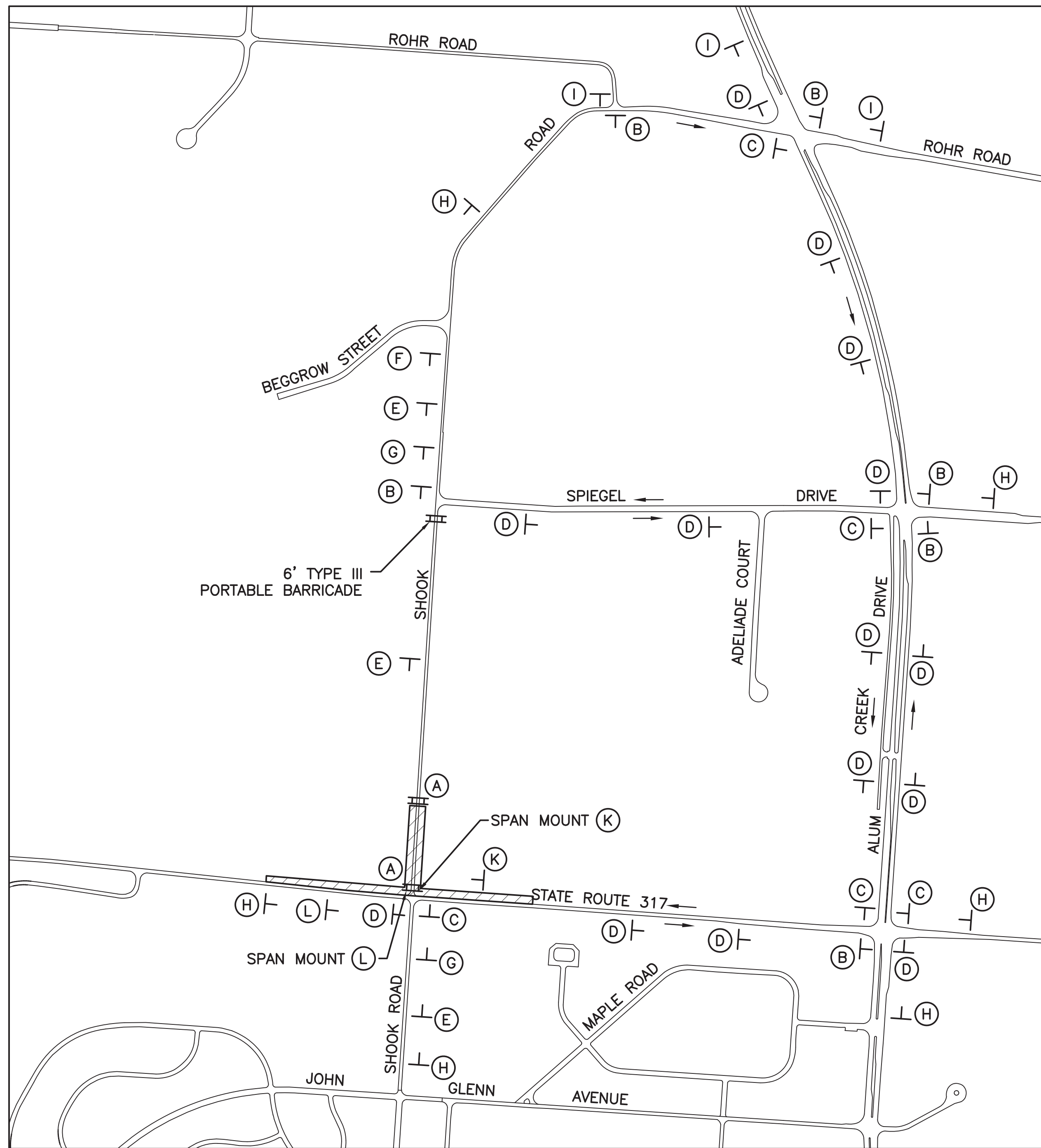
CONSTRUCT SHOOK ROAD SOUTH FROM S.R. 317 AND SOUTH SIDE S.R. 317 WIDENING UP TO THE INTERMEDIATE PAVEMENT COURSE. CLOSE AND DETOUR SHOOK ROAD TRAFFIC USING ALUM CREEK DRIVE AND JOHN GLENN AVENUE, AS SHOWN ON SHEET 9. S.R. 317 TRAFFIC TO BE MAINTAINED PER CITY OF COLUMBUS STD. DWG. 1500, AND ODOT STD. DWG. MT-101.90 USING NEW AND EXISTING PAVEMENT AND THE DETAIL BELOW.

PHASE 4

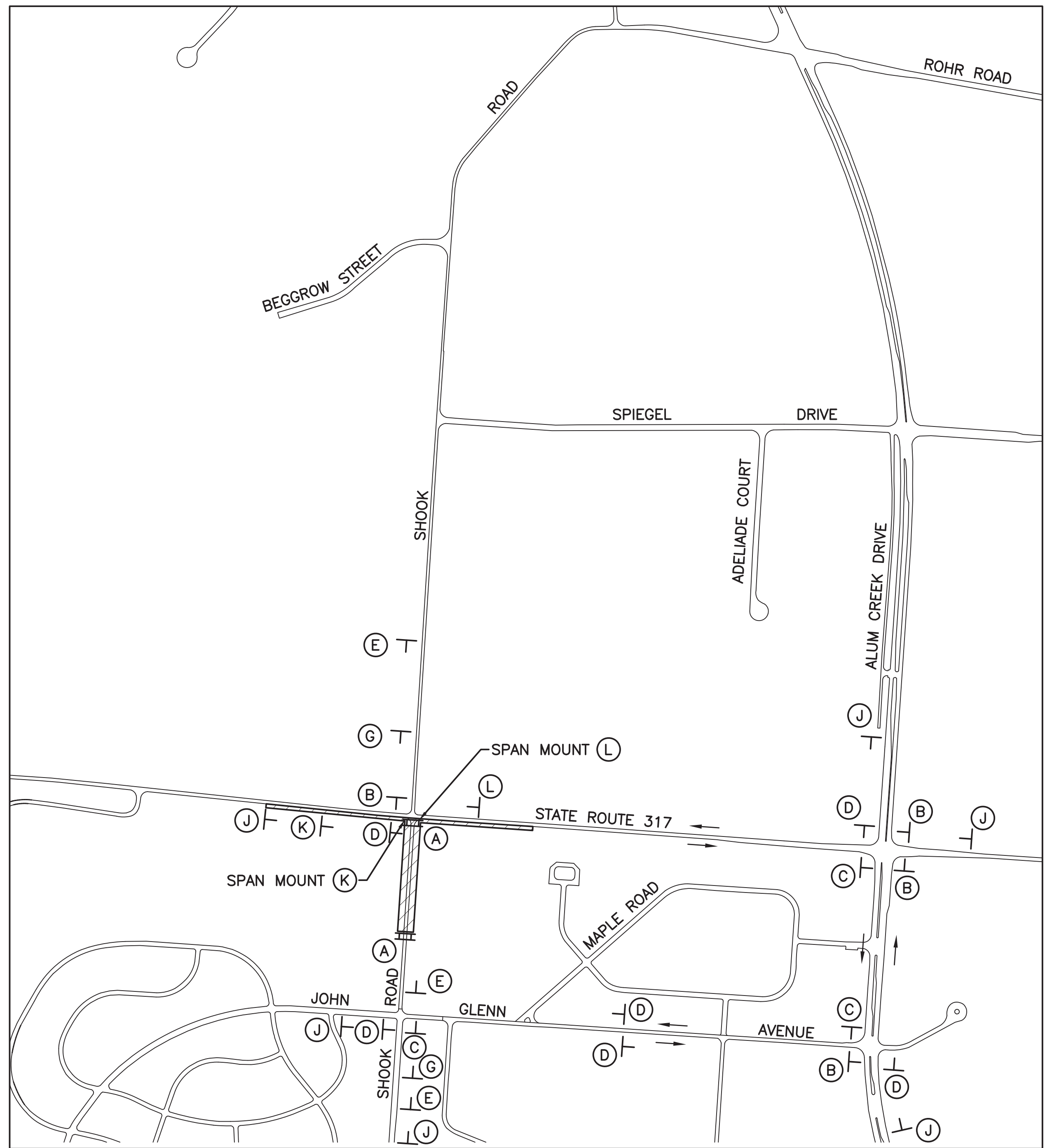
COMPLETE FINAL PAVEMENT PLACEMENT USING CITY OF COLUMBUS STD. DWG. 1550.



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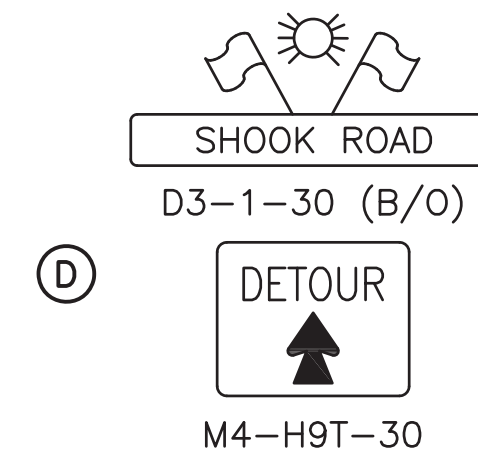
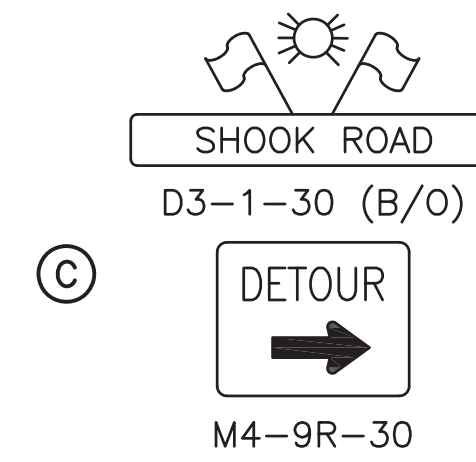
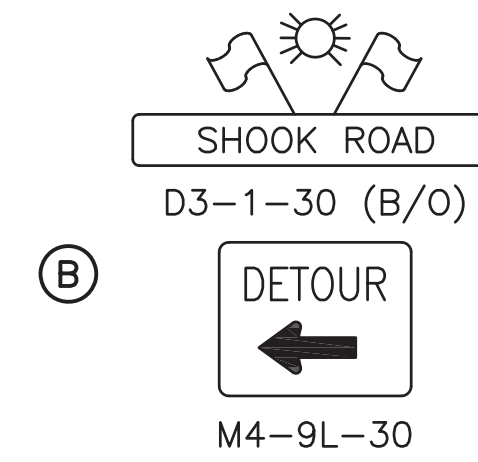
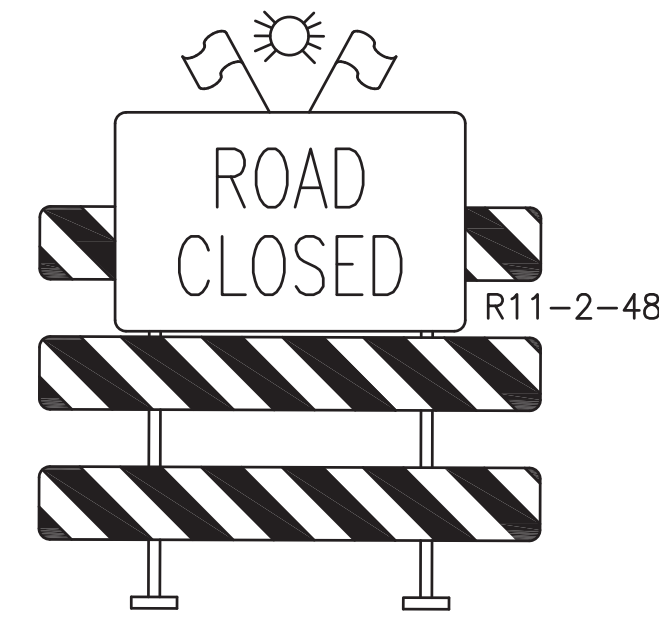
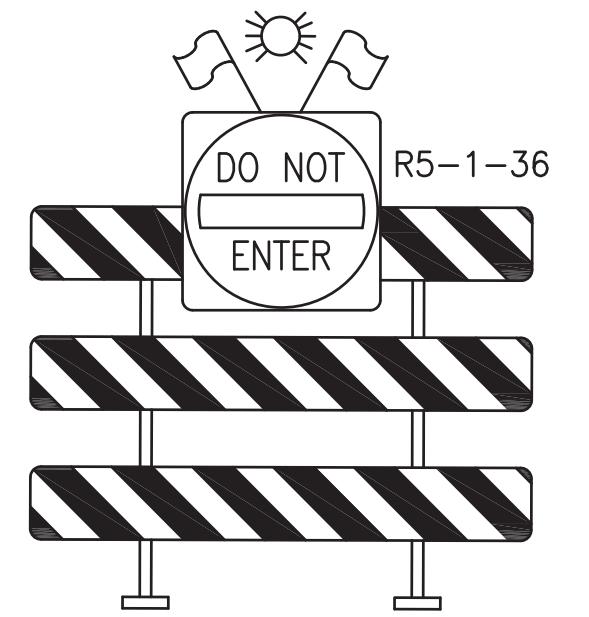
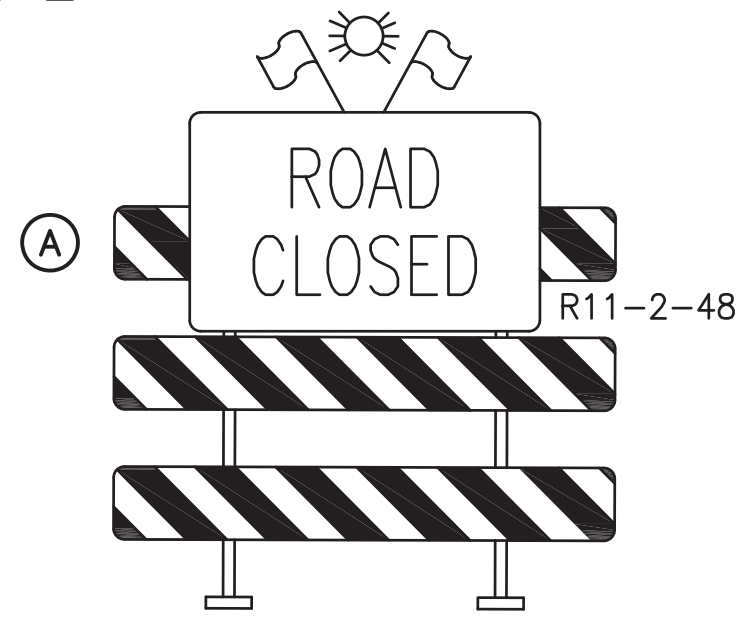
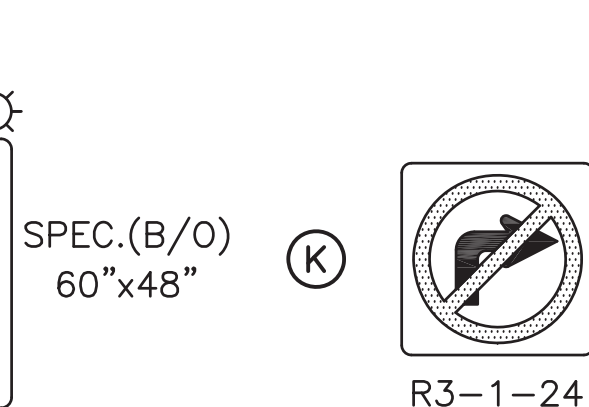
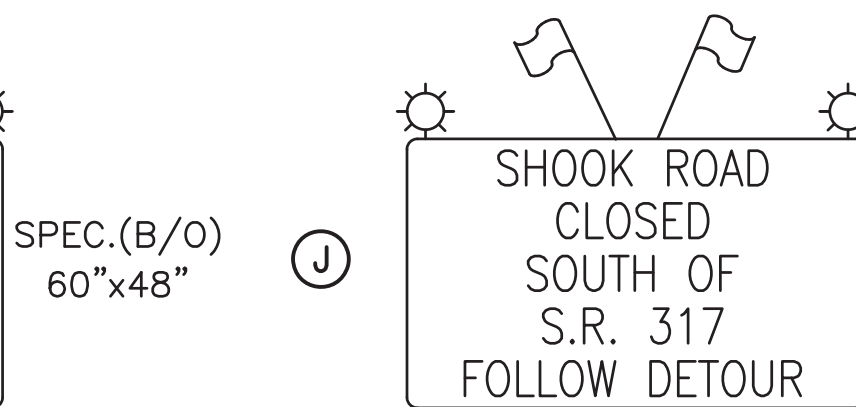
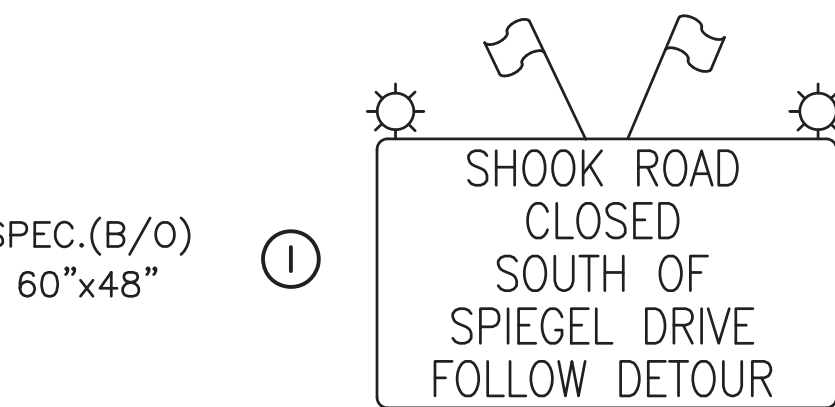
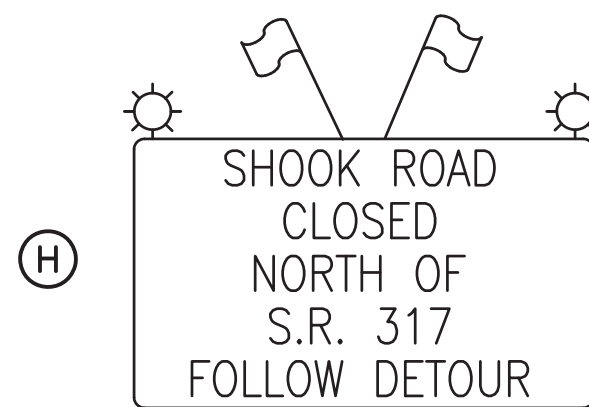
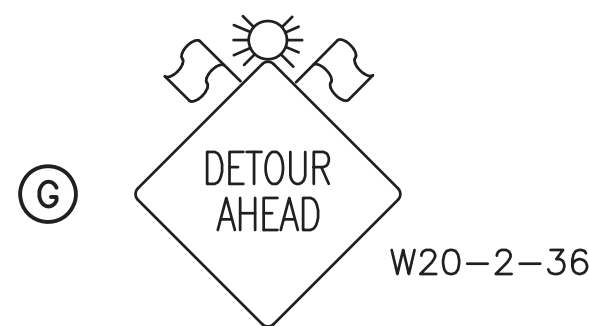
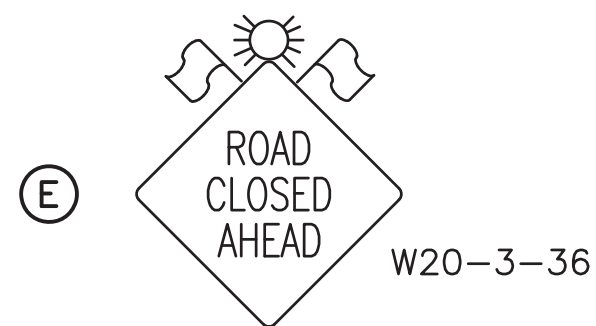
PHASE 2



PHASE 3

LEGEND:

- T - SIGN ON POST
- H - TYPE III BARRICADE
- - DETOUR ROUTE
- ▨ - WORK AREA



MAINTENANCE OF TRAFFIC

STATE ROUTE 317
SHOOK ROAD - PHASE II

9
71

2873-E



$$\frac{10}{71}$$

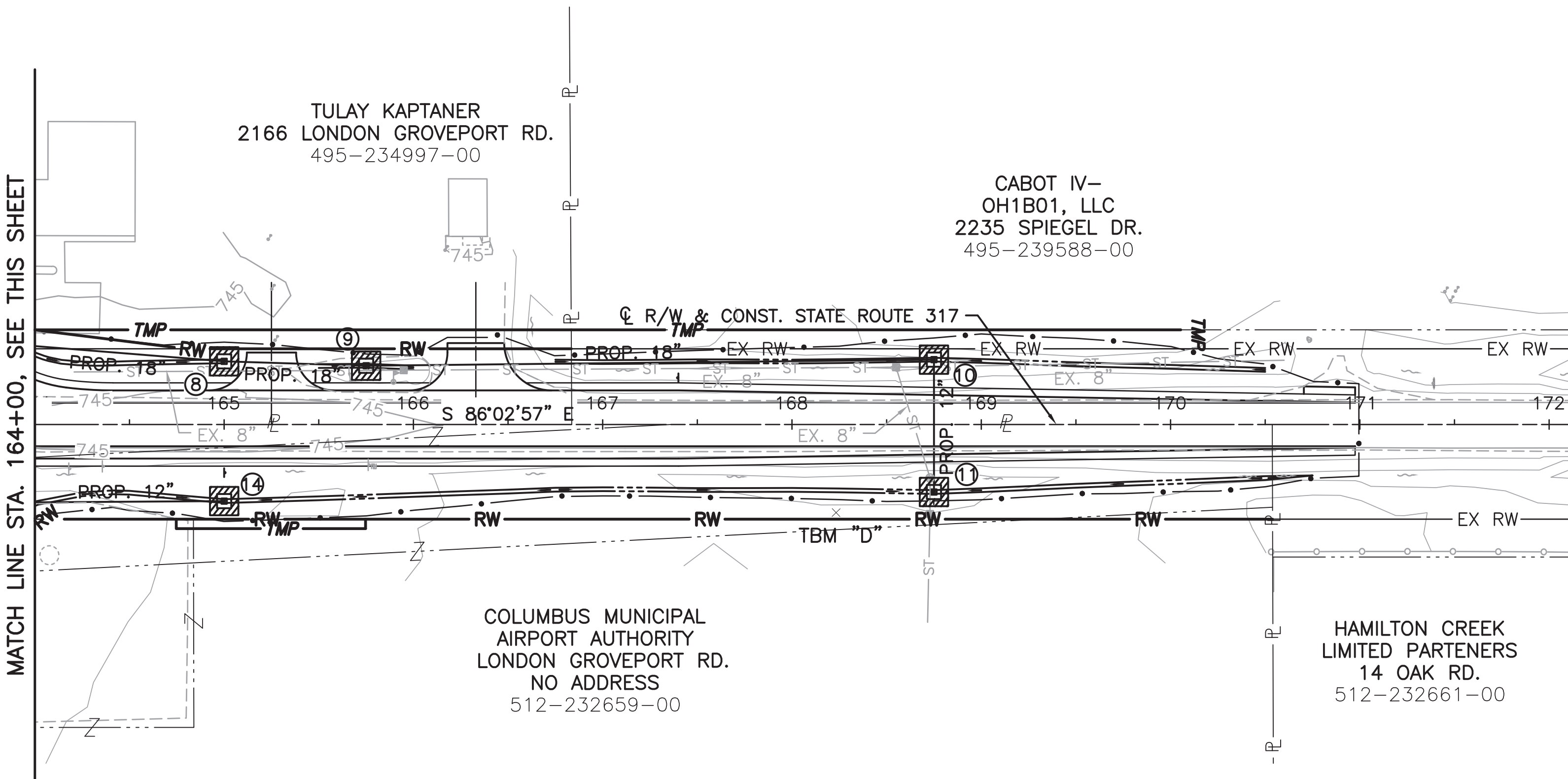
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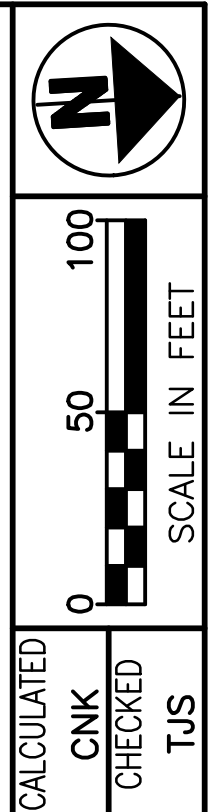
$$\left(\frac{12}{71} \right)$$

$$\frac{13}{71}$$

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MATCH LINE STA. 164+00, SEE THIS SHEET





ICON DP WH
COLUMBUS OWNER
POOL 3 MIDWEST, LLC
6241 SHOOK ROAD
495-286103-00

THE COLUMBUS REGIONAL
AIRPORT AUTHORITY
LONDON GROVEPORT ROAD
NO ADDRESS
150-000429-00

COLUMBUS STS, LLC
LONDON GROVEPORT RD.
NO ADDRESS
512-232659-00

PROP. 24" 2166 TULAY KAPTANER
LONDON GROVEPORT RD.
495-234997-00

FCGS 9930
ANGLE POINT
STA. 163+33.66 € R/W & CONST. S.R. 317
DEF. = 00°11'53" LT. =

ANGLE POINT
STA. 10+00 € R/W & CONST. SHOOK ROAD
DEF. = 00°12'04" LT.

CABOT IV—
OH1B01, LLC
2235 SPIEGEL DR.
495-239588-00

CABOT IV—
OH1B01, LLC
6578 SHOOK RD.
495-232644-00

CABOT IV—
OH1B01, LLC
2235 SPIEGEL DR.
495-239588-00

STORM WATER POLLUTION PREVENTION PLAN
SHOOK ROAD

STORM WATER CONTROL PRACTICES (SCP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT ARE INCLUDED IN THE MASTER DRAINAGE PLANS CC-15204, CC-17936 AND CC-18467. WATER QUANTITY AND QUALITY ARE TO BE TREATED BY THE PONDS IMMEDIATELY NORTHWEST OF THE STORM SEWER OUTLET AT THE APPROXIMATE STATION 153+25 LEFT.

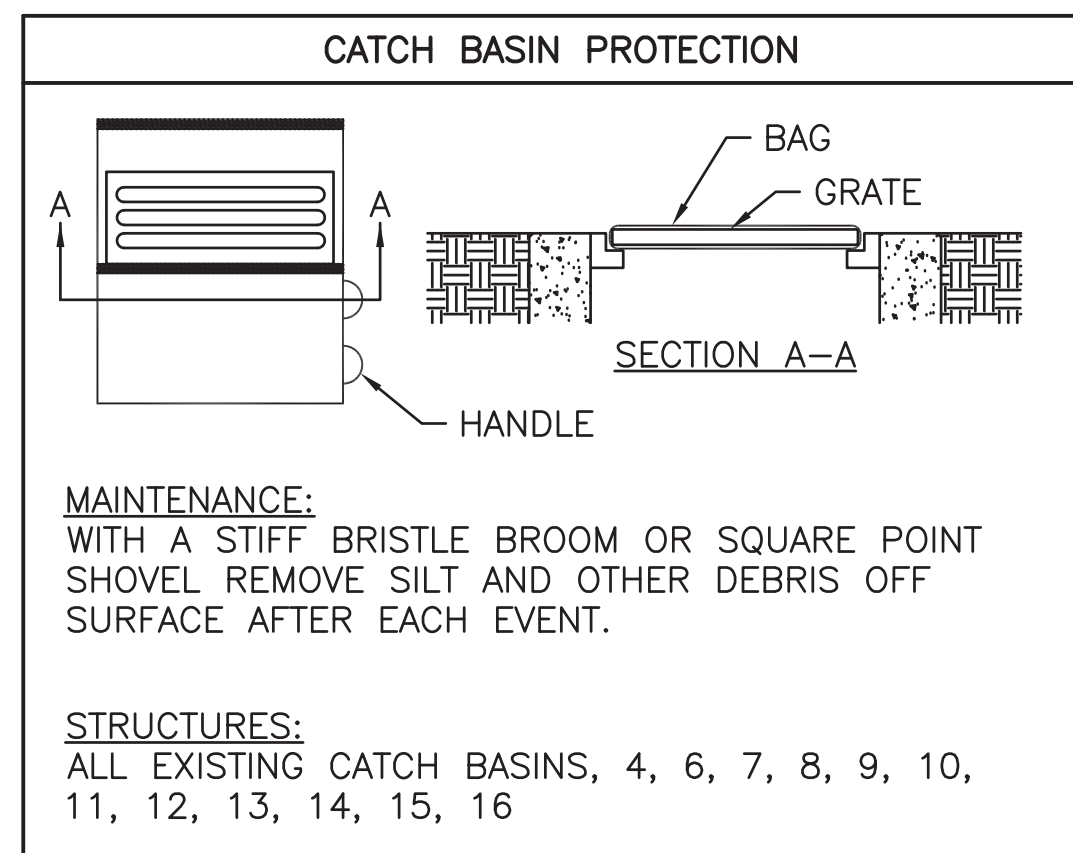
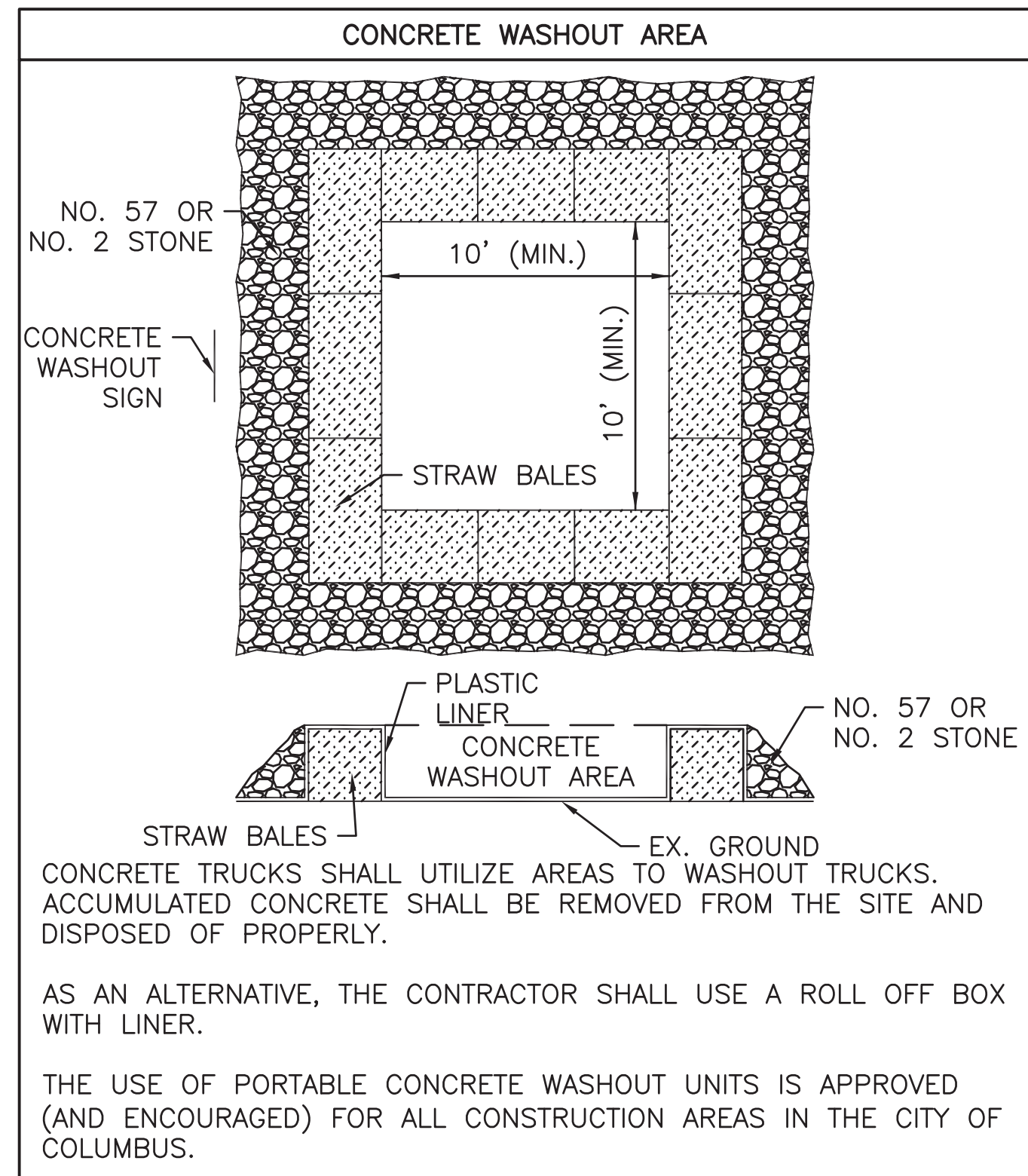
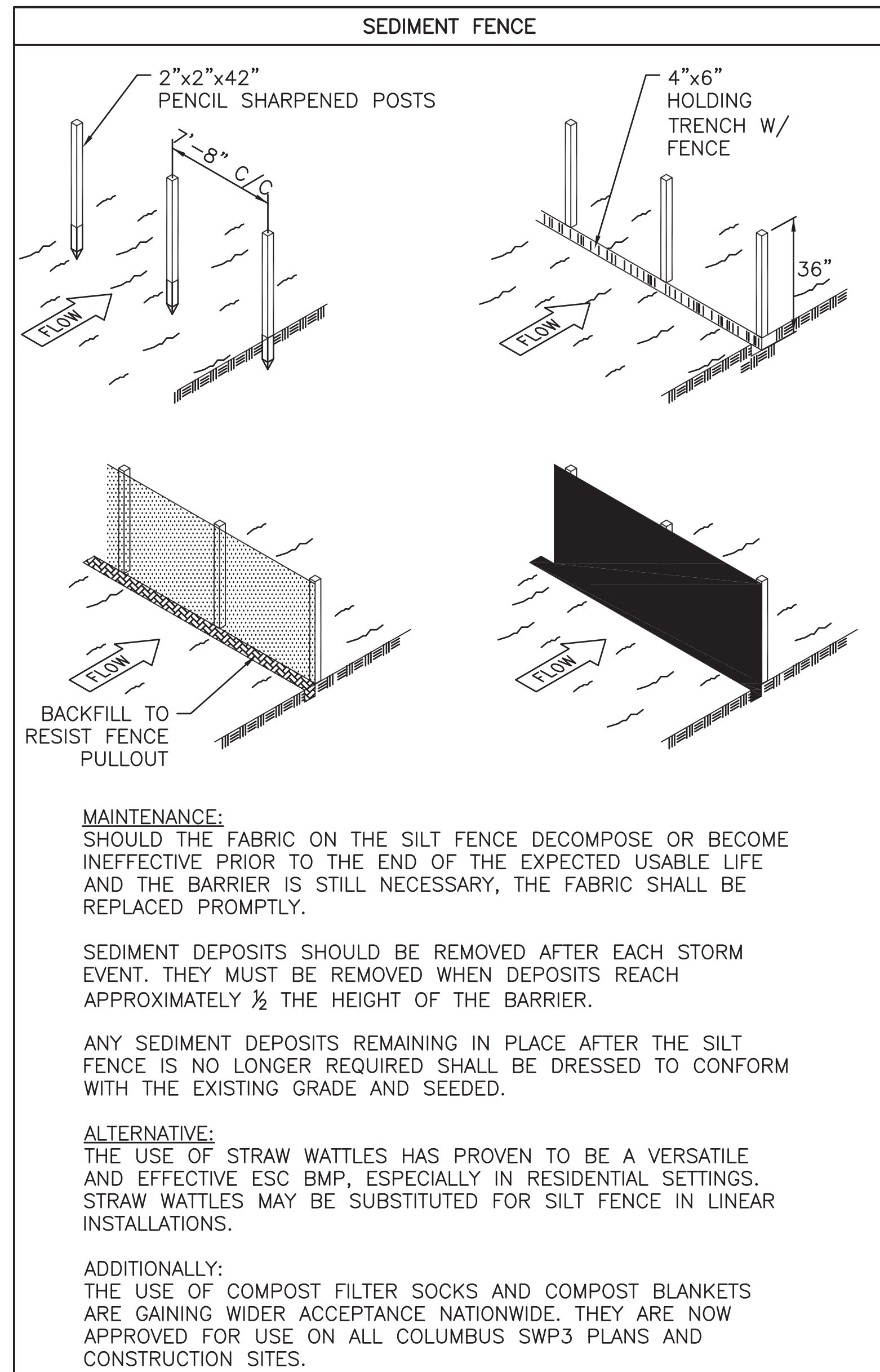
THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR THE INSPECTION AND MAINTENANCE OF THE STORMWATER FACILITIES AND ASSOCIATED OUTLET STRUCTURES.

THIS TABLE COMES FROM CC-18467 AND ACCOUNTS FOR THE DETENTION REQUIRED FOR 2873E. REFER TO 2873E AND CC-18467 STORMWATER MASTER PLAN FOR DETAILS. THE STORM WATER MANAGEMENT FOR THIS PLAN WAS DESIGNED IN ACCORDANCE WITH THE AUGUST 2012 STORM WATER DRAINAGE MANUAL.

SEDIMENT AND EROSION CONTROL QUANTITIES (THIS SHEET)			
ITEM	QUANTITY	UNIT	DESCRIPTION
207	6	EACH	CATCH BASIN PROTECTION (BAG TYPE)
207	0	FT	PERIMETER FILTER FABRIC FENCE
207	0	FT	FILTER FABRIC DITCH CHECK

SEDIMENT AND EROSION CONTROL QUANTITIES (CARRIED TO GENERAL SUMMARY)			
ITEM	QUANTITY	UNIT	DESCRIPTION
207	17	EACH	CATCH BASIN PROTECTION (BAG TYPE)
207	222	FT	PERIMETER FILTER FABRIC FENCE
207	30	FT	FILTER FABRIC DITCH CHECK

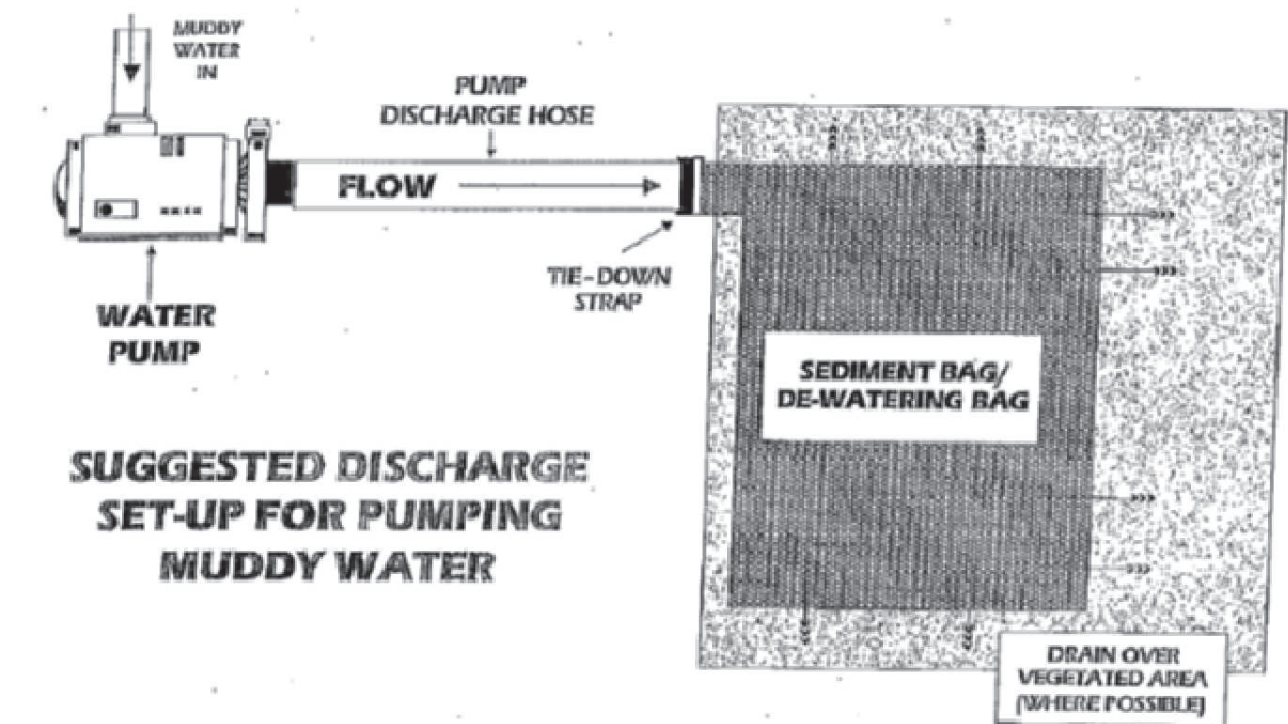
NOTE: THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ON-SITE DRAINAGE AT ALL TIMES DURING CONSTRUCTION. NO SEPARATE PAYMENT SHALL BE MADE FOR MAINTAINING DRAINAGE.



THE PUMPING OR DIRECT DISCHARGE OF SEDIMENT-LADEN (MUDDY) WATER TO THE CITY'S SEWER SYSTEM OR A RECEIVING STREAM IS A VIOLATION OF OHIO EPA AND CITY OF COLUMBUS REGULATIONS. THE CONTRACTOR WILL BE HELD LIABLE FOR THE VIOLATION AND SUBSEQUENT FINES.

ALL INLETS RECEIVING FLOW FROM RUNOFF, PUMPING ACTIVITIES, OR OTHER DIRECT DISCHARGES SHALL BE FITTED WITH AN INLET PROTECTION DEVICE THAT IS PROPERLY SIZED AND SECURED TO REDUCE THE DISCHARGE OF SEDIMENT INTO THE STORM SEWER SYSTEM AND RECEIVING STREAM. INLET PROTECTION IS REQUIRED ON ALL INLETS RECEIVING DISCHARGE REGARDLESS OF WHETHER OR NOT THE INLET IS TRIBUTARY TO ANY DOWNSTREAM EROSION AND SEDIMENT CONTROLS.

DISCHARGE HOSES USED DURING PUMPING ACTIVITIES SHALL BE FITTED WITH SEDIMENT BAGS THAT ARE PROPERLY SIZED PER MANUFACTURER'S RECOMMENDATIONS REGARDLESS OF WHAT OTHER SEDIMENT CONTROLS ARE IN PLACE FURTHER DOWNSTREAM. SEDIMENT BAGS MUST BE PROPERLY SECURED TO THE DISCHARGE HOSE AND PLACED OVER VEGETATED AREAS, WHERE FEASIBLE, DURING DISCHARGE. SEE DETAIL BELOW OF A TYPICAL SEDIMENT BAG INSTALLATION.



NOTE: DETAILS ARE NOT TO SCALE.

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CONTRACTOR RESPONSIBILITY: DETAILS HAVE BEEN PROVIDED ON THE PLANS IN AN EFFORT TO HELP THE CONTRACTOR PROVIDE EROSION AND SEDIMENTATION CONTROL. THE DETAILS SHOWN ON THE PLAN SHALL BE CONSIDERED A MINIMUM. ADDITIONAL OR ALTERNATED DETAILS MAY BE FOUND IN THE O.D.N.R. MANUAL "RAINWATER AND LAND DEVELOPMENT". THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING NECESSARY AND ADEQUATE MEASURES FOR THE PROPER CONTROL OF EROSION AND SEDIMENT RUNOFF FROM THE SITE ALONG WITH PROPER MAINTENANCE AND INSPECTION IN COMPLIANCE WITH THE NPDES GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY.

THIS PLAN MUST BE POSTED ON-SITE. A COPY OF THE SWPPP PLAN AND THE APPROVED EPA STORMWATER PERMIT (WITH THE SITE-SPECIFIC NOI NUMBER) SHALL BE KEPT ON-SITE AT ALL TIMES.

PRIOR TO CONSTRUCTION OPERATIONS IN AN AREA, ALL SEDIMENTATION AND EROSION CONTROL FEATURES SHALL BE IN PLACE. FIELD ADJUSTMENTS WITH RESPECT TO LOCATIONS AND DIMENSIONS MAY BE MADE BY THE ENGINEER.

THE CONTRACTOR SHALL PLACE INLET EROSION CONTROL IMMEDIATELY AFTER CONSTRUCTION.

THE LIMITS OF SEEDING AND MULCHING ARE AS SHOWN ON THE PLANS. THOSE AREAS DISTURBED OUTSIDE THE WORK LIMITS SHALL BE SEEDED AND MULCHED AT THE CONTRACTOR'S EXPENSE.

MAINTENANCE: IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE SEDIMENT CONTROL FEATURES USED ON THIS PROJECT. THE SITE SHALL BE INSPECTED PERIODICALLY AND WITHIN 24 HOURS OF A RAINFALL EVENT. RECORDS OF THESE INSPECTIONS SHALL BE KEPT AND MADE AVAILABLE TO JURISDICTIONAL AGENCIES IF REQUESTED. ANY SEDIMENT OR DEBRIS WHICH HAS REDUCED THE EFFICIENCY OF A STRUCTURE SHALL BE REMOVED IMMEDIATELY. SHOULD A STRUCTURE OR FEATURE BECOME DAMAGED, THE CONTRACTOR SHALL REPAIR OR REPLACE AT NO ADDITIONAL COST TO THE CITY.

THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE OFF-SITE TRACKING OF SEDIMENTS BY VEHICLES AND EQUIPMENT IS MINIMIZED.

STREET CLEANING (ON AN AS-NEEDED BASIS) IS REQUIRED THROUGH THE DURATION OF THIS CONSTRUCTION PROJECT. THIS INCLUDES SWEEPING, POWER CLEANING AND (IF NECESSARY) MANUAL REMOVAL OF DIRT OR MUD IN THE STREET GUTTERS.

THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT NO SOLID OR LIQUID WASTE IS DISCHARGED INTO STORMWATER RUNOFF. SEDIMENT LADEN WATER SHALL BE FILTERED THROUGH THE USE OF FILTER FENCES OR SEDIMENTATION BASINS PRIOR TO DISCHARGE TO SURFACE WATERS. CONCRETE TRUCKS WILL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE INTO OR ALONGSIDE RIVERS, STREAMS AND CREEKS OR INTO NATURAL OR MAN MADE CHANNELS/SWALES. CONCRETE TRUCK WASH WATER AND SURPLUS CONCRETE SHALL BE CONFINED TO AREAS APPROVED BY THE ENGINEER; AFTER HARDENING, THESE WASTE MATERIALS SHALL BE REMOVED FROM THE SITE.

ALL EROSION AND SEDIMENT CONTROL PRACTICES ARE SUBJECT TO FIELD MODIFICATION AT THE DIRECTION OF THE CITY AND/OR OHIO EPA.

DIRECT DISCHARGE OF SEDIMENT LADEN WATER TO THE CITY'S SEWER SYSTEM OR A RECEIVING STREAM IS A VIOLATION OF OHIO EPA AND CITY OF COLUMBUS REGULATIONS. THE CONTRACTOR WILL BE HELD LIABLE FOR THE VIOLATION AND SUBSEQUENT FINES.

POST CONSTRUCTION STORM WATER TREATMENT

STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT ARE INCLUDED IN MASTER DRAINAGE PLAN CC-15204. WATER QUANTITY AND QUALITY ARE TO BE TREATED BY THE PONDS IMMEDIATELY NORTHWEST OF THE STORM SEWER OUTLET AT APPROXIMATE STATION 153+25 LEFT. THESE PONDS ARE TO BE MAINTAINED BY THE DEVELOPER.

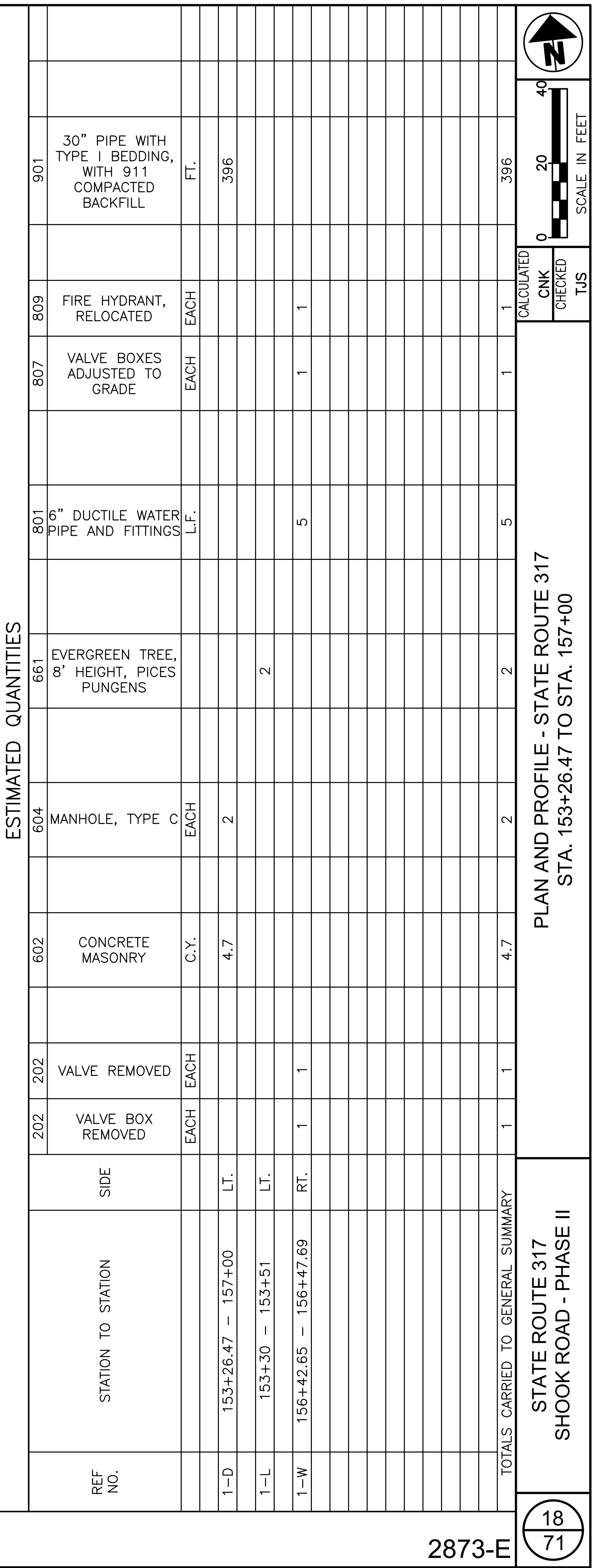
SOIL STABILIZATION: STABILIZATION OF DISTURBED AREAS SHALL, AT A MINIMUM, BE INITIATED IN ACCORDANCE WITH THE TIME FRAMES SPECIFIED IN THE FOLLOWING TABLES.

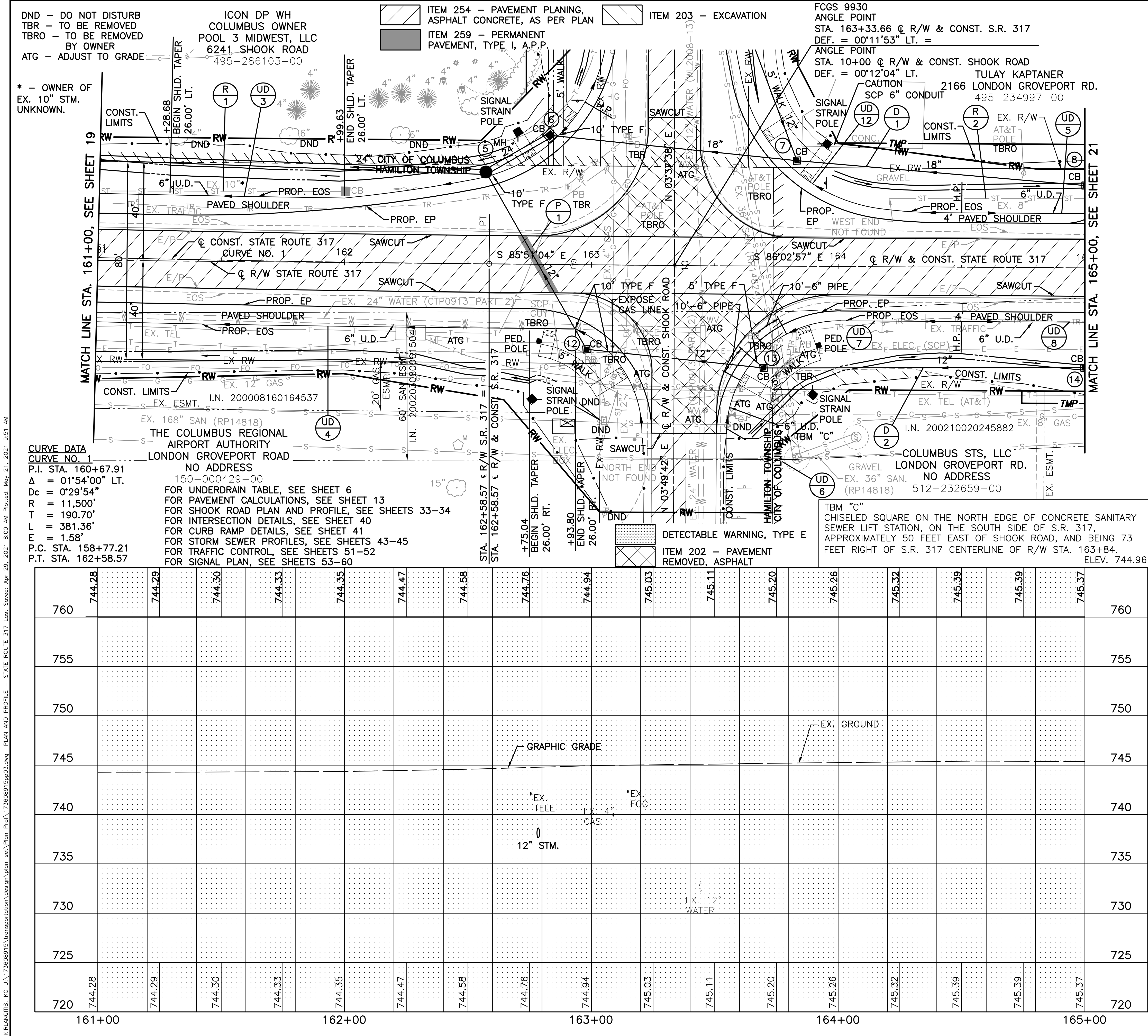
PERMANENT STABILIZATION	
AREA REQUIRING PERMANENT STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY AREAS THAT WILL LIE DORMANT FOR ONE YEAR OR MORE.	WITHIN SEVEN DAYS OF THE MOST RECENT DISTURBANCE.
ANY AREAS WITHIN 50 FEET OF A SURFACE WATER OF THE STATE AND AT FINAL GRADE.	WITHIN TWO DAYS OF REACHING FINAL GRADE.
ANY OTHER AREAS AT FINAL GRADE.	WITHIN SEVEN DAYS OF REACHING FINAL GRADE.

TEMPORARY STABILIZATION	
AREA REQUIRING TEMPORARY STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY DISTURBED AREA WITHIN 50 FEET OF A SURFACE WATER OF THE STATE AND NOT AT FINAL GRADE.	WITHIN TWO DAYS OF THE MOST RECENT DISTURBANCE IF THE AREA WILL REMAIN IDLE FOR MORE THAN 14 DAYS.
FOR ALL CONSTRUCTION ACTIVITIES, ANY DISTURBED AREAS THAT WILL BE DORMANT FOR MORE THAN 14 DAYS BUT LESS THAN ONE YEAR, AND NOT WITHIN 50 FEET OF A SURFACE WATER OF THE STATE.	WITHIN SEVEN DAYS OF THE MOST RECENT DISTURBANCE IN THE AREA. FOR RESIDENTIAL SUBDIVISIONS, DISTURBED AREAS MUST BE STABILIZED AT LEAST SEVEN DAYS PRIOR TO TRANSFER OF PERMIT COVERAGE OF THE INDIVIDUAL LOT(S).
DISTURBED AREAS THAT WILL BE IDLE OVER WINTER.	PRIOR TO THE ONSET OF WINTER WEATHER.

WHERE VEGETATIVE STABILIZATION TECHNIQUES MAY CAUSE STRUCTURAL INSTABILITY OR ARE OTHERWISE UNOBTAINABLE, ALTERNATIVE STABILIZATION TECHNIQUES MUST BE EMPLOYED.

OEPA NOI #	TBD
PLAN DESIGNER:	STANTEC CONSULTING SERVICES INC. 1500 LAKE SHORE DR. SUITE 100 COLUMBUS, OHIO 43204
OWNER:	CITY OF COLUMBUS DIVISION OF DESIGN AND CONSTRUCTION 111 N. FRONT ST. COLUMBUS, OHIO 43215 TIFFANY ELCHERT 614-645-2923 TMElchert@Columbus.gov
PROJECT DESCRIPTION:	WIDENING OF SHOOK ROAD (NORTH OF SR 317) TO PROVIDE A SOUTHBOUND RIGHT TURN LANE AND WIDENING OF SR 317 TO PROVIDE BOTH WESTBOUND AND EASTBOUND LEFT TURN LANES AT THE INTERSECTION. CONSTRUCT SIDEWALK ALONG THE WEST AND EAST SIDES OF SHOOK ROAD FROM SR 317 NORTH TO EXISTING SIDEWALK LIMITS. NEW BOX SPAN SIGNAL WILL BE INSTALLED AT THE INTERSECTION OF SR 317 AND SHOOK ROAD.
EXISTING SITE CONDITIONS:	THE PROJECT CONSISTS OF OPEN CHANNEL AND CLOSED DRAINAGE SYSTEMS THAT OUTLET INTO THE NEIGHBORHOODS SOUTH OF S.R. 317, AND SUBSEQUENTLY INTO BIG WALNUT CREEK.
SITE DISTURBANCE:	3.28 AC.
ADJACENT AREAS:	RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL AREAS
EROSION & SEDIMENT MEASURES:	EROSION AND SEDIMENT WILL BE CONTROLLED BY THE USE OF INLET PROTECTION AND FILTER FABRIC FENCE.
MAINTENANCE:	ALL EROSION CONTROL DEVICES ARE TO BE INSPECTED BY THE SUPERINTENDENT DAILY AND AFTER RAINFALL EVENTS. ANY DAMAGED FACILITIES ARE TO BE REPLACED OR REPAIRED IMMEDIATELY.
CONSTRUCTION:	THE CONTRACTOR SHALL PROVIDE A SCHEDULE OF OPERATIONS TO THE CITY. SEDIMENTATION AND EROSION CONTROL FEATURES SHALL BE PLACED AND MAINTAINED IN ACCORDANCE WITH THIS SCHEDULE.
SITE CONTACT:	CITY OF COLUMBUS TIFFANY ELCHERT 614-645-2923 TMElchert@Columbus.gov





CABOT IV-
OH1B01, LLC
2235 SPIEGEL DR.
495-239588-00



FOR UNDERDRAIN TABLE, SEE SHEET 6
FOR PAVEMENT CALCULATIONS, SEE SHEET 13
FOR TRAFFIC CONTROL, SEE SHEET 51

HAMILTON CREEK
LIMITED PARTENERS
LONDON GROVEPORT RD.
14 OAK RD.
512-232661-00

TBM "E"
RAILROAD SPIKE IN POWER POLE #10819036, ON THE NORTH SIDE OF S.R. 317, APPROXIMATELY 1025 FEET EAST OF SHOOK ROAD, AND BEING 41 FEET (±) LEFT OF S.R. 317 CENTERLINE OF R/W STA. 173+57 (±).

169+00	170+00	171+00	172+00	173+00
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ESTIMATED QUANTITIES

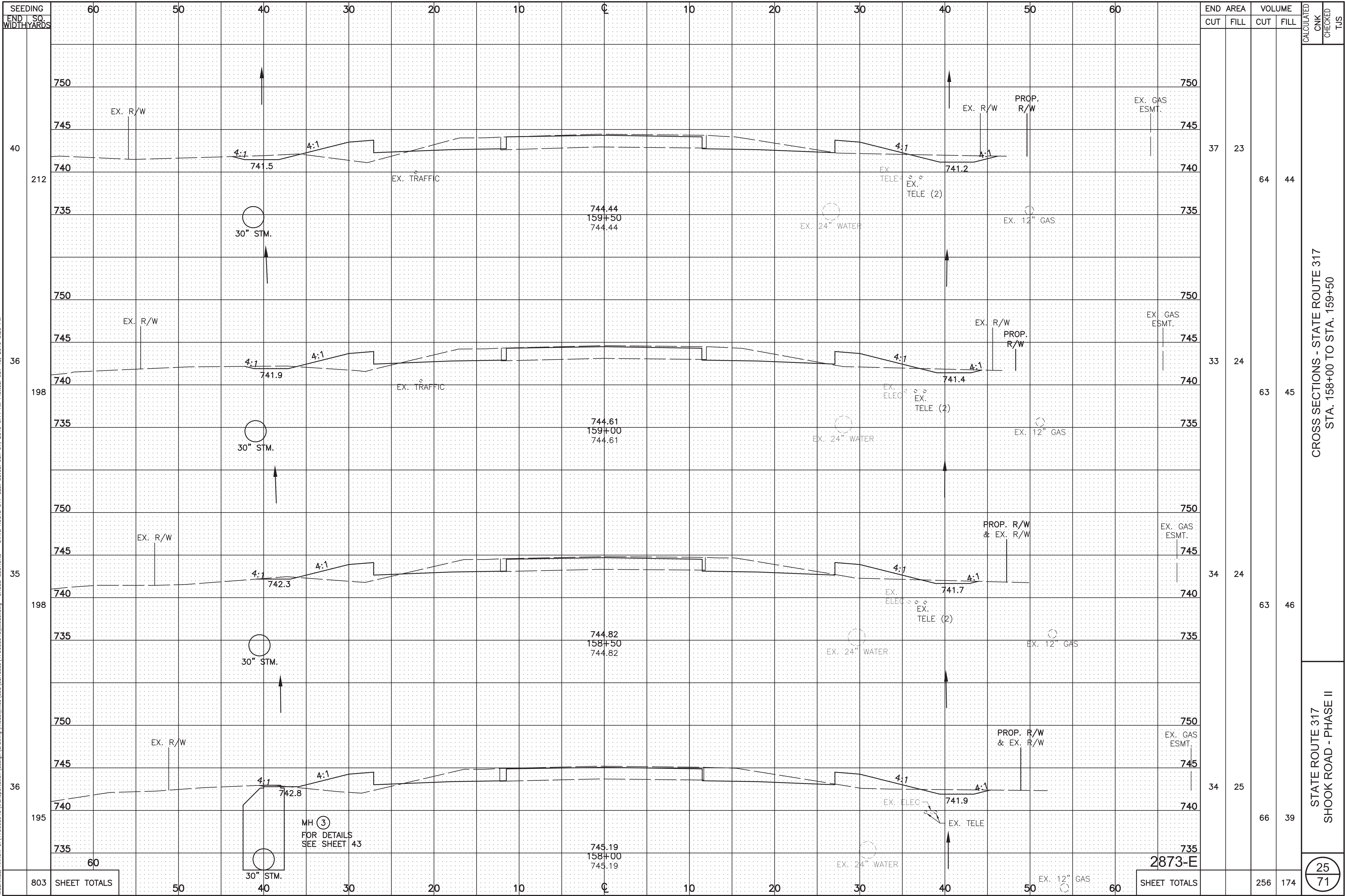
CARRIED TO GENERAL SUMMARY

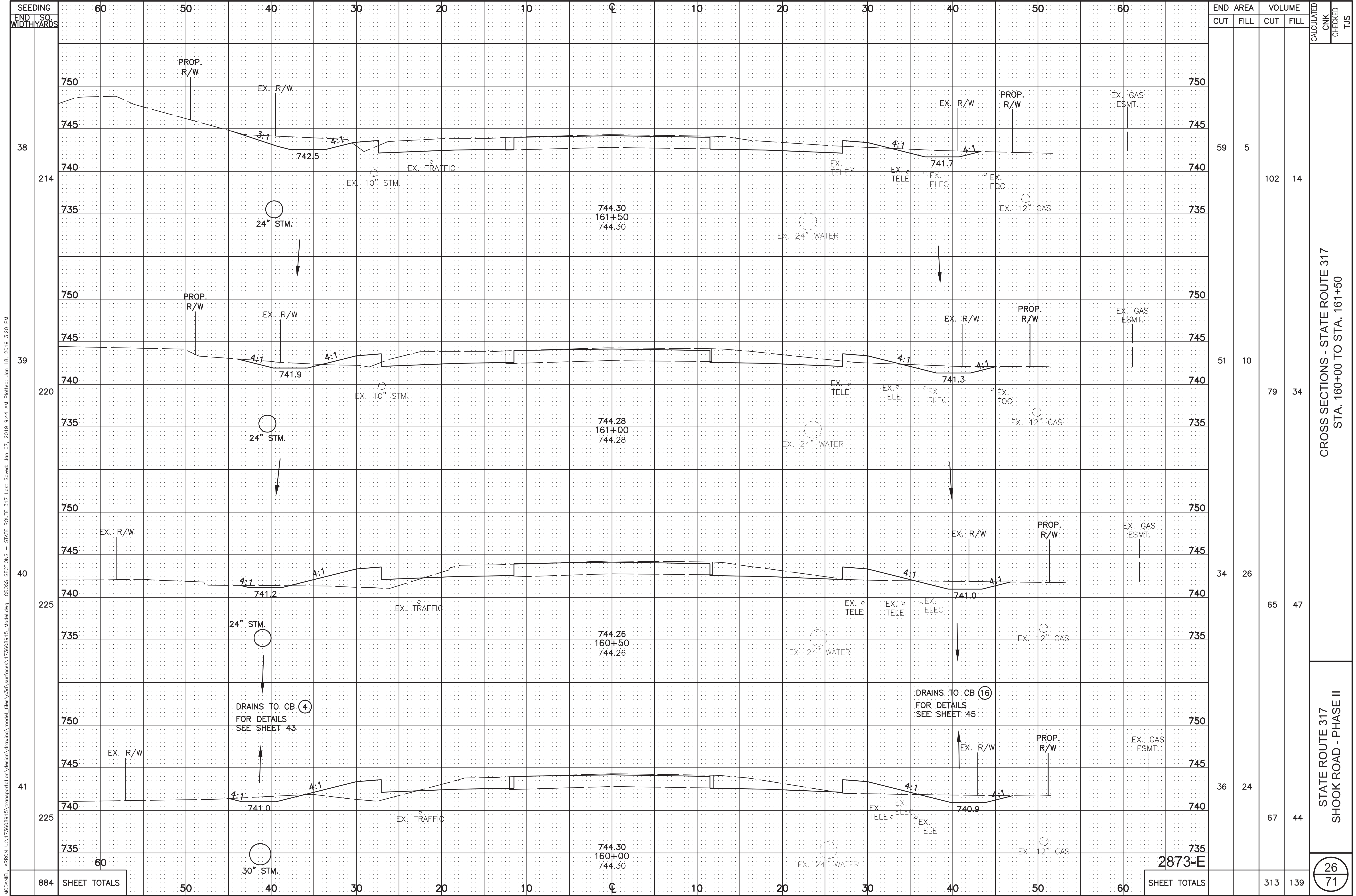
STATE ROUTE 317

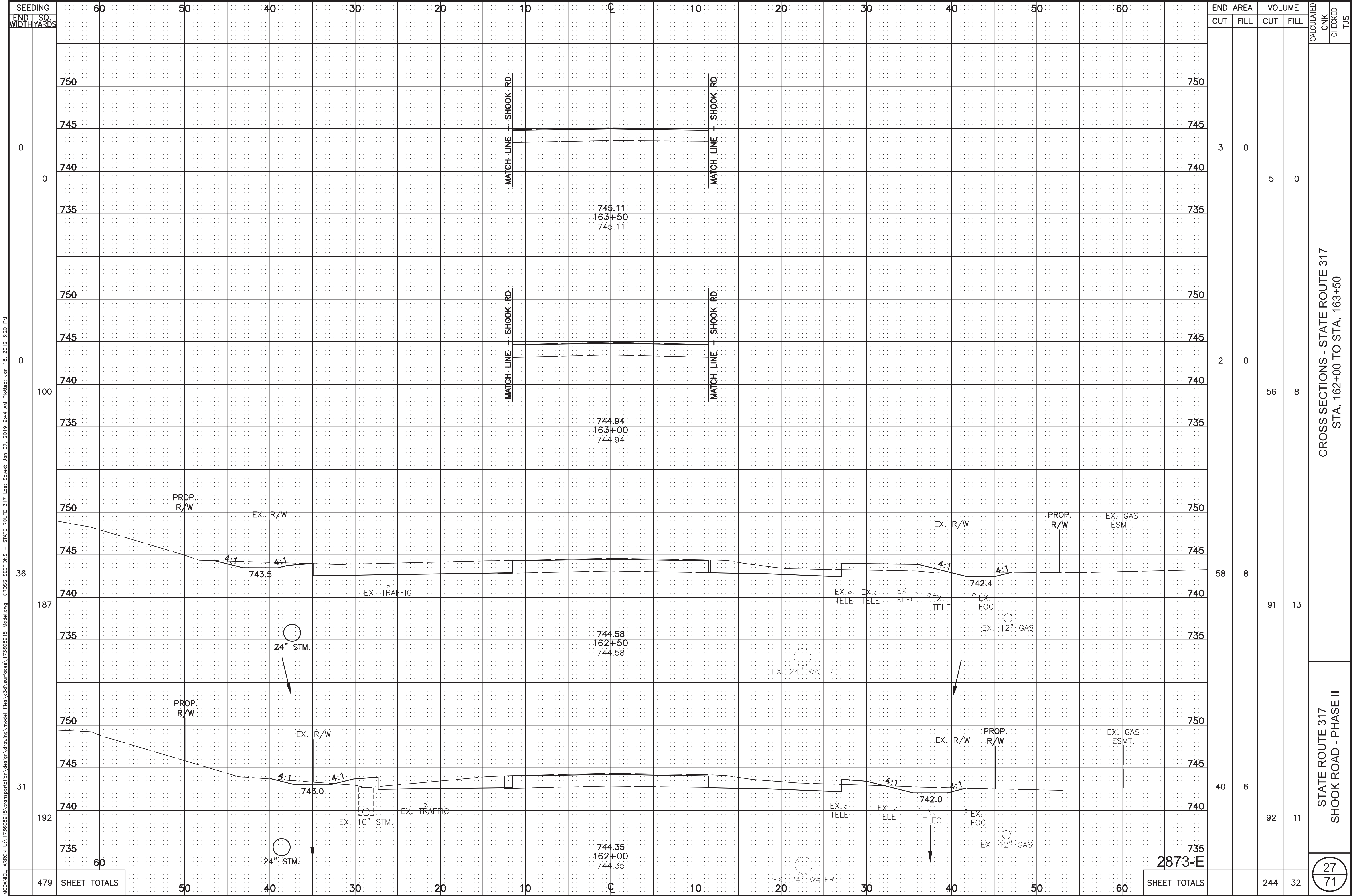
SHOOK ROAD - PHASE II

PLAN AND PROFILE - STATE ROUTE 317
STA. 169+00 TO STA. 170+97.50

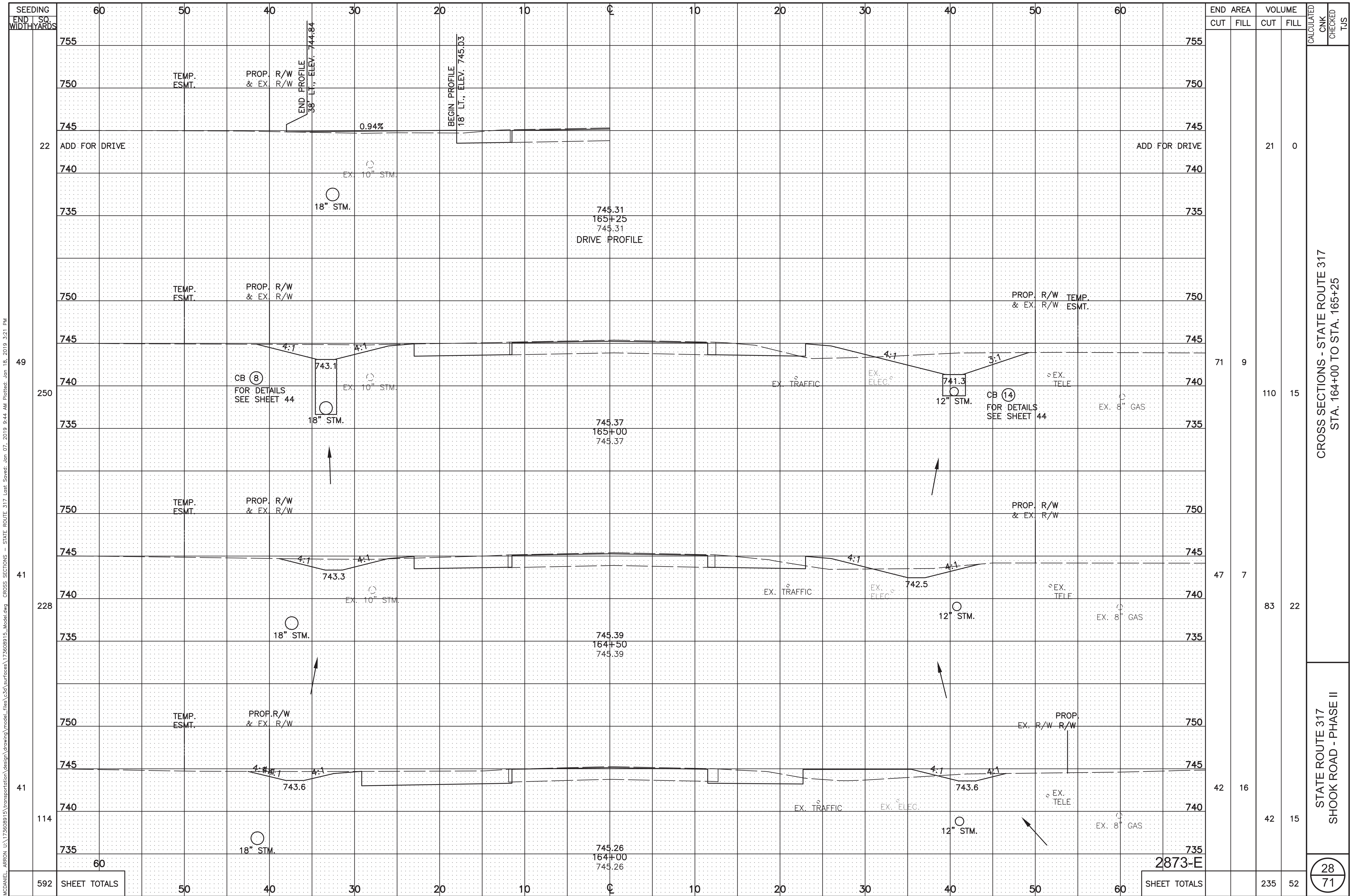
McDANIEL, ARRON U:\173608915\Transportation\design\drawing\model_files\317\317.dwg CROSS SECTIONS - STATE ROUTE 317 Last Saved: Jan 07, 2019 9:44 AM Plotted: Jan 18, 2019 3:20 PM



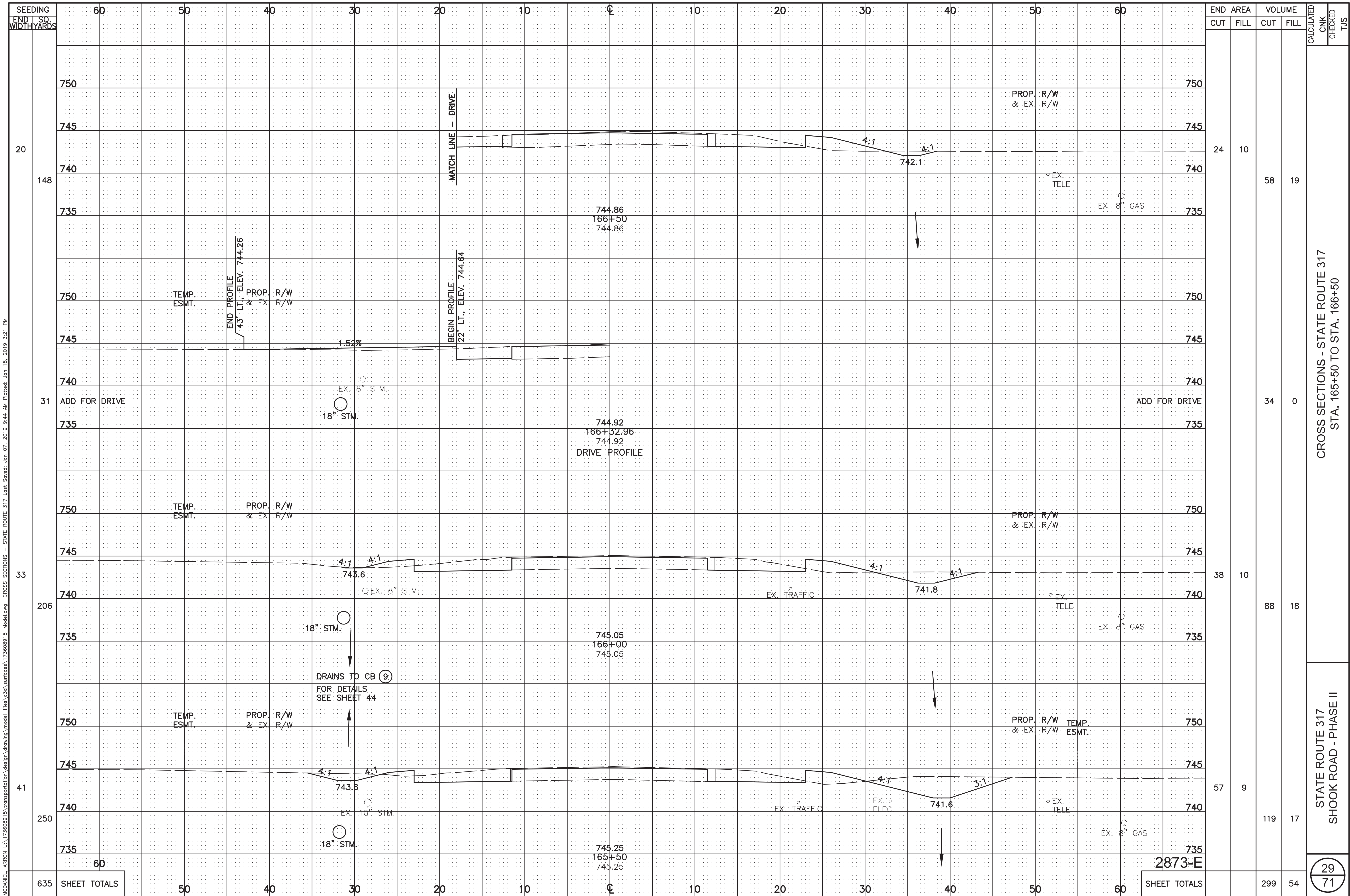




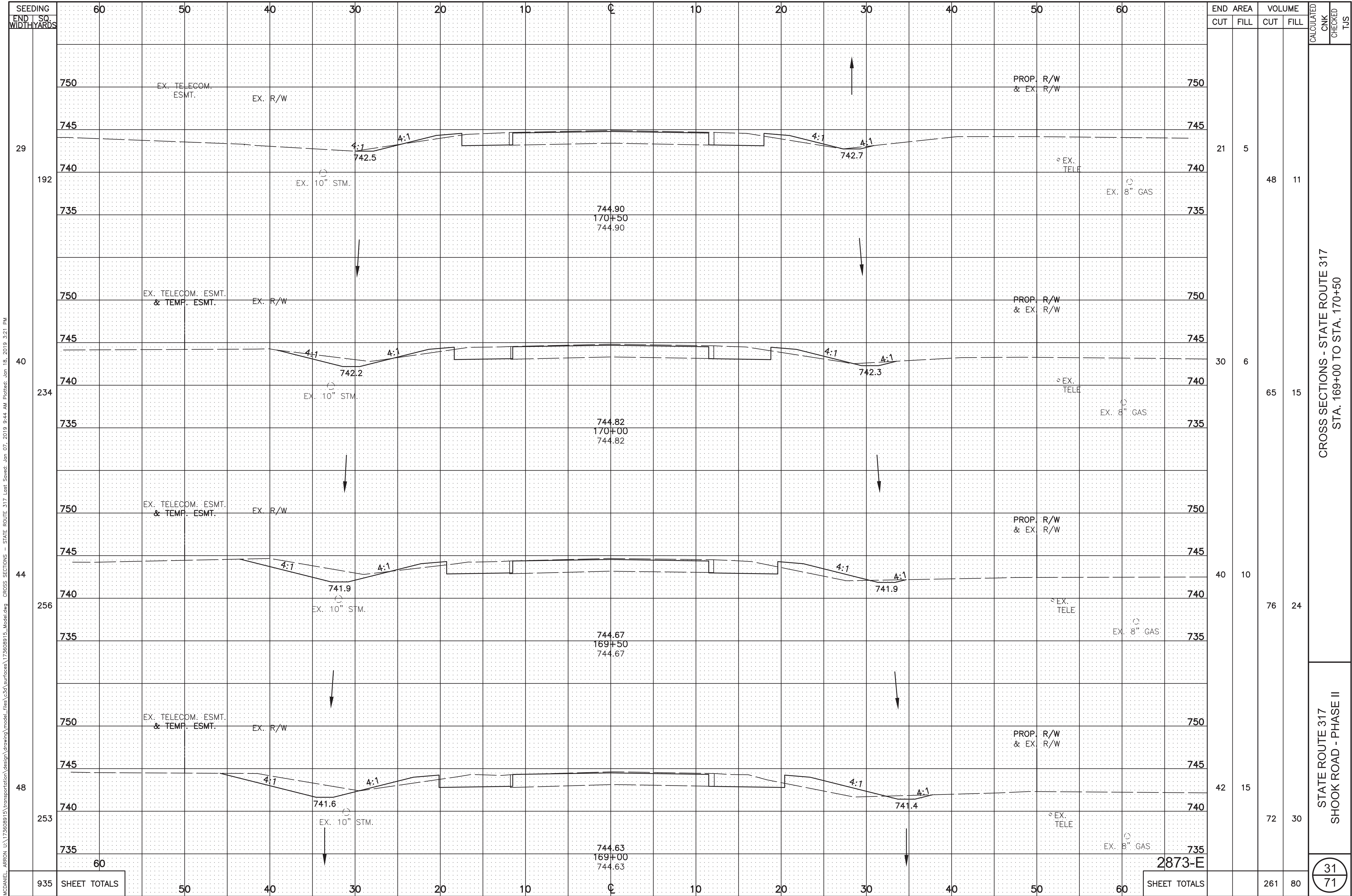
\\173608915\transportation\design\drawing\model_files\317\317.dwg CROSS SECTIONS - STATE ROUTE 317 State Route 317, 2019 9:44 AM Plotted: Jan 18, 2019 3:21 PM



\\173608915\transportation\design\drawing\model_files\3d\surfaces\173608915_Model.dwg CROSS SECTIONS - STATE ROUTE 317 Last Saved: Jan 07, 2019 9:44 AM Plotted: Jan 18, 2019 3:21 PM



McDANIEL, ARRON_U:\173608915\Transportation\design\drawing\model_files\3d\surfaces\173608915_Model.dwg CROSS SECTIONS - STATE ROUTE 317 Last Saved: Jan 18, 2019 3:21 PM

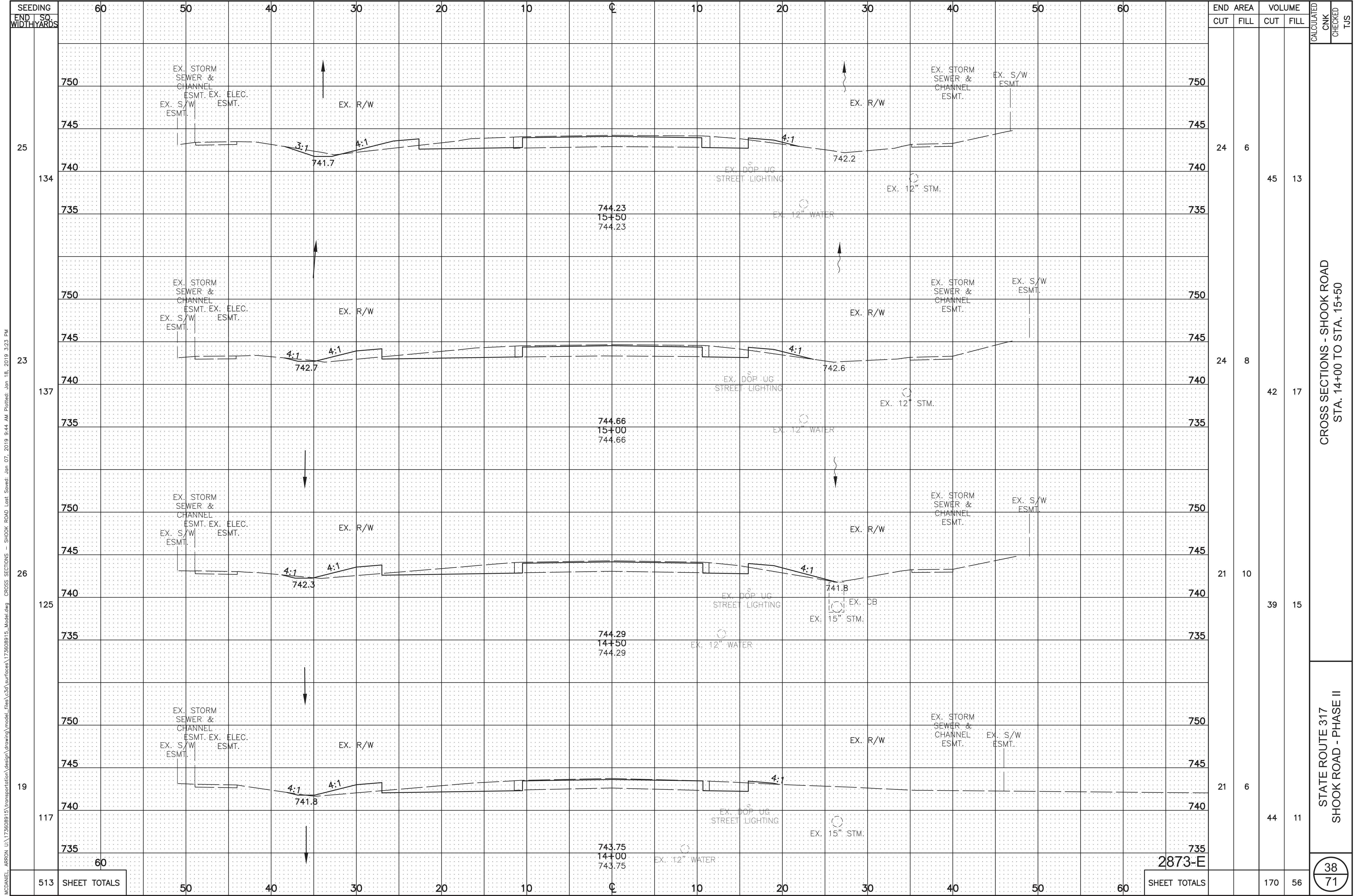


$$\frac{33}{71}$$



KIRLANGITIS, KC U:\1736089\15\transportation\design\plan_set\Plan Prof\173608915p07.dwg PLAN AND PROFILE - SHOOK ROAD Last Saved: Jul 19, 2019 2:15 PM Plotted: Apr 29, 2021 8:13 AM

KIRLANGITIS, KC U:\1736089\15\transportation\design\plan_set\Plan Prof\173608915p07.dwg PLAN AND PROFILE - SHOOK ROAD Last Saved: Jul 19, 2019 2:15 PM Plotted: Apr 29, 2021 8:13 AM



McDANIEL, ARRON U:\173608915\Transportation\design\drawing\model_files\317a\317a\surfaces\173608915_Model.dwg CROSS SECTIONS - SHOOK ROAD Last Saved: Jan 18, 2019 3:33 PM

E/P CURVE DATA
CURVE A
 $\Delta = 11^{\circ}58'23''$
 $R = 600.00'$
 $T = 62.92'$
 $L = 125.38'$
P.C. STA. 161+28.68, 18' LT.
R.P. STA. 161+28.68, 618' LT.
P.C.C. STA. 162+53.49, 30.38' LT.

E/P CURVE DATA
CURVE B
 $\Delta = 72^{\circ}05'04''$
 $R = 70.00'$
 $T = 50.94'$
 $L = 88.07'$
P.C.C. STA. 162+53.49, 30.38' LT.
R.P. STA. 162+39.59, 99' LT.
P.C.C. STA. 10+91.20, 23.54' LT.

E/P CURVE DATA
CURVE C
 $\Delta = 07^{\circ}06'40''$
 $R = 200.00'$
 $T = 12.43'$
 $L = 24.82'$
P.C.C. STA. 10+91.20, 23.54' LT.
R.P. STA. 11+15.96, 222' LT.
P.T. STA. 11+15.96, 22' LT.

CURVE DATA
STATE ROUTE 317
CURVE NO. 1
P.I. STA. 160+67.91
 $\Delta = 01^{\circ}54'00''$ LT.
 $D_c = 0^{\circ}29'54''$
 $R = 11,500'$
 $T = 190.70'$
 $L = 381.36'$
 $E = 1.58'$
P.C. STA. 158+77.21
P.T. STA. 162+58.57

E/P CURVE DATA
CURVE G
 $\Delta = 89^{\circ}48'40''$
 $R = 50.00'$
 $T = 49.84'$
 $L = 78.37'$
P.C. STA. 162+75.04, 18' RT.
R.P. STA. 162+75.04, 68' RT.
P.T. STA. 9+32.21, 8.98' LT.

E/P CURVE DATA
CURVE D
 $\Delta = 11^{\circ}41'37''$
 $R = 600.00'$
 $T = 61.44'$
 $L = 122.46'$
P.C. STA. 11+95.90, 11' RT.
R.P. STA. 11+95.90, 611' RT.
P.C.C. STA. 10+74.29, 23.45' RT.

E/P CURVE DATA
CURVE E
 $\Delta = 70^{\circ}52'17''$
 $R = 70.00'$
 $T = 49.81'$
 $L = 86.59'$
P.C.C. STA. 10+74.29, 23.45' RT.
R.P. STA. 10+88.48, 92' RT.
P.C.C. STA. 164+16.49, 19.54' LT.

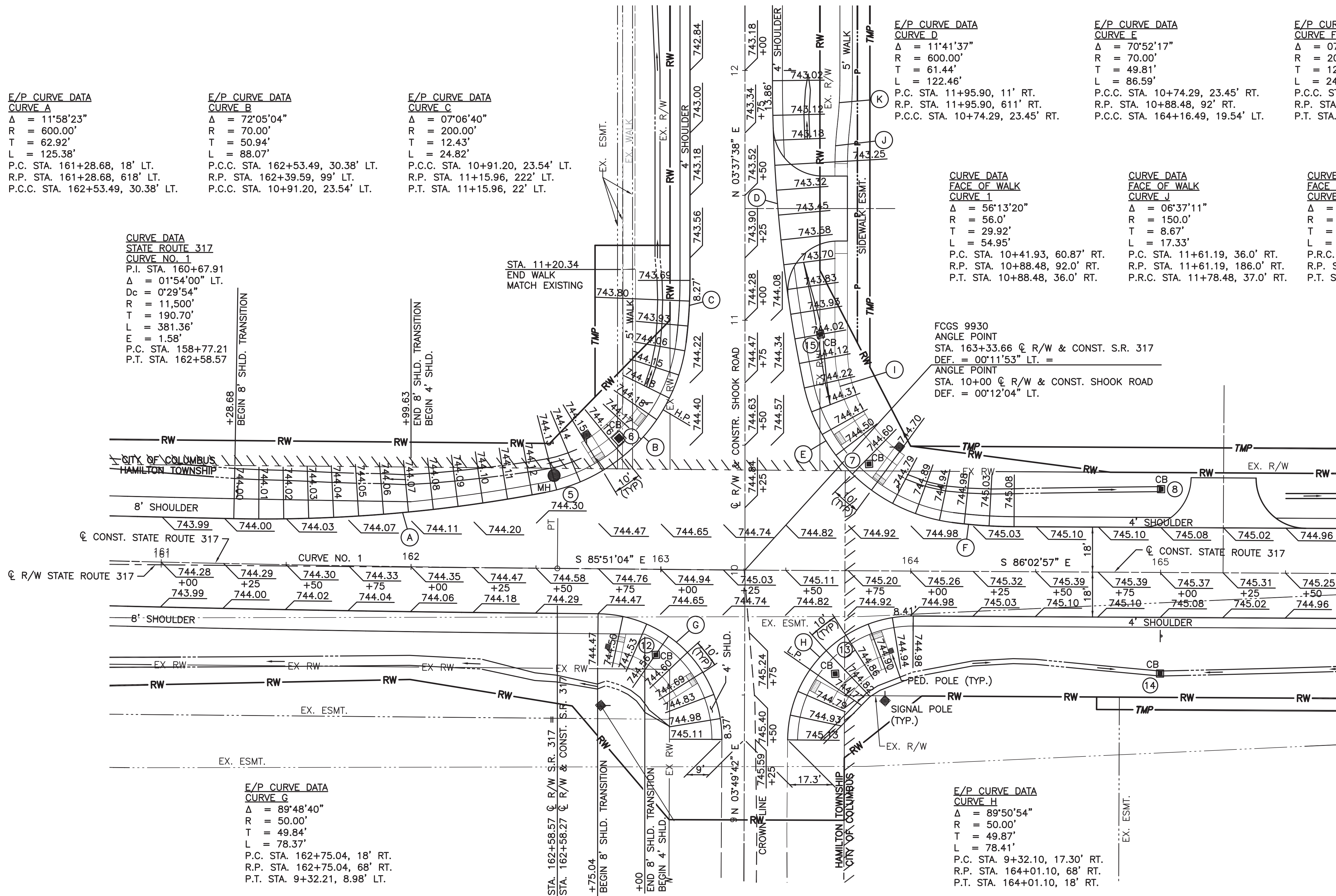
E/P CURVE DATA
CURVE F
 $\Delta = 07^{\circ}06'40''$
 $R = 200.00'$
 $T = 12.43'$
 $L = 24.83'$
P.C.C. STA. 164+16.49, 19.54' LT.
R.P. STA. 164+41.25, 218' LT.
P.T. STA. 164+41.25, 18' LT.

CURVE DATA
FACE OF WALK
CURVE I
 $\Delta = 56^{\circ}13'20''$
 $R = 56.0'$
 $T = 29.92'$
 $L = 54.95'$
P.C. STA. 10+41.93, 60.87' RT.
R.P. STA. 10+88.48, 92.0' RT.
P.T. STA. 10+88.48, 36.0' RT.

CURVE DATA
FACE OF WALK
CURVE J
 $\Delta = 06^{\circ}37'11''$
 $R = 150.0'$
 $T = 8.67'$
 $L = 17.33'$
P.C. STA. 11+61.19, 36.0' RT.
R.P. STA. 11+61.19, 186.0' RT.
P.R.C. STA. 11+78.48, 37.0' RT.

CURVE DATA
FACE OF WALK
CURVE K
 $\Delta = 06^{\circ}37'11''$
 $R = 150.0'$
 $T = 8.67'$
 $L = 17.33'$
P.R.C. STA. 11+78.48, 37.0' RT.
R.P. STA. 11+95.77, 112.0' LT.
P.T. STA. 11+95.77, 38.0' RT.

FCGS 9930
ANGLE POINT
STA. 163+33.66 @ R/W & CONST. S.R. 317
DEF. = $00^{\circ}11'53''$ LT. =
ANGLE POINT
STA. 10+00 @ R/W & CONST. SHOOK ROAD
DEF. = $00^{\circ}12'04''$ LT.



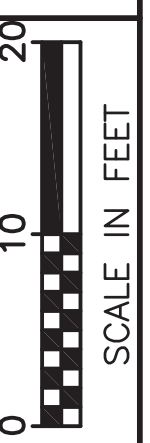
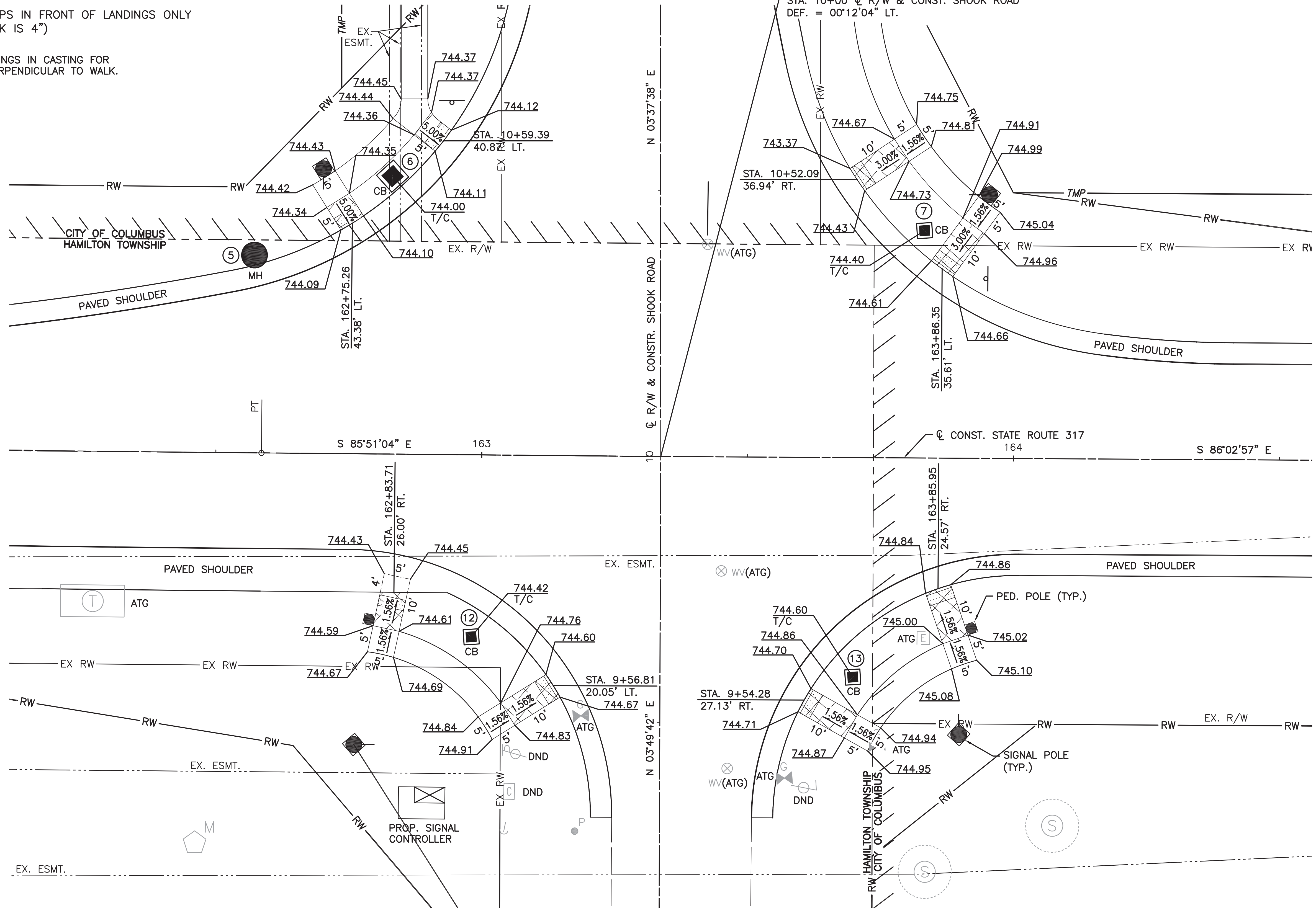
DETECTABLE WARNING, TYPE E

DND - DO NOT DISTURB
TBR - TO BE REMOVED
TBR - TO BE REMOVED
& RELOCATED
ATG - ADJUST TO GRADE

DETECTABLE WARNING, TYPE E

8" WALK - RAMPS IN FRONT OF LANDINGS ONLY
(ALL OTHER WALK IS 4")

NOTE: ENSURE THAT OPENINGS IN CASTING FOR
CB ⑥ ARE SET PERPENDICULAR TO WALK.

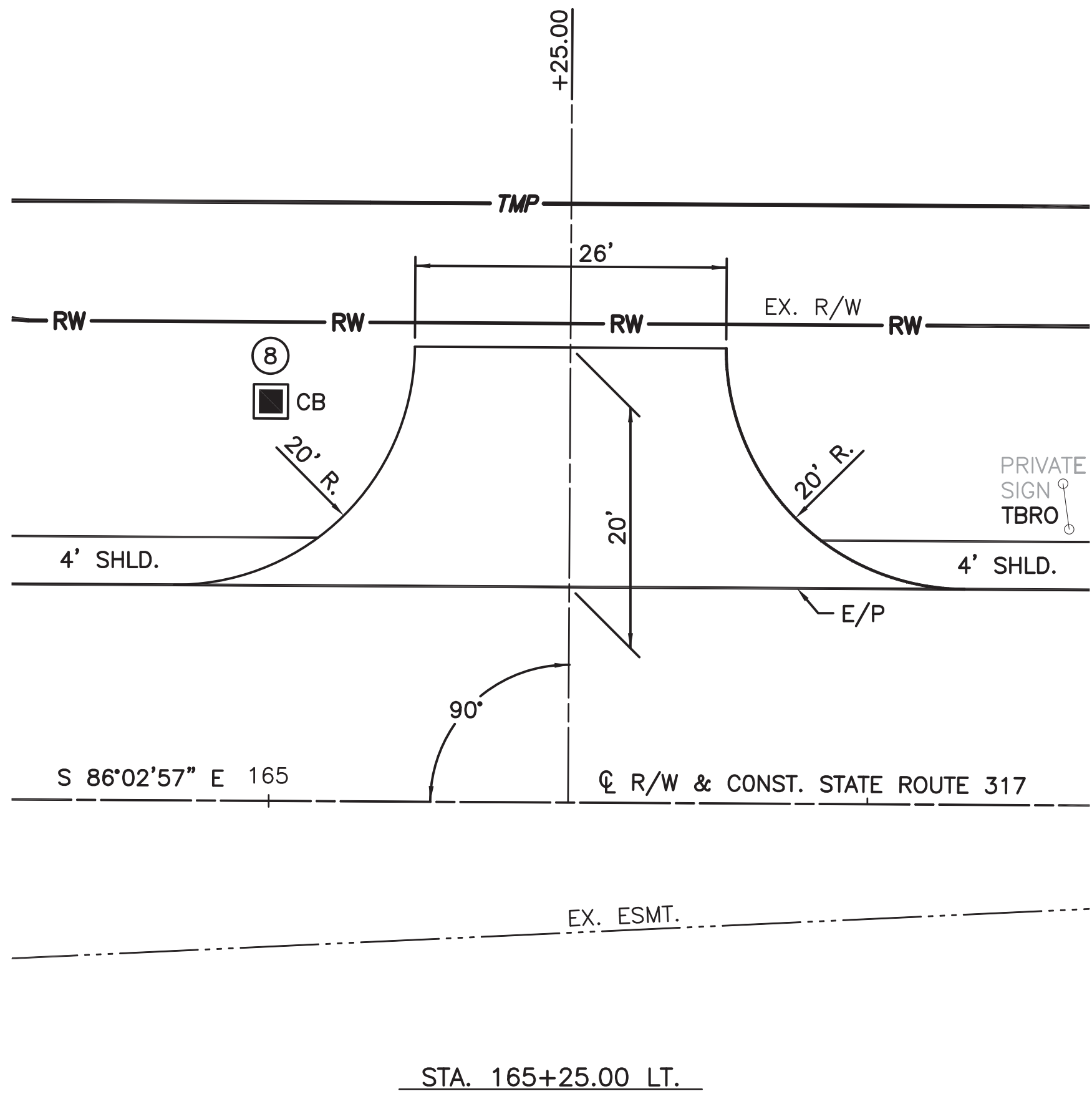


CALCULATED
CNK
CHECKED
TJS

CURB RAMP DETAILS

STATE ROUTE 317
SHOOK ROAD - PHASE II

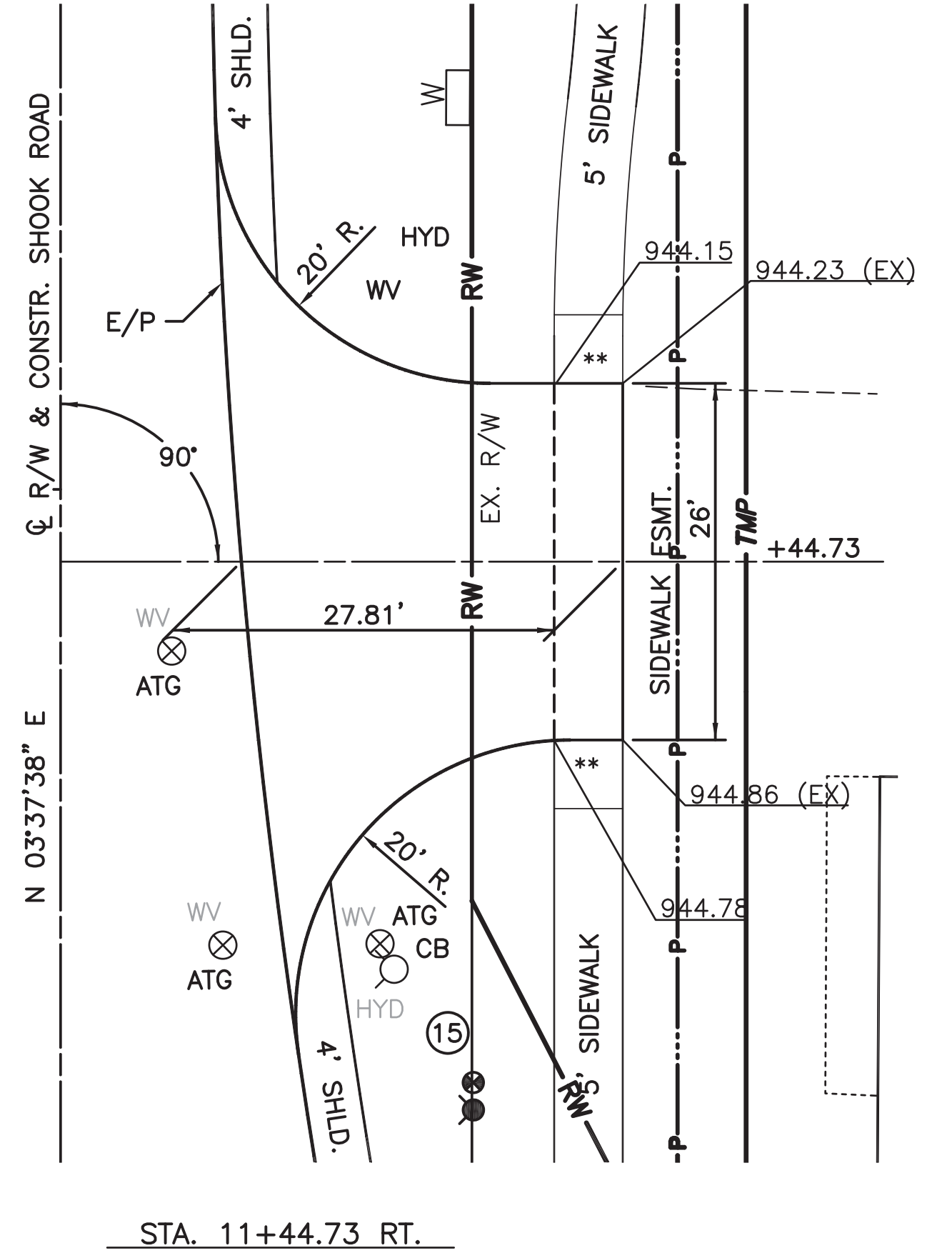
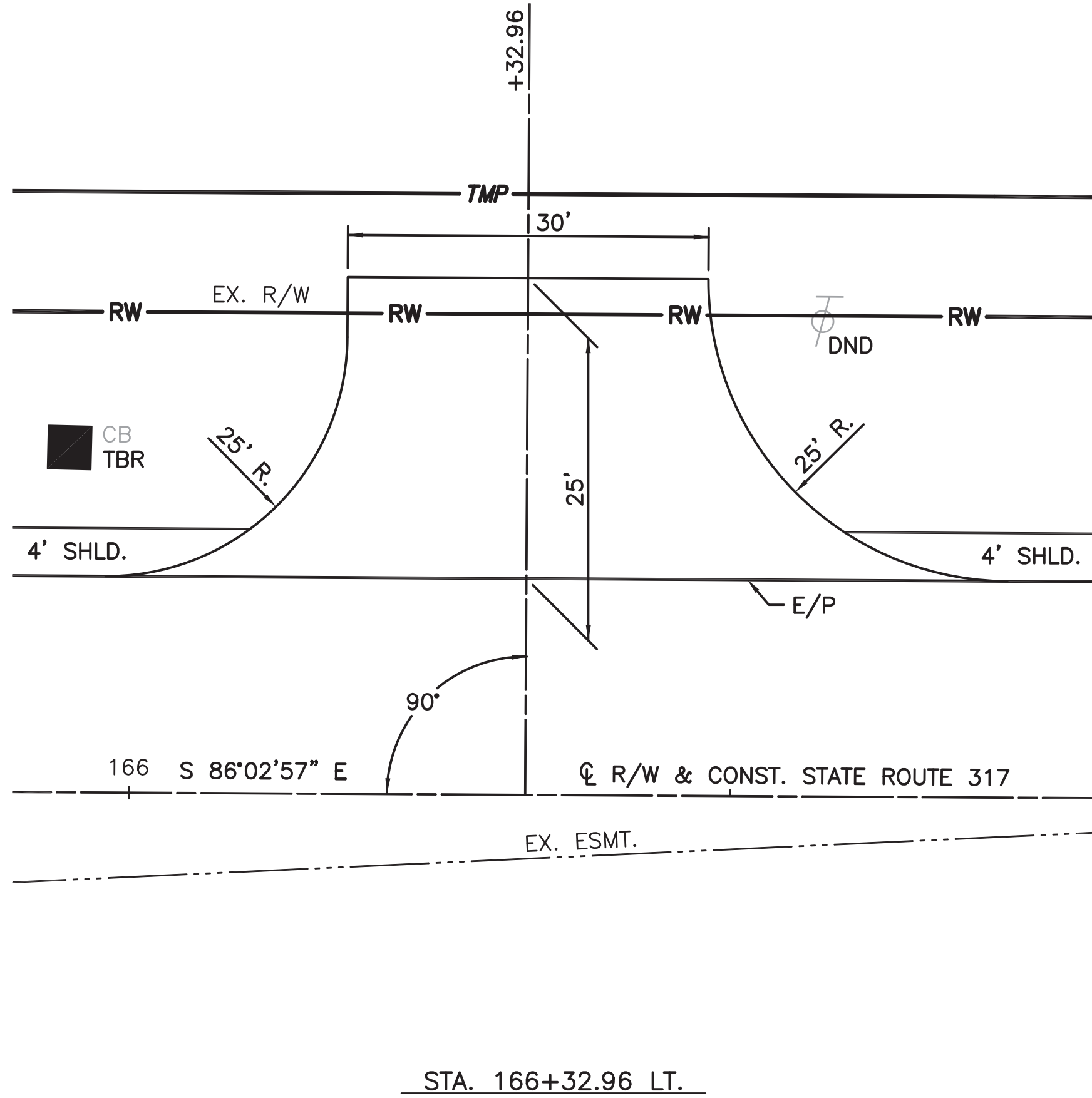
MCDANIEL, ARRON U:\173608915\Transportation\design\plan_sst\173608915.dwg DRIVEWAY DETAILS Last Saved: Oct 30, 2018 10:44 AM Plotted: Jan 18, 2019 3:23 PM



TYPICAL PAVEMENT COMPOSITION

DRIVE NON-RESIDENTIAL:

- ITEM 441 - 4" ASPHALT CONCRETE, SURFACE COURSE, TYPE 1, (448), PG64-22
- ITEM 441 - 4" ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 2, (448), PG64-22
- ITEM 304 - 4" AGGREGATE BASE



** 8" THICK CONCRETE SIDEWALK FOR 1 FULL PANEL (MIN. 5FT.) BEYOND EDGE OF DRIVE.

DND - DO NOT DISTURB
TBR - TO BE REMOVED
TBRO - TO BE REMOVED BY OWNER
ATG - ADJUST TO GRADE

FOR DRIVEWAY PROFILES, SEE SHEETS 28, 29, & 36

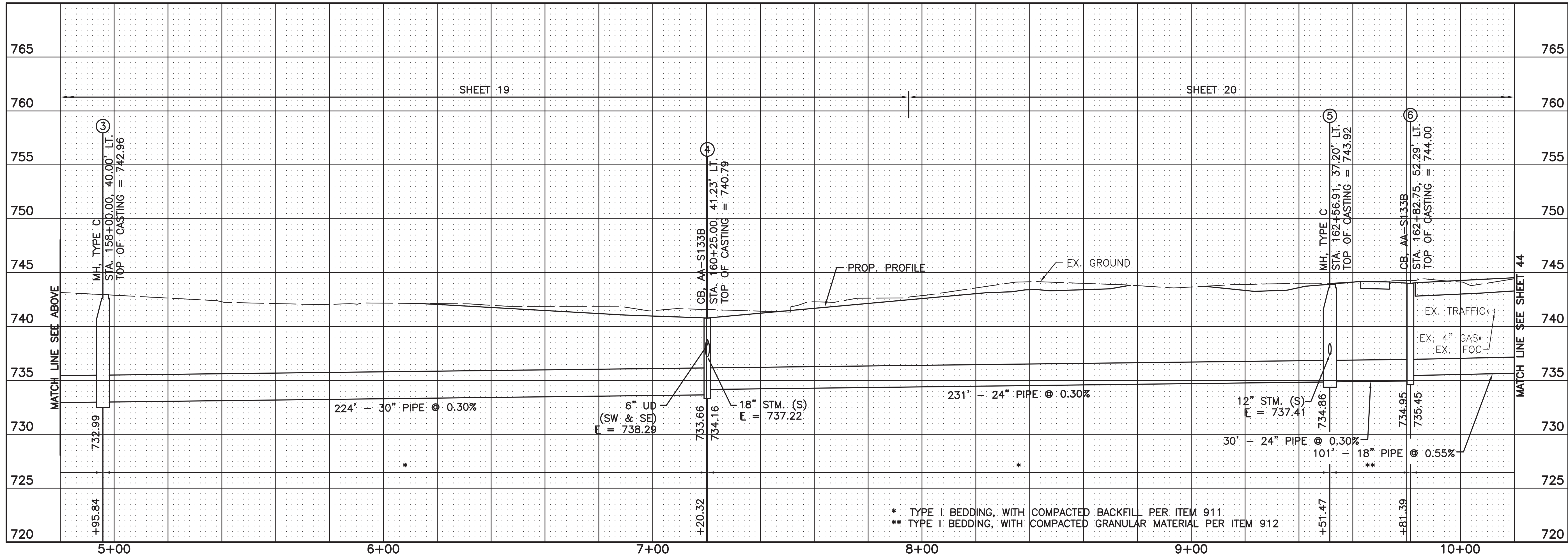
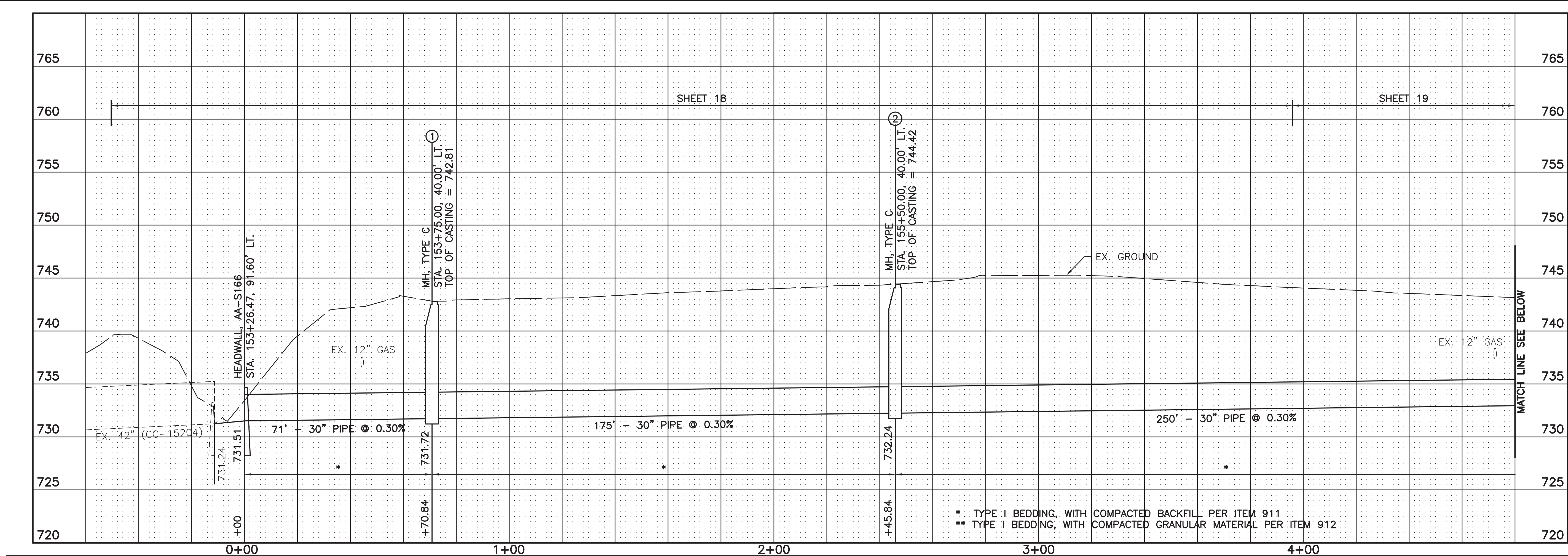


CALCULATED
MRD
CHECKED
TJS

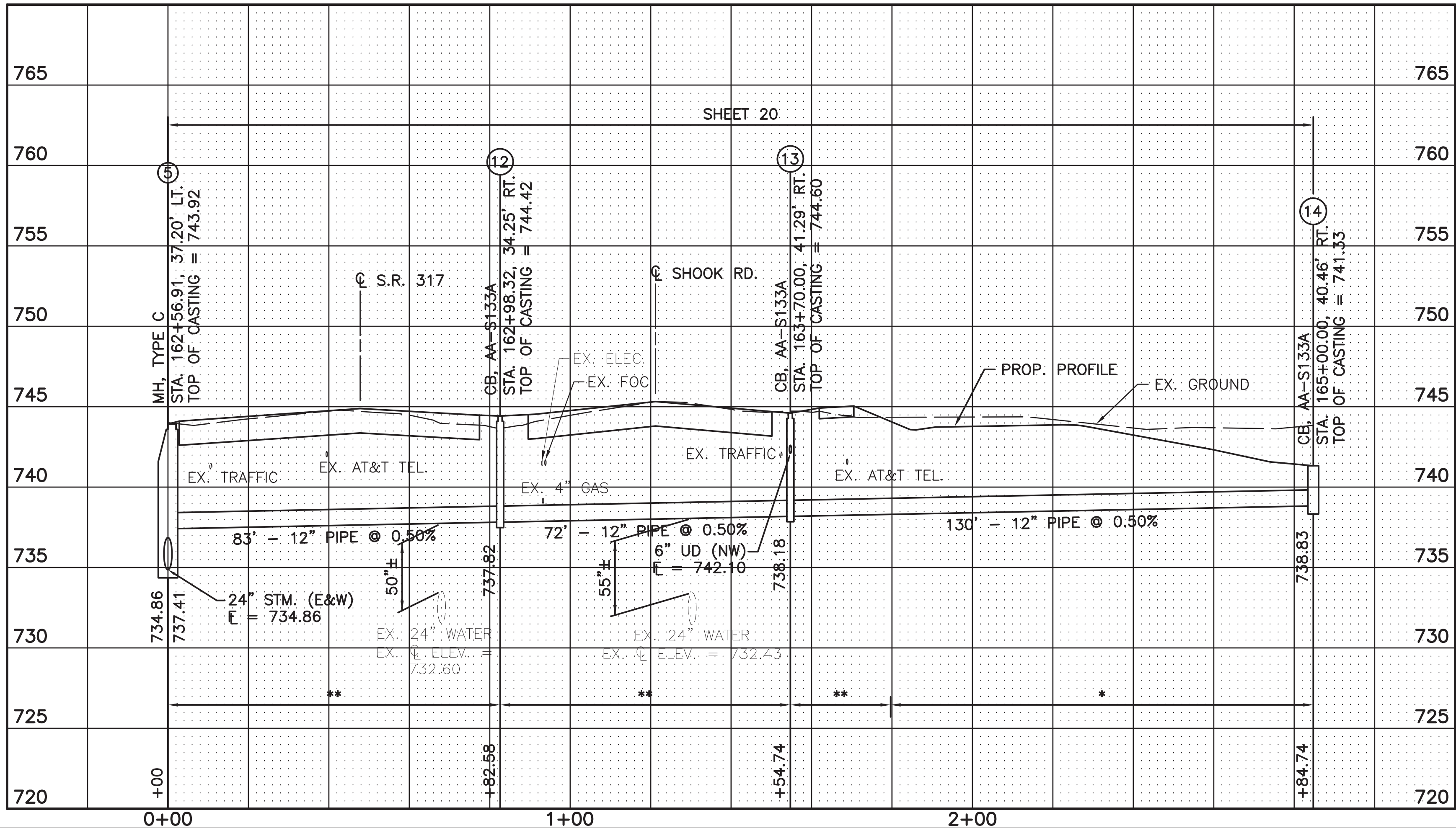
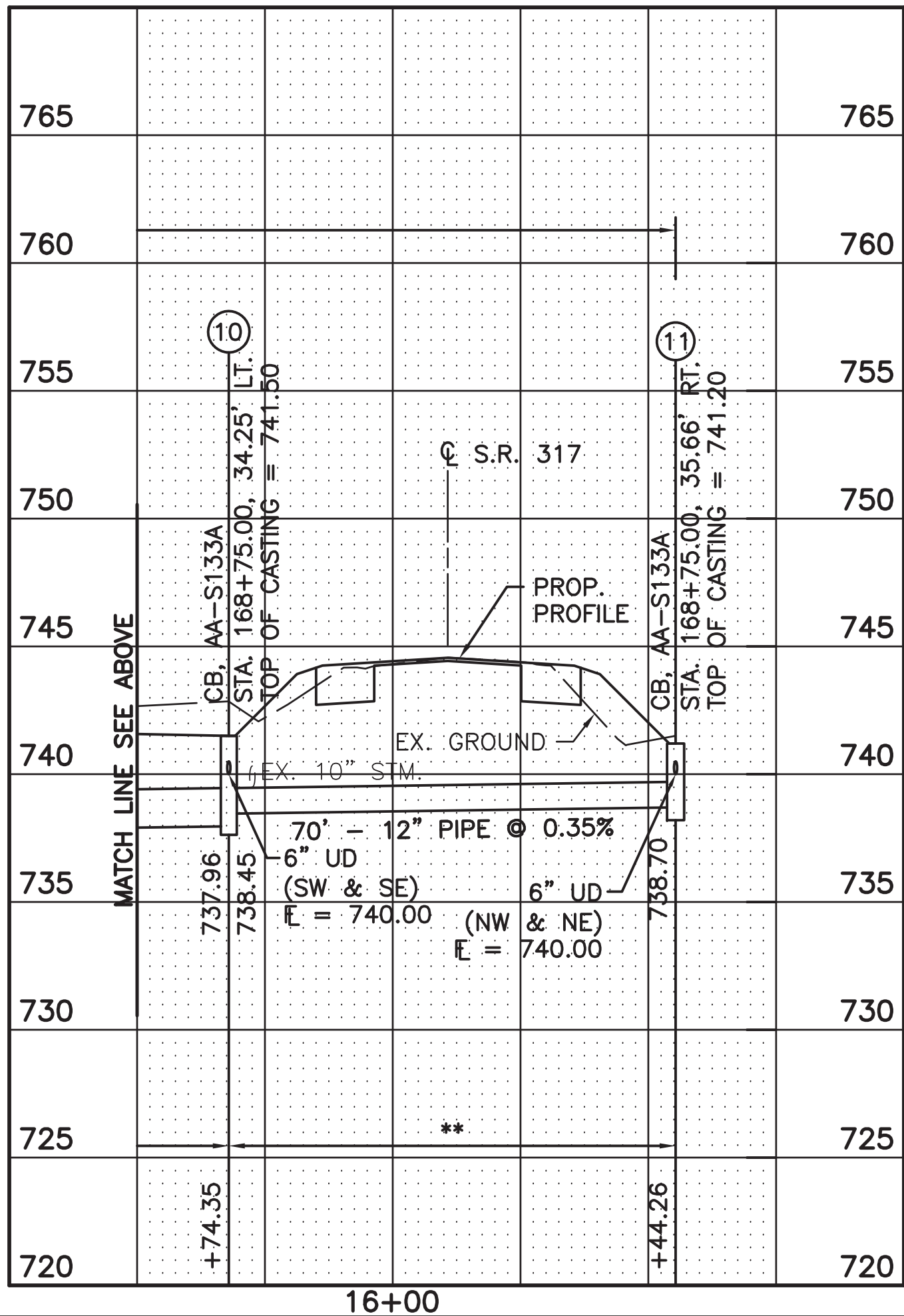
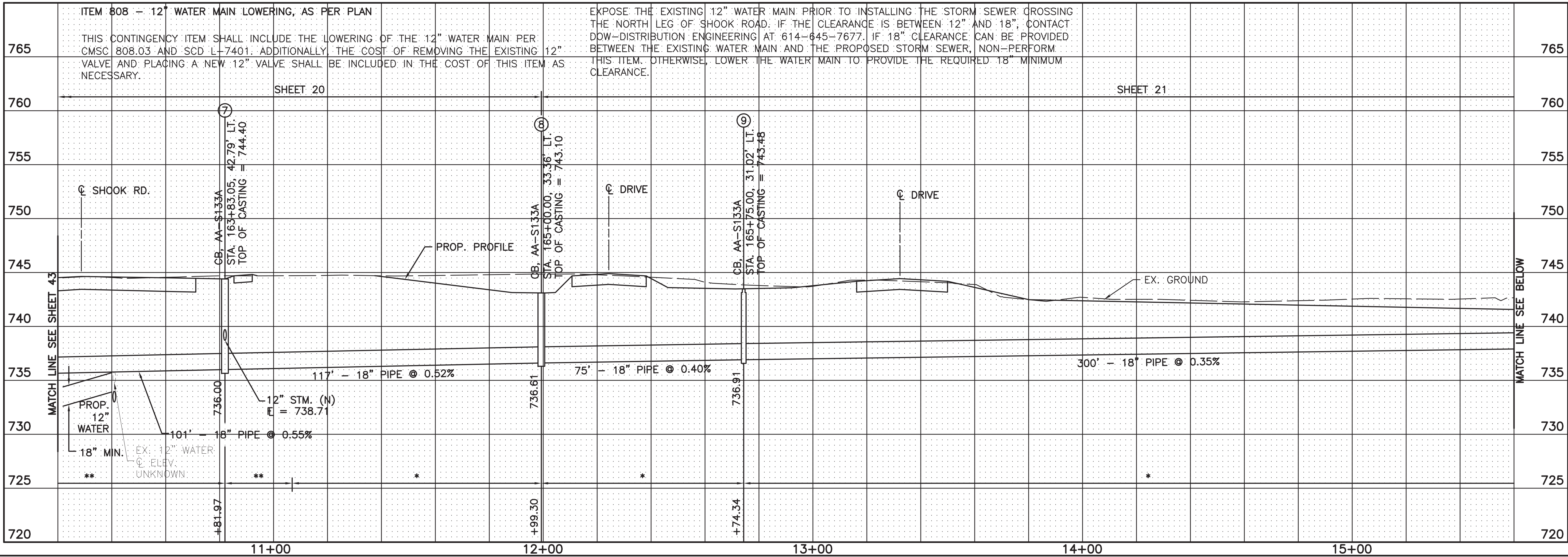
DRIVEWAY DETAILS

STATE ROUTE 317
SHOOK ROAD - PHASE II

McDANIEL, ARRON U:\17360891\Transportation\design\plan_sheets\17360891\5wp01.dwg STORM SEWER PROFILES Last Saved: Sep 04, 2018 11:07 AM, AMCDANIEL Plotted: Jan 18, 2019 3:24 PM



SHKOLNIK_T00D_U:\173608915\transportation\design\plan_sheets\173608915wp02.dwg STORM SEWER PROFILES Last Saved: Jul 17, 2019 3:09 PM TSHKOLNIK Plotted: Jul 18, 2019 9:54 AM



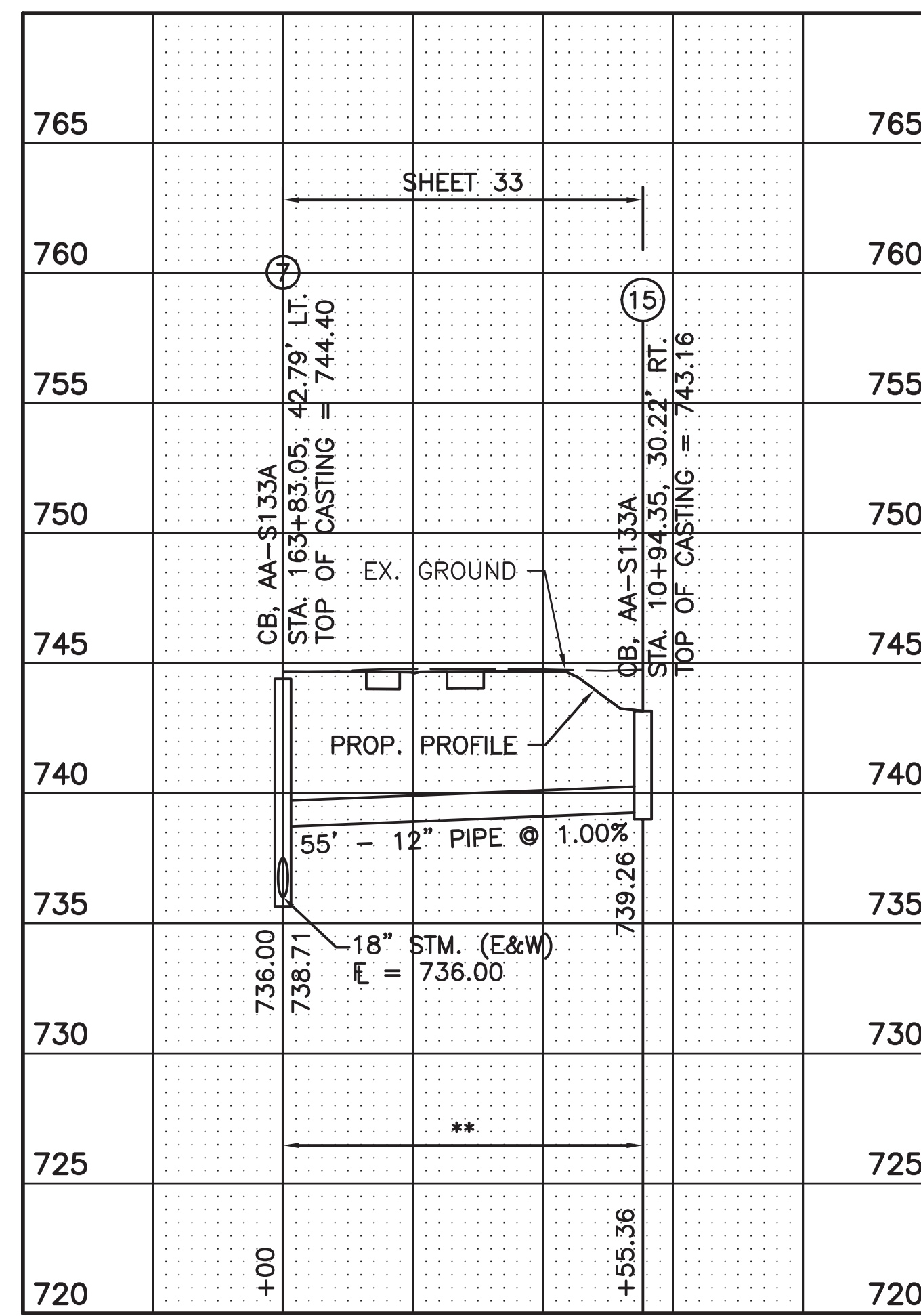
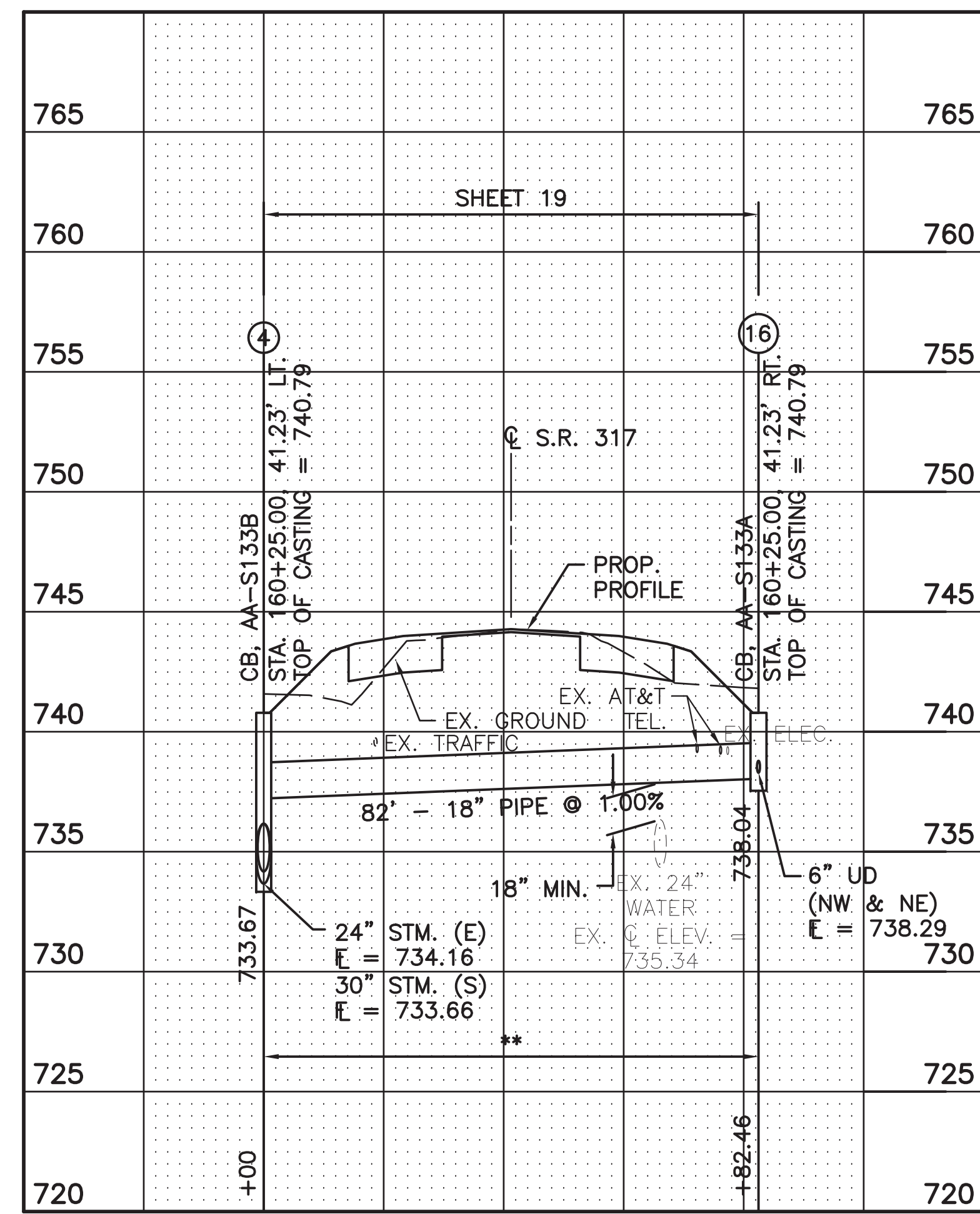
- * TYPE I BEDDING, WITH COMPACTED BACKFILL PER ITEM 911
- ** TYPE I BEDDING, WITH COMPACTED GRANULAR MATERIAL PER ITEM 912

STORM SEWER PROFILES

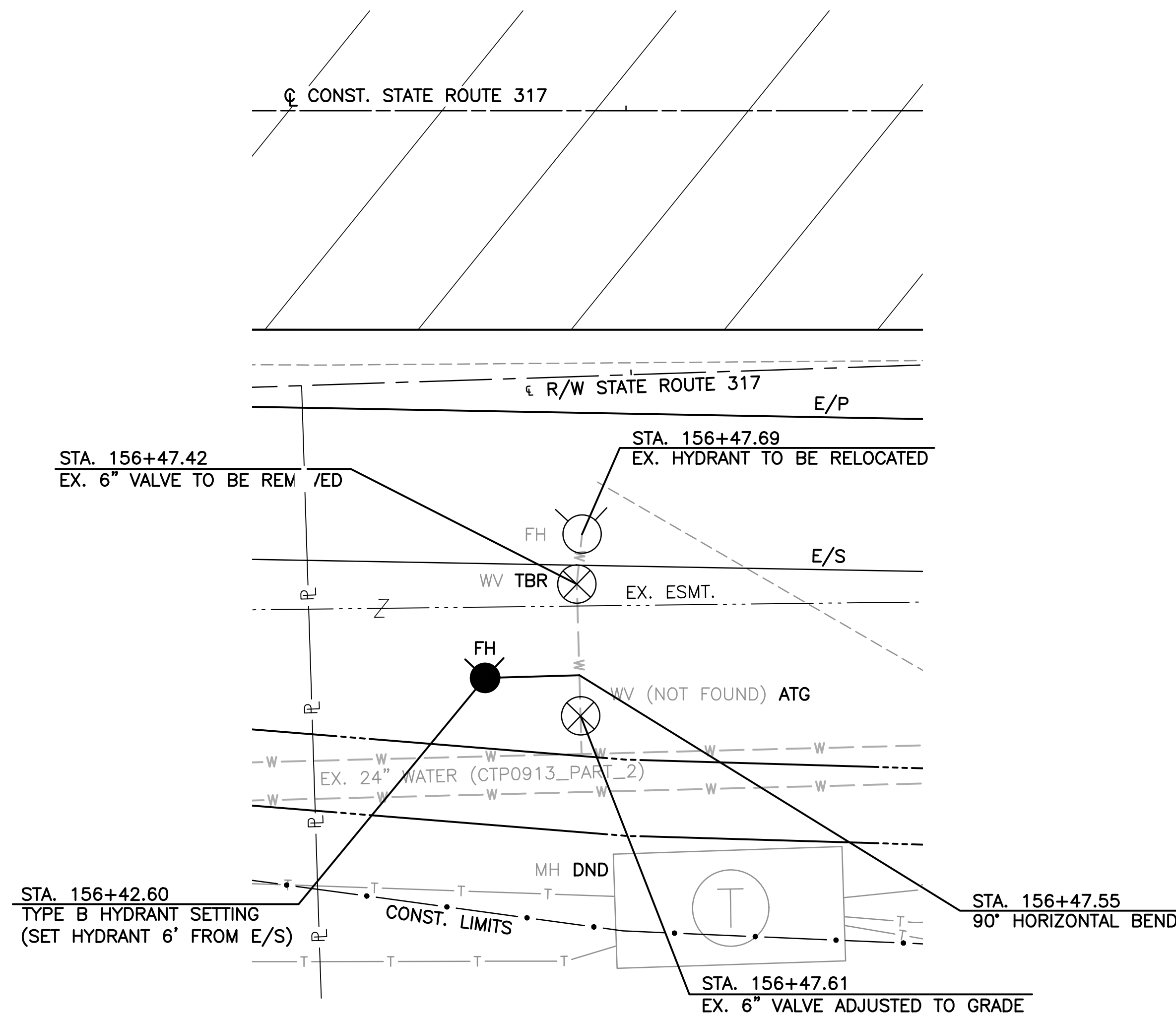
STATE ROUTE 317
SHOOK ROAD - PHASE II

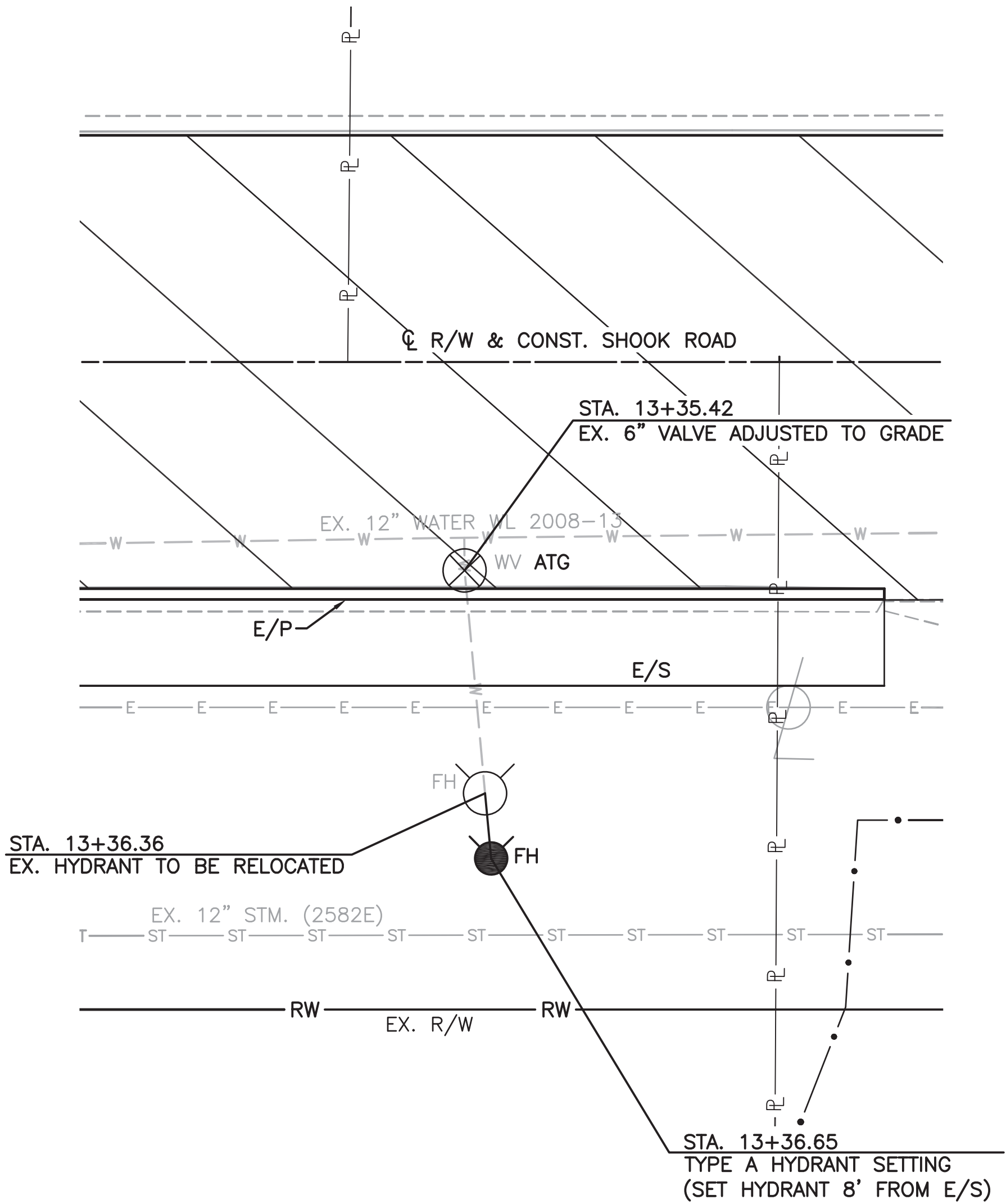
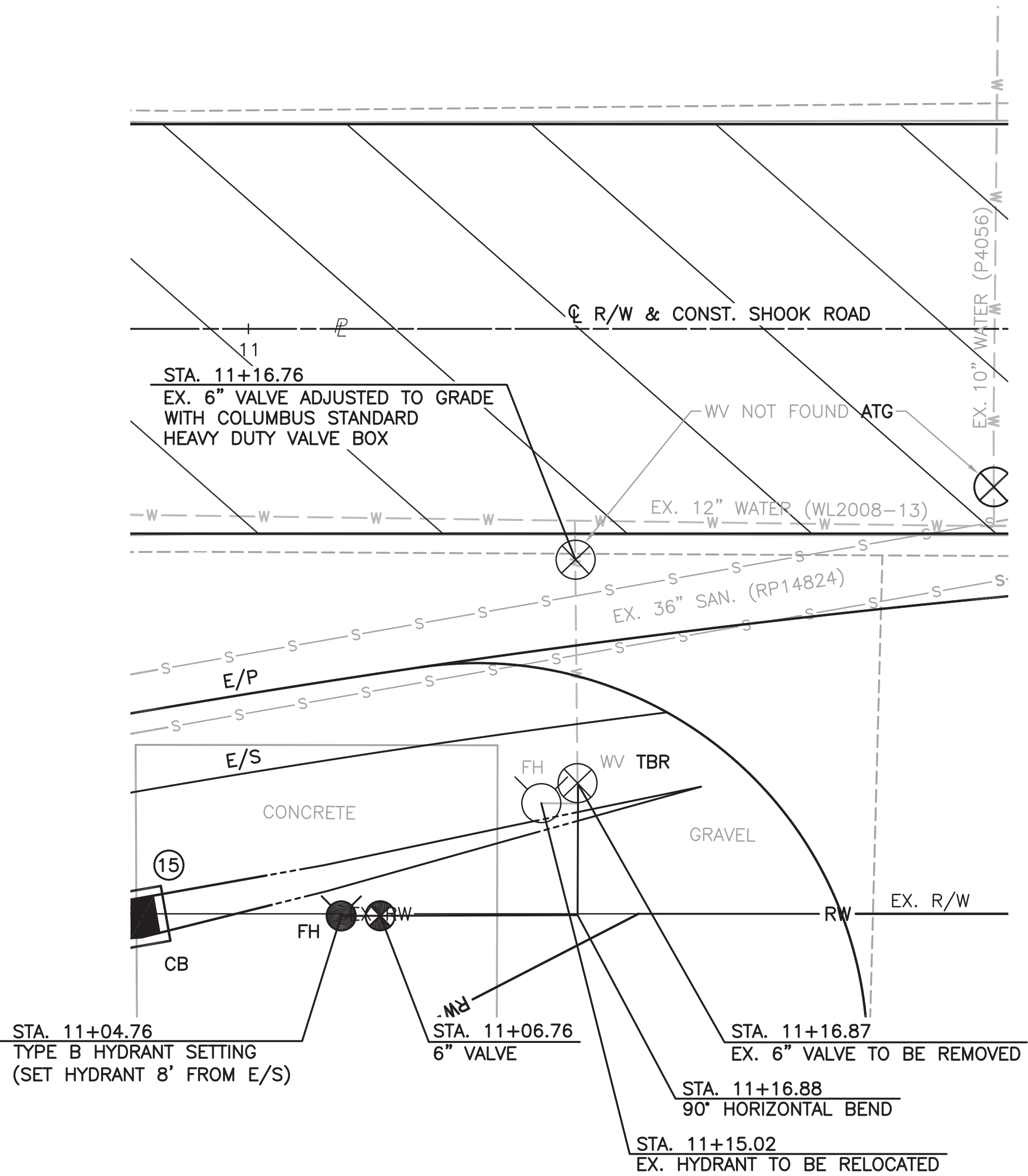
44
71

2873-E



* TYPE I BEDDING, WITH COMPACTED BACKFILL PER ITEM 911
** TYPE I BEDDING, WITH COMPACTED GRANULAR MATERIAL PER ITEM 912





 ITEM 254 - PAVEMENT PLANING,
ASPHALT CONCRETE, AS PER PLAN

DND - DO NOT DISTURB
TBR - TO BE REMOVED
TBRO - TO BE REMOVED
BY OWNER
ATG - ADJUST TO GRADE

CALCULATED	TJS
CHECKED	BMH

WATER LINE DETAILS
SHOOK ROAD

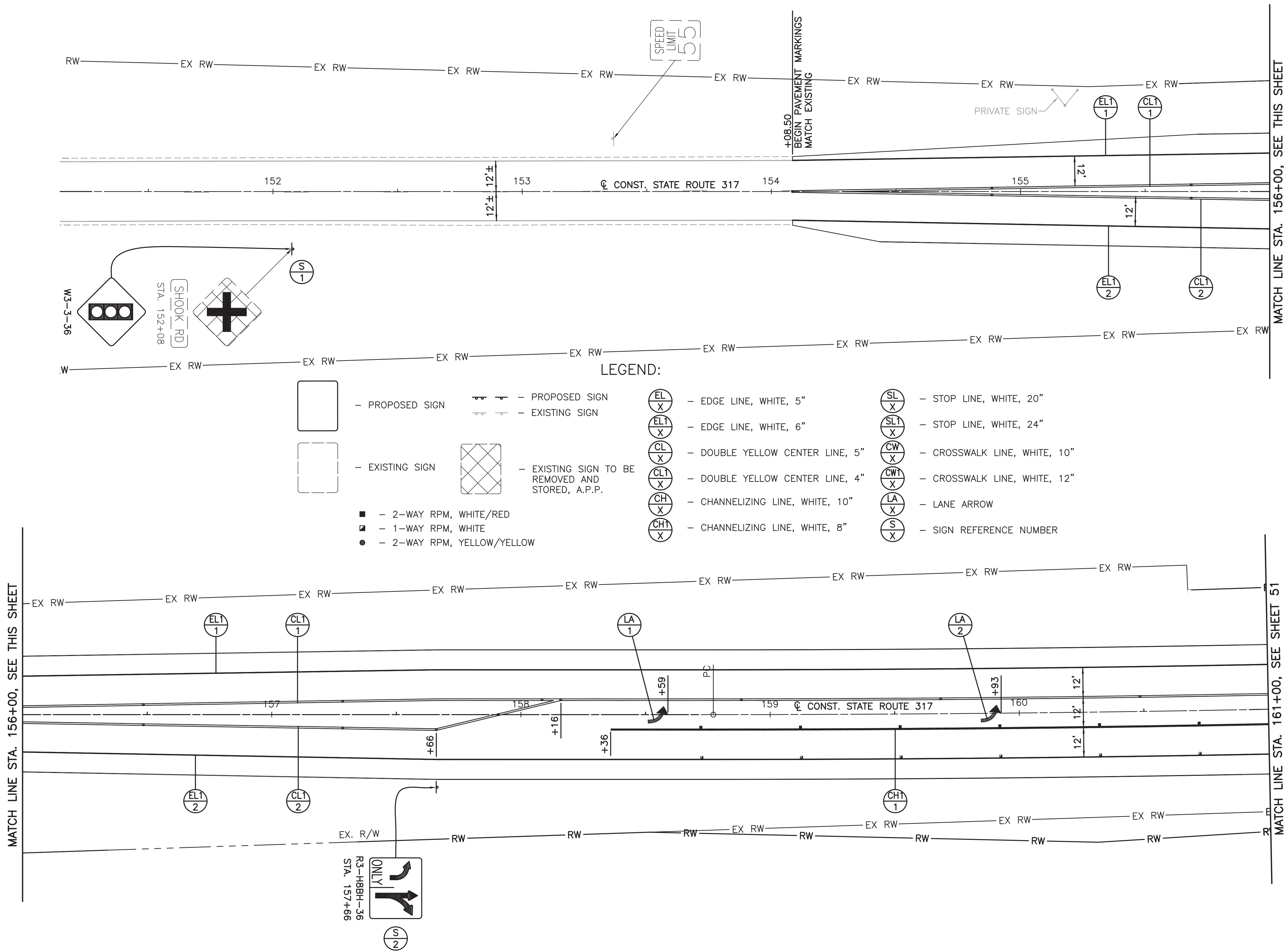
STATE ROUTE 317
SHOOK ROAD - PHASE II

K:\BLANGTIS_KC_U\173608915\transportation\design\plan_set\Traffic Control\173608915tcsa01.dwg TBAFIC CONTROL Last Saved: Apr 27, 2021 9:22 AM Plotted: Apr 27, 2021 9:23 AM

SHEET NO.	REF NO.	STATION TO STATION	SIDE	621	621	621	621	621	644	644	644	644	644	644	644	644	644	644	644
				RPM, WHITE EACH	RPM, YELLOW EACH	RPM, WHITE/RED EACH	RPM, YELLOW,YELLOW EACH	RPM, YELLOW/RED EACH	EDGE LINE, 5", WHITE FT	EDGE LINE, 6", WHITE FT	CENTER LINE, 4", DOUBLE SOLID YELLOW FT	CENTER LINE, 5", DOUBLE SOLID YELLOW FT	CHANNELIZING LINE, 8" FT	CHANNELIZING LINE, 10" FT	STOP LINE, 20" FT	STOP LINE, 24" FT	CROSSWALK LINE, 10" FT	CROSSWALK LINE, 12" FT	LANE ARROW EACH
50	EL1-1	154+08 - 161+00	LT.							692									
	EL1-2	154+08 - 161+00	RT.	6						692									
	CL1-1	154+08 - 161+00	LT.				10				692								
	CL1-2	154+08 - 158+16	L/R				6				408								
	CH1-1	158+36 - 161+00	CL			6							264						
	LA-1	158+59	RT.																1
51	LA-2	159+93	CL																1
	EL1-1	161+00 - 162+73	LT.							175									
	EL1-2	161+00 - 9+32	RT.	5						254									
	EL1-3	9+32 - 163+71	RT.							46									
	EL-1	163+72 - 170+98	LT.	11					732										
	EL-2	163+71 - 170+98	RT.						729										
	CL1-1	161+00 - 162+72	LT.				2				172								
	CL-1	163+95 - 170+98	RT.				10					703							
	CL-2	166+80 - 170+98	L/R				6					418							
	CH1-1	161+00 - 162+72	RT.			5							172						
	CH-1	163+95 - 166+60	LT.			7								265					
	LA-1	161+08	CL																1
	LA-2	162+42	CL																1
	LA-3	164+25	CL																1
	LA-4	165+59	CL																1
	LA-5	166+37	CL																1
	LA-6	164+93	CL																1
	SL1-1	162+72	L/R													24			
	SL-1	163+95	L/R												32				
	CW1-1	162+73 - 162+94	L/R														116	119	
	CW-1	163+70 - 163+90	L/R																
52	EL-1	162+73 - 15+81	LT.						559										
	EL-2	163+72 - 15+81	RT.						543										
	EL-3	2+75 - 9+32	LT.						657										
	CL1-1	2+75 - 9+46	RT.								671								
	CL-1	10+75 - 15+81	CL									506							
	CH-1	10+75 - 15+11	LT.											436					
	LA-1	11+05	LT.																1
	LA-2	12+39	LT.																1
	LA-3	13+63	LT.																1
	LA-4	14+88	LT.																1
	LA-5	11+73	LT.																1
	SL1-1	9+46	RT.													16			
	SL-1	10+75	LT.												28				
	CW1-1	9+52 - 9+65	L/R															87	
	CW-1	9+40 - 9+61	L/R														147		
SUBTOTALS				22		18	34		3220	1859	1943	1627	436	701	60	40	263	206	13
TOTALS CARRIED TO GENERAL SUMMARY						74			0.61	0.36	0.37	0.31	436	701	60	40	263	206	13

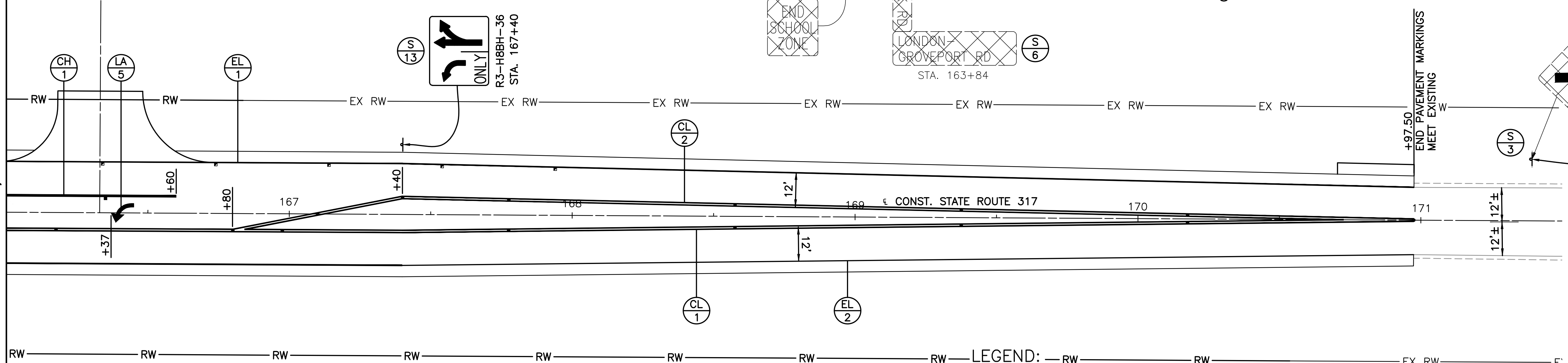
K:\BLANGTIS_KC_U\173608915\transportation\design\plan_set\Traffic Control\173608915tca02.dwg TRAFFIC CONTROL Last Saved: Apr 27, 2021 9:35 AM Plotted: Apr 27, 2021 9:36 AM

SHEET NO.	REF NO.	STATION	SIDE	CODE	630	630	630	630	630	630	630
					SIGN, FLAT SHEET	GROUND MOUNTED SUPPORT, NO 3 POST, AS PER PLAN	SIGN, DOUBLE FACED, STREET NAME	SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN	REMOVAL OF GROUND MOUNTED POST SUPPORT AND STORAGE, AS PER PLAN	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE, AS PER PLAN	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL
					SQ FT	FT	EACH	EACH	EACH	EACH	EACH
		S.R. 317									
50	S-1	152+08	RT.	W3-3-36	9.00	10.00			1		1
	S-2	157+66	RT.	R3-H8BH-36	7.50	10.00					
51	S-1	161+16	LT.						1	2	
	S-2	161+30	LT.	M3-3-30	2.00	10.50					
				M1-5-3-30	5.00						
	S-3	171+39	LT.	W3-3-36	9.00	10.00			1		1
	S-4		RT.	L-G RD			1	1			
	S-5	163+06	LT.							2	
	S-6	163+84	RT.							2	
	S-7		LT.	L-G RD			1	1			
	S-8	163+95	LT.	R3-H8BH-36	7.50	10.00					
	S-9	164+18	RT.						1	1	
	S-10	164+36	RT.						1	1	
	S-11	165+00	RT.	M3-1-30	2.00	10.50					
				M1-5-3-30	5.00						
	S-12	165+77	RT.						1	2	
	S-13	167+40	LT.	R3-H8BH-36	7.50	10.00					
52	S-1	9+45	RT.								3
	S-2		RT.	SHOOK RD			1	1			
	S-3		LT.	SHOOK RD			1	1			
	S-4	10+67	LT.	R3-H8BJ-36	7.50	10.00					
	S-5	11+90	RT.						1	1	
	S-6	12+00	RT.	R2-1-24	5.00	10.00					
	S-7	15+31	LT.	R3-H8BJ-36	7.50	10.00					
SUBTOTALS					74.50	101.00	4	4	7	11	5
TOTALS CARRIED TO GENERAL SUMMARY					74.5	101.0	4	4	7	11	5



K:\LANGTIS_KC_L\173608915\transportation\design\plan_set\Traffic Control\173608915r02.dwg TBAFIC CONTROL Last Saved: Apr 27, 2021 8:06 AM Plotted: Apr 27, 2021 8:08 AM

MATCH LINE STA. 166+00, SEE THIS SHEET

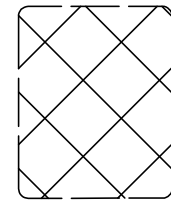


PROPOSED SIGN

EXISTING SIGN

- 2-WAY RPM, WHITE/RED
- 1-WAY RPM, WHITE
- 2-WAY RPM, YELLOW/YELLOW

PROPOSED SIGN
EXISTING SIGN



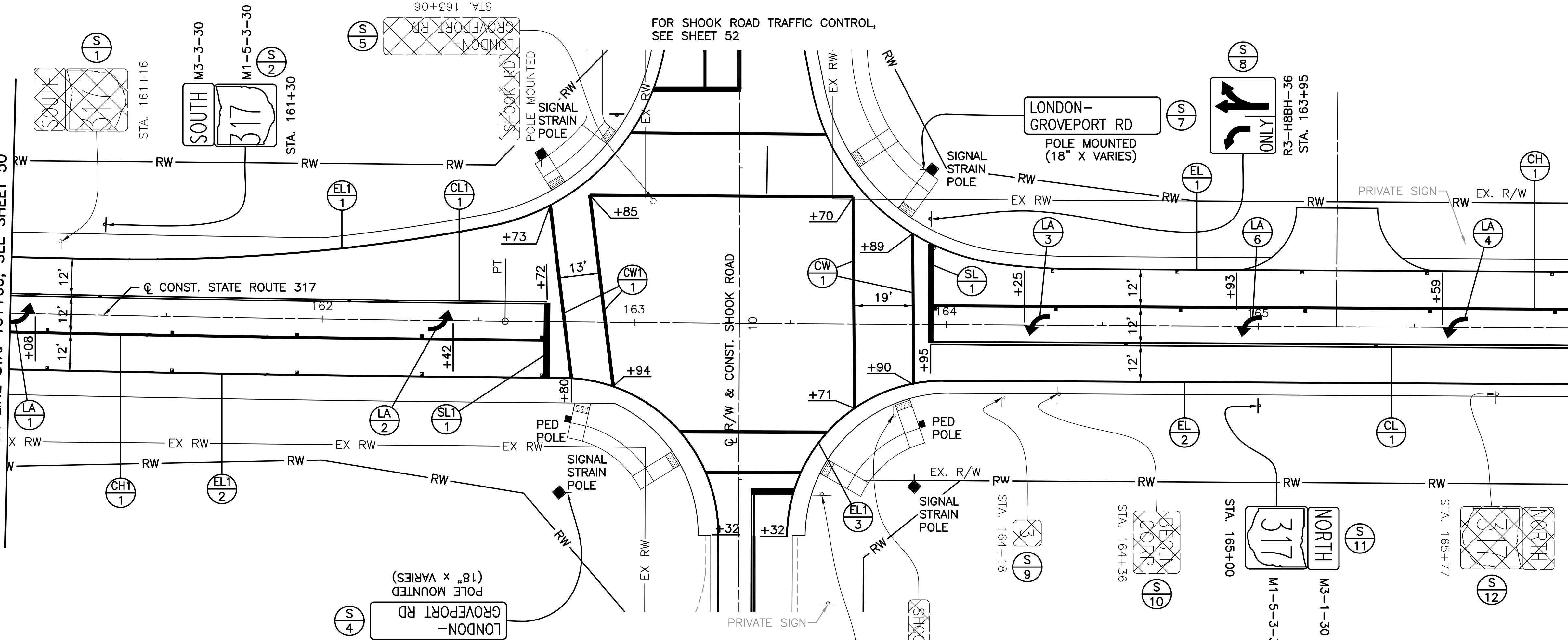
EXISTING SIGN TO BE
REMOVED AND
STORED, A.P.P.

LEGEND:

- EDGE LINE, WHITE, 5"
- EDGE LINE, WHITE, 6"
- DOUBLE YELLOW CENTER LINE, 5"
- DOUBLE YELLOW CENTER LINE, 4"
- CHANNELIZING LINE, WHITE, 10"
- CHANNELIZING LINE, WHITE, 8"

- STOP LINE, WHITE, 20"
- STOP LINE, WHITE, 24"
- CROSSWALK LINE, WHITE, 10"
- CROSSWALK LINE, WHITE, 12"
- LANE ARROW
- SIGN REFERENCE NUMBER

MATCH LINE STA. 161+00, SEE SHEET 50



MATCH LINE STA. 166+00, SEE THIS SHEET

STATE ROUTE 317
SHOOK ROAD - PHASE II

TRAFFIC CONTROL - STATE ROUTE 317
STA. 161+00 TO STA. 170+97.50

CALCULATED
CNK
CHECKED
TJS

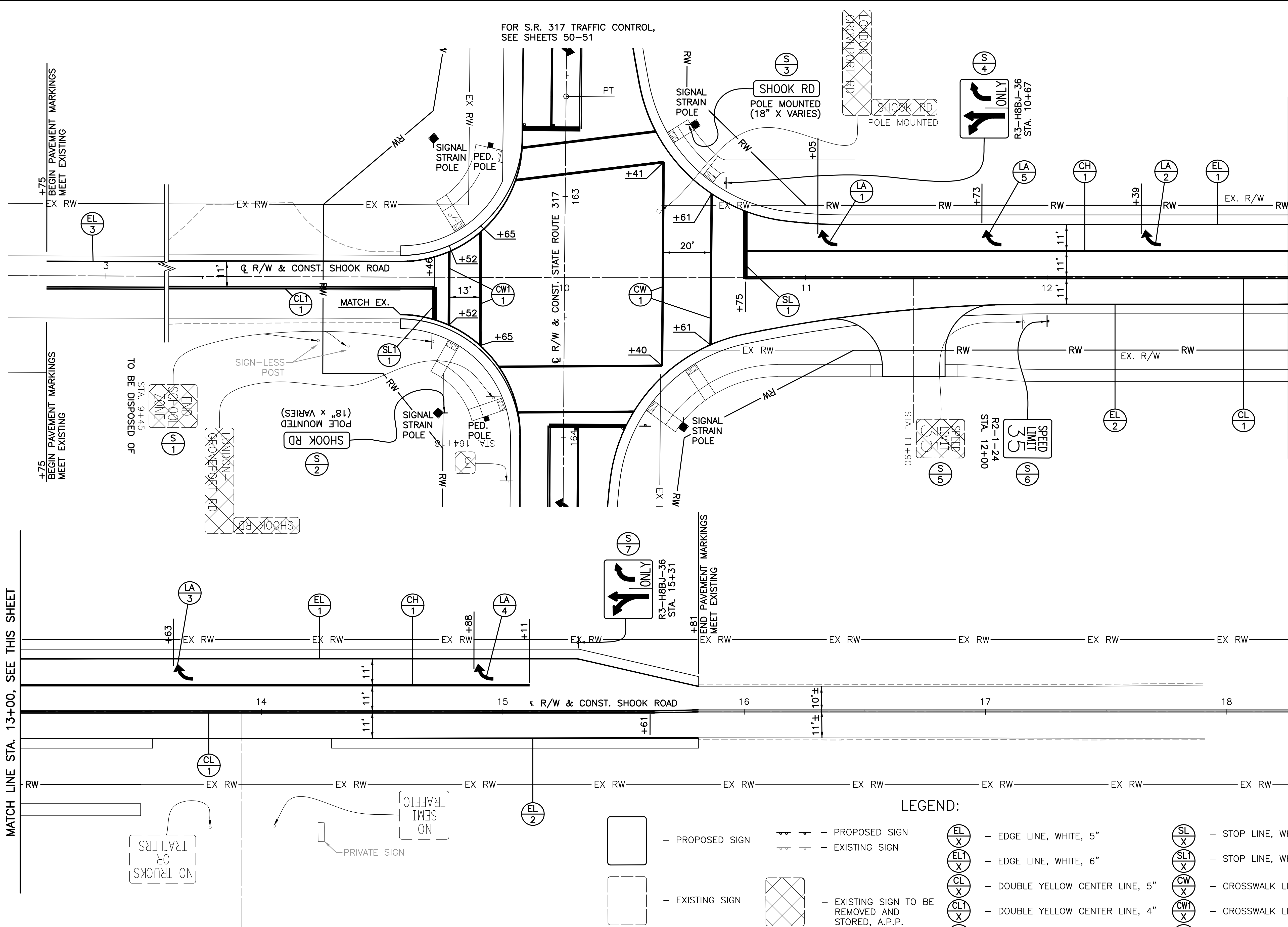


0 20 40
SCALE IN FEET

2873-E

51
71

K:\LANGTIS_KC_U\173608915\transportation\design\plan_set\Traffic Control\173608915\cd3.dwg TRAFFIC CONTROL - Last Saved: Apr 27, 2021 9:12 AM Plotted: Apr 29, 2021 8:18 AM



MCDANIEL, ARRON U:\173608915\Transportation\design\plan_ssa\Signal\173608915sig04.dwg TRAFFIC SIGNAL GENERAL NOTES Last Saved: Dec 04, 2018 11:40 AM Plotted: Jun 18, 2019 3:26 PM

NEW TRAFFIC SIGNAL INSTALLATION
THIS WORK CONSISTS OF FURNISHING AND INSTALLING TRAFFIC SIGNAL EQUIPMENT, COMPLETE AND READY FOR SERVICE. THIS WORK ALSO INCLUDES NECESSARY EXCAVATION AND BACKFILL, DISPOSAL OF DISCARDED MATERIALS, RESTORATION OF DISTURBED FACILITIES AND SURFACES TO A CONDITION EQUAL TO THAT EXISTING BEFORE THE WORK STARTED, AND ELECTRICAL TESTING AS SPECIFIED.

PULL BOXES, CONDUITS, GROUND RODS, AND CABLE SPLICING KITS REQUIRED FOR TRAFFIC SIGNAL EQUIPMENT INSTALLATIONS ARE SPECIFIED IN ITEM 625.

BEFORE ANY WORK IS STARTED ON THE TRAFFIC SIGNAL, THE DISTRICT SIX TRAFFIC ENGINEER (740-833-8198) AND THE CONTRACTORS REPRESENTATIVE SHALL REVIEW AND RESOLVE ANY POTENTIAL PROBLEMS AT THE LOCATION WHERE THE NEW SIGNAL WILL BE CONSTRUCTED.

ALL OF THE REQUIRED PERMANENT SIGNS SHALL BE ERECTED AND THE REQUIRED PERMANENT PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO THE FINAL ACCEPTANCE OF THE TRAFFIC SIGNAL.

PRIOR TO THE FINAL ACCEPTANCE OF THE COMPLETED TRAFFIC SIGNAL, THE DISTRICT SIX ROADWAY SERVICES REPRESENTATIVE AND THE CONTRACTORS REPRESENTATIVE, SHALL INSPECT AND RESOLVE ANY EXISTING PROBLEMS PRIOR TO THE ACCEPTANCE OF EACH NEW SIGNAL BY THE OHIO DEPARTMENT OF TRANSPORTATION.

SIGNAL ACTIVATION
PRIOR TO ACTIVATING THE NEW TRAFFIC SIGNAL TO STOP-AND-GO MODE AND/OR REMOVING THE EXISTING TRAFFIC SIGNAL FROM SERVICE, ALL ITEMS IN THE PROPOSED SIGNAL PLAN SHALL BE FULLY COMPLETED, (I.E., VEHICLE DETECTION, PEDESTRIAN SIGNAL HEADS, ETC.) IF THERE ARE CONSTRUCTABILITY ISSUES (I.E., ROADWAY WIDENING, ETC.) THAT PREVENT THE SIGNAL FROM BEING COMPLETED PRIOR TO ACTIVATION, IT SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER. THE DISTRICT TRAFFIC ENGINEER WILL THEN REVIEW, APPROVE OR REJECT PROPOSALS TO ACTIVATE THE TRAFFIC SIGNAL PRIOR TO COMPLETION.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER AT LEAST 10 WORKING DAYS PRIOR TO SCHEDULING THE FINAL INSPECTION OF THE SIGNAL INSTALLATION. FINAL INSPECTION IS NOT CONSIDERED COMPLETE UNTIL DESIGNATED DISTRICT TRAFFIC PERSONNEL INSPECT THE TRAFFIC SIGNAL AND ISSUE WRITTEN APPROVAL. IF ISSUES ARE FOUND DURING THE FINAL INSPECTION THAT EFFECT THE SAFETY OF THE TRAVELING PUBLIC AND/OR THE EFFICIENCY OF THE INTERSECTION, THE SIGNAL SHALL NOT BE ACTIVATED ON THE PROPOSED DATE. ANY PUNCH LIST ITEMS THAT ARE FOUND SHALL BE CORRECTED AND REINSPECTED BY DISTRICT TRAFFIC PERSONNEL PRIOR TO FINAL ACCEPTANCE. ODOT FORCES SHALL ONLY ASSUME DAY TO DAY MAINTENANCE OF THE TRAFFIC SIGNAL AFTER FINAL WRITTEN ACCEPTANCE HAS BEEN ISSUED.

ITEM 632 – REMOVAL OF TRAFFIC SIGNAL INSTALLATION
TRAFFIC SIGNAL INSTALLATIONS, INCLUDING SIGNAL HEADS, CABLE, MESSENGER WIRE, STRAIN POLES, CABINET, CONTROLLER, ETC., SHALL BE REMOVED IN ACCORDANCE WITH C&MS 632.26 AND AS INDICATED ON THE PLANS. REMOVED ITEMS SHALL BE REUSED AS PART OF A NEW INSTALLATION ON THE PROJECT OR DELIVERED TO DISTRICT 6 TRAFFIC AT 400 E. WILLIAM STREET, DELAWARE, OHIO ATTN: KEN GREENE (740-833-8198). FOR SALVAGE BY ODOT, DISTRICT 6 IN ACCORDANCE WITH THE LISTING GIVEN HEREIN.

- CONTROLLER CABINET AND COMPONENTS
- WAVETRINIX SENSORS, SPLICE BOXES AND TAILS
- UPS CABINET AND COMPONENTS

ITEM 632 – POWER SERVICE
THE CONTRACTOR SHALL CONTACT THE METER SECTION OF SOUTH CENTRAL POWER FOR INFORMATION REGARDING THE METER BASE INSTALLATION PRIOR TO ORDERING POLES. THE CONTRACTOR WILL BE RESPONSIBLE FOR REQUESTING AND SCHEDULING ANY INSPECTIONS THE POWER COMPANY MAY REQUIRE FOR THE POWER SERVICE HOOK UP. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT THE POWER COMPANY FOR THE ELECTRICAL SERVICE CONNECTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR SPLICE POWER CABLE INTO THE POWER COMPANY’S CIRCUITS.

THE VOLTAGE SUPPLIED SHALL BE NOMINALLY 120 VOLTS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND THE PAYING OF ALL FEES WITH THE EXCEPTION OF NORMAL MONTHLY ENERGY CHARGES. WHERE THERE IS AN EXISTING TRAFFIC SIGNAL THAT IS BEING REPLACED, THE CONTRACTOR SHALL COORDINATE WITH THE POWER COMPANY TO CONTINUE BILLING ON THE EXISTING DISTRICT 6 ACCOUNT. WHERE A NEW SIGNAL IS BEING INSTALLED, THE CONTRACTOR SHALL ESTABLISH THE ACCOUNT IN THE DISTRICT’S NAME FROM THE ONSET.

WORK INSPECTION
THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER, KEN GREENE (740-833-8198) WITH 72 HOUR NOTICE OF ANY SIGNAL WORK TO BE PERFORMED AT THE INTERSECTION SITE(S) SO THAT INSPECTION SERVICES CAN BE SUPPLIED.

ITEM 632 – VEHICULAR SIGNAL HEAD, (LED), BLACK, 3-SECTION, 12” LENS, 1-WAY, POLYCARBONATE, WITH BACKPLATE, AS PER PLAN
ITEM 632 – VEHICULAR SIGNAL HEAD, (LED), BLACK, 5-SECTION, 12” LENS, 1-WAY, POLYCARBONATE, WITH BACKPLATE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 632 AND 732, THE FOLLOWING SHALL APPLY:

1. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF BLACK POLYCARBONATE PLASTIC WITH VISORS AS SPECIFIED AND MEET ITE SPECIFICATIONS.
2. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.
3. ALL UPPER SIGNAL SUPPORT HARDWARE AND PIPING UP TO AND INCLUDING THE WIRE INLET FITTING SHALL BE FERROUS METAL.
4. THE ENTRANCE FITTING SHALL BE OF THE TRI-STUD DESIGN WITH SERRATED RINGS IN ORDER TO ACHIEVE POSITIVE LOCKING.
5. ALL SIGNAL HEADS SHALL BE RIGIDLY MOUNTED TO THE MAST ARM WITH THE YELLOW LENS LOCATED IN FRONT OF THE MAST ARM.
6. ALUMINUM BACKPLATES SHALL BE IN ACCORDANCE WITH THE C&MS AND INCLUDE A FLUORESCENT YELLOW REFLECTIVE BORDER.
7. THE LIGHT EMITTING DIODE (LED) SIGNAL LAMP UNITS SHALL MEET THE REQUIREMENTS OF CMS 732.04-C.THE CONTRACTOR SHALL PROVIDE ODOT, IN WRITING, WITH THE LED MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF LAMP, AND DATE OF MANUFACTURE FOR ALL LED UNITS THAT ARE TO BE USED IN THE SIGNAL HEAD PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES.
8. SIGNAL HEADS SHALL HAVE A MINIMUM WALL THICKNESS OF 0.117 INCHES.
9. SIGNAL HEADS SHALL INCLUDE CUTAWAY TYPE VISORS UNLESS OTHERWISE SPECIFIED IN THE PLANS.
10. APPLY A BEAD OF SILICONE TO THE SIGNAL HEAD, WASHER, AND ENTRANCE ADAPTER SERRATIONS TO PREVENT WATER INTRUSION. ALSO, FILL THE SPACE BETWEEN CONCENTRIC SERRATION RINGS ON THE TOP OF THE SIGNAL HEAD TO COMPLETELY EXCLUDE WATER FROM THE SPACE BETWEEN THE CONCENTRIC RINGS. BEFORE CLOSING SERRATIONS, APPLY A BEAD OF ROOM-TEMPERATURE VULCANIZING (RTV) SILICONE TO ALL SERRATED SURFACES AND THEN TIGHTEN. RTV SILICONE SHALL BE WHITE TO FACILITATE VISUAL INSPECTION. ON HEADS WITH DUAL CONCENTRIC SERRATED RINGS, COMPLETELY FILL THE SPACE BETWEEN THE RINGS WITH RTV SILICONE.
11. BALANCE ADJUSTERS SHALL NOT BE USED ON ONE-WAY HEADS OR TETHERED HEADS.

PAYMENT FOR ITEM 632 VEHICULAR SIGNAL HEAD, (LED), BLACK, (BY TYPE), 12” LENS, 1-WAY, POLYCARBONATE, WITH BACKPLATE, AS PER PLAN SHALL BE MADE FOR COMPLETE SIGNAL HEAD FURNISHED AND INSTALLED, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS, AND NEW ATTACHMENT HARDWARE.

ITEM 632 – COVERING OF VEHICULAR SIGNAL HEAD
COVER VEHICULAR SIGNAL HEADS IF ERECTED AT INTERSECTIONS WHERE TRAFFIC IS MAINTAINED BEFORE ENERGIZING THE SIGNALS. USE A STURDY OPAQUE COVERING MATERIAL SPECIFICALLY MADE FOR USE WITH TRAFFIC SIGNALS, AND ENSURE THAT THE COLOR OF THE COVER IS DIFFERENT THAN THE SIGNAL HEAD, TAN OR BEIGE, SO THAT IT IS CLEAR TO DRIVERS THE HEADS ARE COVERED, NOT DARK. USE A METHOD OF COVERING TO COVER ATTACHMENT AND MATERIALS, INCLUDING BACKPLATES, AS APPROVED BY THE ENGINEER. COVERS ARE TO BE FREE OF TEXT, PICTURES, OR ANY TYPE OF ADVERTISING. MAINTAIN COVERS, AND REMOVE THEM WHEN DIRECTED BY THE ENGINEER.

GUARANTEE
THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 90 DAYS FOLLOWING COMPLETION OF THE 10-DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATION THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY. EQUIPMENT, MATERIAL AND LABOR COSTS INCURRED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR.

THE GUARANTEE SHALL COVER THE FOLLOWING ITEMS OF THE TRAFFIC CONTROL SYSTEM: CONTROLLERS AND ASSOCIATED EQUIPMENT, DETECTOR UNITS, INTERCONNECTION ITEMS AND MASTER CONTROL EQUIPMENT.

CUSTOMARY MANUFACTURER’S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE STATE OR THE MAINTAINING AGENCY FOLLOWING ACCEPTANCE OF THE EQUIPMENT.

THE COST OF GUARANTEEING THE TRAFFIC CONTROL SYSTEM WILL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE SYSTEM.

ITEM 633 – CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS2, AS PER PLAN
THE ELECTRICAL TRAFFIC CONTROL EQUIPMENT PROVIDED SHALL MEET THE FOLLOWING SPECIFICATIONS AND BE MANUFACTURED BY ECONOLITE. THE EQUIPMENT PROVIDED AS PART OF THIS CONTRACT SHALL BE THE LATEST MODEL, CURRENTLY UNDER PRODUCTION AND NEW. THE CONTROLLER CABINET AND ACCESSORIES SHALL MEET THE NEMA TS-2, 1992 STANDARD FOR ACTUATED CONTROLLER UNITS. THE CATALOG NUMBER FOR THE GROUND MOUNTED P CABINET SHALL BE EL 720 SIZE 7 (SIZE R) WITH A MINIMUM OF THREE SHELVES. THE CABINET SHALL BE ALUMINUM WITH THE NATURAL ALUMINUM FINISH INSIDE AND OUTSIDE. THE LOAD BAY SHALL BE THE TF5016 OR NEWER, WITH 16 LOAD SWITCH POSITIONS.PROVIDE ONLY THE EXACT NUMBER OF LOAD SWITCHES REQUIRED. EACH LOAD SWITCH SHALL HAVE LIGHT EMITTING DIODES (LEDS) FOR THE CONTROLLER OUTPUT AND LOAD SWITCH OUTPUT. ALSO PROVIDE 8 FLASH RELAY POSITIONS (BUT ONLY SUPPLY THE EXACT NUMBER OF RELAYS NEEDED FOR EACH SPECIFIC INTERSECTION), 1 NEMA 2-CIRCUIT FLASHER, AND AN MMU MONITOR. EACH CABINET SHALL COME EQUIPPED WITH TWO 16-CHANNEL CABINET DETECTOR RACKS (CDR) INCLUDING BUS INTERFACE UNITS (BIU). THE LOOP DETECTOR TERMINATION PANEL FOR THE SECOND DETECTOR RACK SHALL BE OMITTED. WHERE LOOP DETECTORS ARE SPECIFIED, THE CABINET SHALL INCLUDE THE EXACT NUMBER OF FOUR CHANNEL DETECTOR CARDS WITH SOFTWARE REQUIRED FOR EACH INTERSECTION. THE CABINET SHALL BE EQUIPPED WITH A CABINET POWER SUPPLY (CPS). THE CABINET SHALL BE WIRED TO ALLOW THE USE OF EVP CONFIRMATION LIGHTS. THE POLICE PANEL ON THE OUTSIDE OF THE CABINET DOOR SHALL HAVE A FLASH SWITCH, A SWITCH FOR AUTOMATIC/MANUAL OPERATION, SIGNAL ON/OFF SWITCH AND A MANUAL PUSHBUTTON WITH A MINIMUM CORD LENGTH OF 10 FEET. THE TECHNICIAN PANEL ON THE INSIDE OF THE CABINET DOOR SHALL INCLUDE A FLASH SWITCH, A STOP TIME SWITCH, AND AN EQUIPMENT ON/OFF SWITCH. A CABINET DOOR OPEN SWITCH AND A CABINET LIGHT ON / OFF SWITCH SHALL ALSO BE SUPPLIED.

- THE CONTROLLER CABINET SHALL ALSO INCLUDE:
- A. SLIDE-OUT LAPTOP SHELF
 - B. INTERIOR, UNDERSHELF LED CABINET LIGHTING, INCLUDING A MINIMUM OF 2 PANELS OF 6 HIGH-INTENSITY LED’S EACH AND A DOOR-ACTIVATED SWITCH. THE LED PANELS SHALL BE MOUNTED IN LOCATIONS TO MAXIMIZE LIGHT ON THE CABINET EQUIPMENT.
 - C. A GOOSENECK/ADJUSTABLE LIGHT FIXTURE WITH AN LED LAMP. THE ADJUSTABLE LIGHT FIXTURE SHALL BE MOUNTED ON THE LOWER RIGHT SIDE OF THE CONTROLLER CABINET.
 - D. A MINIMUM OF TWO (2) GFCI PROTECTED RECEPTACLES
 - E. A MINIMUM OF SIX (6) SURGE PROTECTED (NON-GFCI)RECEPTACLES

CONTROLLER CABINET LABELING TO IDENTIFY THE WIRING AND FUNCTION
DETECTOR LEAD-IN CABLE:
PHASE NUMBER SERVICE, DIRECTION, MOVEMENT TYPE, AND LOOP PLAN NUMBER.

SIGNAL HEAD FIELD WIRING:
PHASE NUMBER, DIRECTION, MOVEMENT TYPE, AND COLOR (RED, YELLOW, GREEN, YELLOW ARROW, GREEN ARROW) OR PEDESTRIAN MOVEMENT.

THE CONTROLLER TIMER SHALL BE THE ECONOLITE COBALT (OR MOST CURRENT MODEL) NEMA TS-2 TYPE 2 AND COME EQUIPPED WITH ALL INTERNAL COMPONENTS TO MAKE IT FULLY SYSTEM READY FOR THE CENTRAC (OR LATEST) SYSTEM, INCLUDING THE INTERNAL MODEM. EACH CONTROLLER TIMER SHALL HAVE 6 MODES OF COORDINATION, ADAPTIVE TRAFFIC CONTROL, REPORTS, PREEMPTION / PRIORITY, DIAGNOSTICS AND INTERNAL TIME BASE CONTROL.
THE MALFUNCTION MANAGEMENT UNIT SHALL BE MANUFACTURED BY EDI AND HAVE A RJ-45 PORT FOR PC/NETWORK COMMUNICATIONS.

EACH CONDUIT ENTRANCE TO THE CABINET SHALL BE SEALED WITH A RUBBER PIPE/CONDUIT SEAL GASKET. THE SEAL SHALL BE OF A MATERIAL AND TYPE TIGHTLY FITTING AND ABLE TO SEAL OUT WATER, INSECTS, RODENTS, AND DIRT. THE SEAL SHALL BE EASILY REMOVED FOR SERVICE INSTALLATIONS OR CABLE REPLACEMENTS.

THE CONTRACTOR SHALL PROVIDE THE CABINET WIRING DIAGRAM/PLANS IN .PDF FORMAT TO ODOT DISTRICT 6 TRAFFIC.

PAYMENT FOR ITEM 633 – CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS2, AS PER PLAN, WILL BE AT THE CONTRACT BID PRICE COMPLETE AND IN PLACE AND CONNECTIONS TESTED AND ACCEPTED.

ITEM 632 – PEDESTRIAN PUSHBUTTON, AS PER PLAN
IN ADDITION TO THE REQUIREMENTS OF 632.09 AND 732.06, THE PUSHBUTTONS SHALL INCLUDE A CONFIRMATION TONE WHEN PRESSED.

TRAFFIC SIGNAL GENERAL NOTES

STATE ROUTE 317
SHOOK ROAD - PHASE II

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ITEM 632 – PEDESTRIAN SIGNAL HEAD (LED), (COUNTDOWN), TYPE D2, AS PER PLAN
IN ADDITION TO THE REQUIREMENTS OF CMS 632 AND 732 THE FOLLOWING SHALL APPLY:

- 1. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF BLACK POLYCARBONATE PLASTIC AND MEET ITE SPECIFICATIONS.
- 2. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.
- 3. PIPE, SPACERS AND FITTINGS CONSTRUCTED OF POLYCARBONATE PLASTIC MAY BE USED IN LIEU OF GALVANIZED STEEL OR ALUMINUM.
- 4. THE PEDESTRIAN SIGNAL HEAD SHALL BE OF THE LED COUNTDOWN TYPE.
- 5. NEW ATTACHMENT HARDWARE AND FITTINGS SHALL USED.
- 6. THE LIGHT EMITTING DIODE (LED) SIGNAL LAMP UNITS SHALL MEET THE REQUIREMENTS OF C&MS 732.04–C. THE CONTRACTOR SHALL PROVIDE ODOT, IN WRITING, WITH THE LED MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF LAMP, AND DATE OF MANUFACTURE FOR ALL LED UNITS THAT ARE TO BE USED IN THE SIGNAL HEAD PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES.

PAYMENT FOR ITEM 632 PEDESTRIAN SIGNAL HEAD (LED), (COUNTDOWN), TYPE D2, AS PER PLAN SHALL BE MADE FOR THE NUMBER OF COMPLETE SIGNAL HEAD FURNISHED AND INSTALLED, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS AND NEW ATTACHMENT HARDWARE.

GROUNDING AND BONDING

THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS) AND THE TC SERIES OF STANDARD CONSTRUCTION DRAWINGS ARE MODIFIED AS FOLLOWS:

- 1. ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM AN EFFECTIVE GROUND FAULT CURRENT PATH BACK TO THE GROUNDED CONDUCTOR IN THE POWER SERVICE DISCONNECT SWITCH.
- a. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.
- b. WHEN AN EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED IN PLASTIC CONDUIT (725.05), THE INSTALLATION SHALL INCLUDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN ADDITION TO THE CONDUCTORS SPECIFIED.
- c. METALLIC CONDUIT CARRYING THE LOOP WIRES FROM IN THE PAVEMENT TO THE PULL BOX SPLICE LOCATION WILL ONLY BE BONDED AT THE PULL BOX END, AND WILL NOT CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR.
- d. IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.
- e. IF AN EQUIPMENT GROUNDING CONDUCTOR IS NEEDED IN CONDUIT BETWEEN SIGNALIZED INTERSECTIONS FOR UNDERGROUND INTERCONNECT CABLE, THE GROUNDING SYSTEM FOR EACH SIGNALIZED INTERSECTION WILL BE SEPARATED ABOUT MIDWAY BETWEEN THE INTERSECTIONS.
- f. THE MESSENGER WIRE AT SIGNALIZED INTERSECTIONS WILL BE USED AS THE CONDUCTIVE PATH FROM CORNER TO CORNER IF CONDUIT IS NOT PROVIDED UNDER THE ROADWAY. WHEN CONDUIT CONNECTS THE CORNERS OF AN INTERSECTION, AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE USED IN THE CONDUIT.

2. CONDUITS.

- a. THE 725.04 CONDUIT SHALL HAVE GROUNDING BUSHINGS INSTALLED AT ALL TERMINATION POINTS. THE BUSHING MATERIAL SHALL BE COMPATIBLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE FOR USE WITH COPPER WIRE. THREADED OR COMPRESSION TYPE BUSHINGS MAY BE USED.
- b. THE 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.
- c. BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
- d. METALLIC CONDUIT MAY BE BONDED TO METALLIC BOXES THROUGH THE USE OF CONDUIT FITTINGS UL APPROVED FOR THIS TYPE OF CONNECTION, WITH THE BOX BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

3. WIRE FOR GROUNDING AND BONDING.

- a. USE INSULATED, COPPER WIRE FOR THE EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS IN BOXES AND ENCLOSURES MAY BE BARE OR INSULATED COPPER WIRE. WIRE SIZE SHALL BE AS FOLLOWS:
 - i. USE 4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER OR FLASHER CABINETS.
 - ii. USE A MINIMUM 8 AWG BETWEEN LOOP DETECTOR PULL BOXES AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.
 - iii. USE A MINIMUM 8 AWG BETWEEN THE “PREPARE TO STOP WHEN FLASHING” INSTALLATION (INCLUDING SUPPORT) AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.
 - iv. THE INSULATION SHALL BE GREEN OR GREEN WITH YELLOW STRIPE(S). FOR 4 AWG OR LARGER, INSULATION MAY ALSO BE BLACK WITH GREEN TAPE/LABELS INSTALLED AT ALL ACCESS POINTS.
- b. IN A HIGHWAY LIGHTING SYSTEM, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE THE SAME WIRE SIZE AS THE DUCT CABLE OR DISTRIBUTION CABLE CIRCUIT CONDUCTORS, WITH THE MINIMUM CONDUCTOR SIZE OF 4 AWG. BONDING JUMPERS WILL BE MINIMUM SIZE 4 AWG.

4. GROUND ROD.

- a. A 3/4 INCH SCHEDULE 40 PVC CONDUIT WILL BE USED IN FOUNDATIONS AND CONCRETE WALLS FOR THE GROUNDING CONDUCTOR (GROUND WIRE) RACEWAY TO THE GROUND ROD. SHOULD METALLIC CONDUIT BE USED, BOTH ENDS OF THE CONDUIT SHALL BE BONDED TO THE GROUNDING CONDUCTOR.
- b. THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE 4 AWG INSULATED, COPPER.
- 5. THE GREEN CONDUCTOR IN SIGNAL CABLES (CONDUCTOR #4) SHALL NOT BE USED TO SUPPLY POWER TO A SIGNAL INDICATION. IT WILL BE CONNECTED TO THE SIGNAL BODY AS AN EQUIPMENT GROUND IN ALUMINUM HEADS AND IT WILL BE UNUSED IN PLASTIC HEADS. UNUSED CONDUCTORS SHALL BE GROUNDED IN THE CABINET. TYPICAL USE OF CONDUCTORS IS AS FOLLOWS:

COND. NO	COLOR	VEHICLE SIGNAL	PEDESTRIAN SIGNAL
1	BLACK	GREEN BALL	#1 WALK
2	WHITE	AC NEUTRAL	AC NEUTRAL
3	RED	RED BALL	#1 DW/FDW
4	GREEN	EQUIPMENT GROUND	EQUIPMENT GROUND
5	ORANGE	YELLOW BALL	#2 DW/FDW
6	BLUE	GREEN ARROW	#2 WALK
7	WHITE/BLACK STRIPE	YELLOW ARROW	NOT USED

6. POWER SERVICE AND DISCONNECT SWITCH.

- a. AT THE POWER SERVICE LOCATION, THE GROUNDING CONDUCTOR (GROUND WIRE) FROM THE DISCONNECT SWITCH NEUTRAL (AC–) BAR TO THE GROUND ROD SHALL BE A CONTINUOUS, UNSPLICED CONDUCTOR. IF SPLICED, IT SHALL BE AN EXOTHERMIC WELD BUTT SPLICE.
- b. THE SERVICE NEUTRAL (AC–) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH.
- i. NEMA CONTROLLER CABINETS: IF A POWER SERVICE DISCONNECT SWITCH IS LOCATED BEFORE THE CONTROLLER CABINET, THE NEUTRAL (AC–) AND THE GROUNDING BARS IN THE CONTROLLER CABINET SHALL NOT BE CONNECTED TOGETHER AS SHOWN IN NEMA TS–2, FIGURE 5–4.
- ii. IF SECONDARY DISCONNECT SWITCHES ARE CONNECTED AFTER THE PRIMARY DISCONNECT SWITCH, THE NEUTRAL (AC–) SHALL ONLY BE GROUNDED AT THE PRIMARY SWITCH. EQUIPMENT GROUNDING CONDUCTORS SHALL BE BROUGHT TO THE PRIMARY SWITCH, BUT SHALL BE GROUNDED AT BOTH SECONDARY AND PRIMARY SWITCHES.
- 7. PAYMENT – ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED BY CONTRACT.

UNDERDRAINS FOR PULLBOXES

REFERENCE TRAFFIC SCD HL–30.11 FOR DETAILS ABOUT DRAINING PULLBOXES. UNDERDRAINS FOR PULLBOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED 20 FEET. THE FOLLOWING ESTIMATED QUANTITY IS CARRIED TO THE GENERAL SUMMARY FOR THIS PURPOSE:

ITEM 611, 4” CONDUIT, TYPE E 30 FT.

ITEM 633 – UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 633 AND 733, A CABINET RISER (8 INCH MINIMUM) AND ANCHOR BOLTS SHALL BE PROVIDED WITH THE BASE MOUNTED CABINET. BEFORE PERFORMING THE WORK, THE CONTRACTOR, THE DISTRICT TRAFFIC ENGINEER AND THE PROJECT ENGINEER WILL PERFORM A SITE INSPECTION TO ESTABLISH THE LOCATION OF THE UPS CABINET AND FOUNDATION.

THE UPS CABINET SHALL INCLUDE A GENERATOR POWER PANEL WITH A HEAVY DUTY POWER RELAY VERSUS THE LINE VOLTAGE GENERATOR SWITCH. THE GENERATOR INLET SHALL BE A RECESSED PANEL WITH A DOOR THAT IS FLUSH WITH THE EXTERNAL SIDE OF THE UPS CABINET. IT SHALL INCLUDE A RECESSED PLUG, AUTOMATIC TRANSFER SWITCH, A DOOR THAT SECURELY CLOSES OVER THE POWER CORD, AND AN LED LIGHT THAT INDICATES LINE POWER IS AVAILABLE.

THE UPS OUTPUT NOTIFICATIONS FOR ON BATTERY, BATTERY 2 HOUR TIMER, AND LOW BATTERY SHALL BE WIRED INTO THE TRAFFIC SIGNAL CABINET BACK PANEL TO PROVIDE SPECIAL STATUS ALARMS FOR EACH OUTPUT INTO THE SIGNAL CONTROLLER. SPECIAL STATUS ALARMS SHALL BE PROGRAMMED INTO THE CONTROLLER.

THIS ITEM SHALL INCLUDE A RED LED STATUS INDICATOR LAMP TO ALLOW MAINTENANCE PERSONNEL AND LAW ENFORCEMENT TO QUICKLY ASSESS WHETHER A TRAFFIC SIGNAL CABINET IS BEING POWERED BY A UPS. THE LED HOUSING SHALL BE NEMA 4X, IP65 OR IR66, RATED FOR OUTDOOR USE AND BE TAMPER/ SHATTER RESISTANT.IT SHALL BE A DOMED ENCLOSURE CONTAINING A RED LENS WITH LED THAT IS VISIBLE FROM 100 FEET MINIMUM. THE ENCLOSURE AND LED LAMP UNIT SHALL BE PLACED ON THE STREET–SIDE OF THE CABINET OR CENTERED ON THE TOP SURFACE OF THE UPS CABINET AND SEALED FROM WATER INTRUSION. IT SHOULD BE WIRED USING MINIMUM 20GA STRANDED, INSULATED HOOKUP WIRE TO THE STATUS RELAY OUTPUTS OF THE UPS.THE WIRES SHALL BE TERMINATED BY LUGS AT THE DISPLAY END AND PERMANENTLY LABELED “BACKUP POWER STATUS DISPLAY,” WITH WIRE POLARITY INDICATED. THE RED LED SHALL ONLY ILLUMINATE TO INDICATE THE CABINET IS OPERATING UNDER UPS BACKUP POWER (THE “BACKUP” OPERATING CONDITION). THIS ITEM ALSO INCLUDES PROGRAMMING THE UPS STATUS RELAY OUTPUTS TO PRODUCE THE LAMP STATUS DISPLAYS. THESE STATUS DISPLAYS WILL BE SOLID 100% DUTY CYCLE (NOT FLASHING) DISPLAYS. THE OPERATING VOLTAGE OF THE LED LAMP SHALL BE 120V AC UNLESS OTHERWISE INDICATED.

A BATTERY BALANCER SHALL BE FURNISHED AND INSTALLED WITH THE SYSTEM.

ITEM 632 – SIGNAL SUPPORT FOUNDATION

PRIOR TO ORDERING THE SIGNAL SUPPORTS, THE CONTRACTOR SHALL CONTACT OUPS TO HAVE ALL THE UTILITIES LOCATED IN THE FIELD THEN MEET WITH THE PROJECT ENGINEER TO LOCATE THE PROPOSED SUPPORT LOCATIONS TO INSURE THERE ARE NO CONFLICTS WITH UTILITIES. IF THERE ARE ISSUES, THE PROJECT ENGINEER SHALL PROVIDE GUIDANCE AS TO THE RELOCATION OF THE SUPPORT POLES.

PAYMENT WILL BE AT THE CONTRACT UNIT PRICE AND WILL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND OTHER INCIDENTALS NECESSARY FOR EACH SUPPORT FURNISHED, IN PLACE, COMPLETE AND ACCEPTED.

MCDANIEL, ARRON U:\173608915\Transportation\design\plan_ssa\Signal\173608915sig04.dwg TRAFFIC SIGNAL GENERAL NOTES Last Saved: Dec 04, 2018 11:40 AM Plotted: Jan 18, 2019 3:27 PM

ITEM 809 – ADVANCE RADAR DETECTION

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING A WAVETRONIX SMARTSENSOR ADVANCE DETECTION UNIT (MODEL SS–200E). THE DETECTION UNIT SHALL INCLUDE THE FOLLOWING:

1. POWER SHALL BE PROVIDED FROM THE TRAFFIC CABINET.
2. ALL REQUIRED INPUTS CARDS SHALL BE INCLUDED IN THE TRAFFIC CABINET AND SHALL BE COMPATIBLE WITH CALTRANS, NEMA TS1 AND NEMA TS2 DETECTOR RACKS. THE CARDS SHALL PROVIDE TRUE PRESENCE DETECTOR CALLS OR CONTACT CLOSURE TO THE TRAFFIC CONTROLLER.
3. THE UNIT SHALL BE MOUNTED DIRECTLY TO A POLE OR MAST ARM, AS RECOMMENDED BY THE MANUFACTURER. CABLE(S) SHALL BE PROVIDED AS REQUIRED AND RECOMMENDED BY THE MANUFACTURER.
4. SURGE PROTECTION DEVICES, AS RECOMMENDED BY THE MANUFACTURER SHALL BE INCLUDED BOTH AT THE POLE WHERE THE UNIT IS LOCATED TO PROTECT THE UNIT AND IN THE TRAFFIC CABINET TO PROTECT THE CABINET ELECTRONICS.
5. THE MANUFACTURER’S REPRESENTATIVE SHALL BE ON SITE DURING INSTALLATION AND TESTING AND SHALL PROVIDE ONSITE TRAINING ON THE SETUP, OPERATION AND MAINTENANCE OF THE UNIT.
6. A SERIAL TO ETHERNET COMMUNICATIONS MODULE AND ETHERNET CABLE (MIN. 7 FEET)
7. THE POWER SUPPLY AND COMMUNICATION MODULES SHALL BE SECURED TO A SINGLE PANEL THAT CAN BE MOUNTED INTERIOR TO THE TRAFFIC CABINET. THE PANEL SHALL INCLUDE MODULAR–PLUG STYLE CONNECTIONS FOR A UP TO FOUR (4) SENSOR CABLES. ADDITIONAL SENSORS MAY BE HARD–WIRED TO THE COMMUNICATION MODULES, AS NECESSARY.

PAYMENT FOR ITEM 809 ADVANCE RADAR DETECTION SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH UNIT, COMPLETE AND IN PLACE INCLUDING ALL REQUIRED CABINET HARDWARE, MOUNTING BRACKETS, CABLES, CONDUIT, CONNECTIONS TESTED AND ACCEPTED, AND ANY OTHER NECESSARY HARDWARE TO ESTABLISH A FULLY FUNCTIONAL DETECTION SYSTEM.

ITEM 809 STOP–BAR RADAR DETECTION

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING A WAVETRONIX SMARTSENSOR MATRIX DETECTION UNIT. THE DETECTION UNIT SHALL INCLUDE THE FOLLOWING:

1. POWER SHALL BE PROVIDED FROM THE TRAFFIC CABINET.
2. ALL REQUIRED INPUTS CARDS SHALL BE INCLUDED IN THE TRAFFIC CABINET AND SHALL BE COMPATIBLE WITH CALTRANS, NEMA TS1 AND NEMA TS2 DETECTOR RACKS. THE CARDS SHALL PROVIDE TRUE PRESENCE DETECTOR CALLS OR CONTACT CLOSURE TO THE TRAFFIC CONTROLLER.
3. THE UNIT SHALL BE MOUNTED DIRECTLY TO A POLE OR MAST ARM, AS RECOMMENDED BY THE MANUFACTURER. CABLE(S) SHALL BE PROVIDED AS REQUIRED AND RECOMMENDED BY THE MANUFACTURER.
4. SURGE PROTECTION DEVICES, AS RECOMMENDED BY THE MANUFACTURER SHALL BE INCLUDED BOTH AT THE POLE WHERE THE UNIT IS LOCATED TO PROTECT THE UNIT AND IN THE TRAFFIC CABINET TO PROTECT THE CABINET ELECTRONICS.
5. THE MANUFACTURER’S REPRESENTATIVE SHALL BE ON SITE DURING INSTALLATION AND TESTING AND SHALL PROVIDE ONSITE TRAINING ON THE SETUP, OPERATION AND MAINTENANCE OF THE UNIT.
6. A SERIAL TO ETHERNET COMMUNICATIONS MODULE AND ETHERNET CABLE (MIN. 7 FEET)
7. THE POWER SUPPLY AND COMMUNICATION MODULES SHALL BE SECURED TO A SINGLE PANEL THAT CAN BE MOUNTED INTERIOR TO THE TRAFFIC CABINET. THE PANEL SHALL INCLUDE MODULAR–PLUG STYLE CONNECTIONS FOR A UP TO FOUR (4) SENSOR CABLES. ADDITIONAL SENSORS MAY BE HARD–WIRED TO THE COMMUNICATION MODULES, AS NECESSARY.

PAYMENT FOR ITEM 809 STOP–BAR RADAR DETECTION SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH UNIT, COMPLETE AND IN PLACE INCLUDING ALL REQUIRED CABINET HARDWARE, MOUNTING BRACKETS, CABLES, CONDUIT AND CONNECTIONS TESTED AND ACCEPTED.

MAINTENANCE OF TRAFFIC SIGNAL INSTALLATION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CIRCUMSTANCES:

1. EXISTING SIGNAL INSTALLATION WHICH THE PLANS REQUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO OR REMOVE OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MODIFIES, OR OTHERWISE DISTURBS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION (AT AN INTERSECTION) FROM THE TIME THE CONTRACTOR’S OPERATIONS FIRST DISTURB THE INSTALLATION UNTIL THE INSTALLATION HAS BEEN SUBSEQUENTLY REMOVED OR MODIFIED AND THE WORK IS ACCEPTED.
2. NEW SIGNAL INSTALLATION OR DEVICE, INSTALLED BY THE CONTRACTOR: THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THIS FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS AND PROVIDE THE MAINTAINING AGENCY AND THE ENGINEER SUCH WITH THE NAME(S) AND PHONE NUMBER(S) OF THE CONTRACTORS REPRESENTATIVE(S) TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MUST GIVE PROMPT ATTENTION TO THESE CALLS AND BE READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN FOUR HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF AN OUTAGE.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE, ALL DAMAGED EQUIPMENT EXCEPT POLES AND CONTROL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER WITH THE NEW SIGNAL BACK IN SERVICE WITHIN 8 HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

THE CONTRACTOR SHALL ARRANGE FOR FULL TRAFFIC CONTROL UNTIL THE SIGNAL IS BACK IN OPERATION.

IF POLES AND/OR CONTROLLERS ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO OPERATION WITHIN THE ALLOWED 8 HOUR TIME PERIOD, AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON THEREAFTER AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCAITON. THAT IS, WHERE MORE THAN ONE OUTAGE OCCURS AT ANY ONE LOCATION THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE.

WHERE OUTAGES ARE THE DIRECT RESULT OF A VEHICLE ACCIDENT THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE.

WHERE THE CONTRACTOR HAS FAILED OR CANNOT RESPOND TO AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, AT THESE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIODS AS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15 AND ANY SUBSEQUENT BILLINGS TO THE COSTS FOR POLICE SERVICES AND MAINTENANCE SERVICES BY THE PROVIDING AGENCY FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15.

ANY VEHICULAR TRAFFIC SIGNAL HEAD EITHER NEW OR EXISTING THAT WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN 632.25.

THE CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF MALFUNCTIONS INCLUDING:

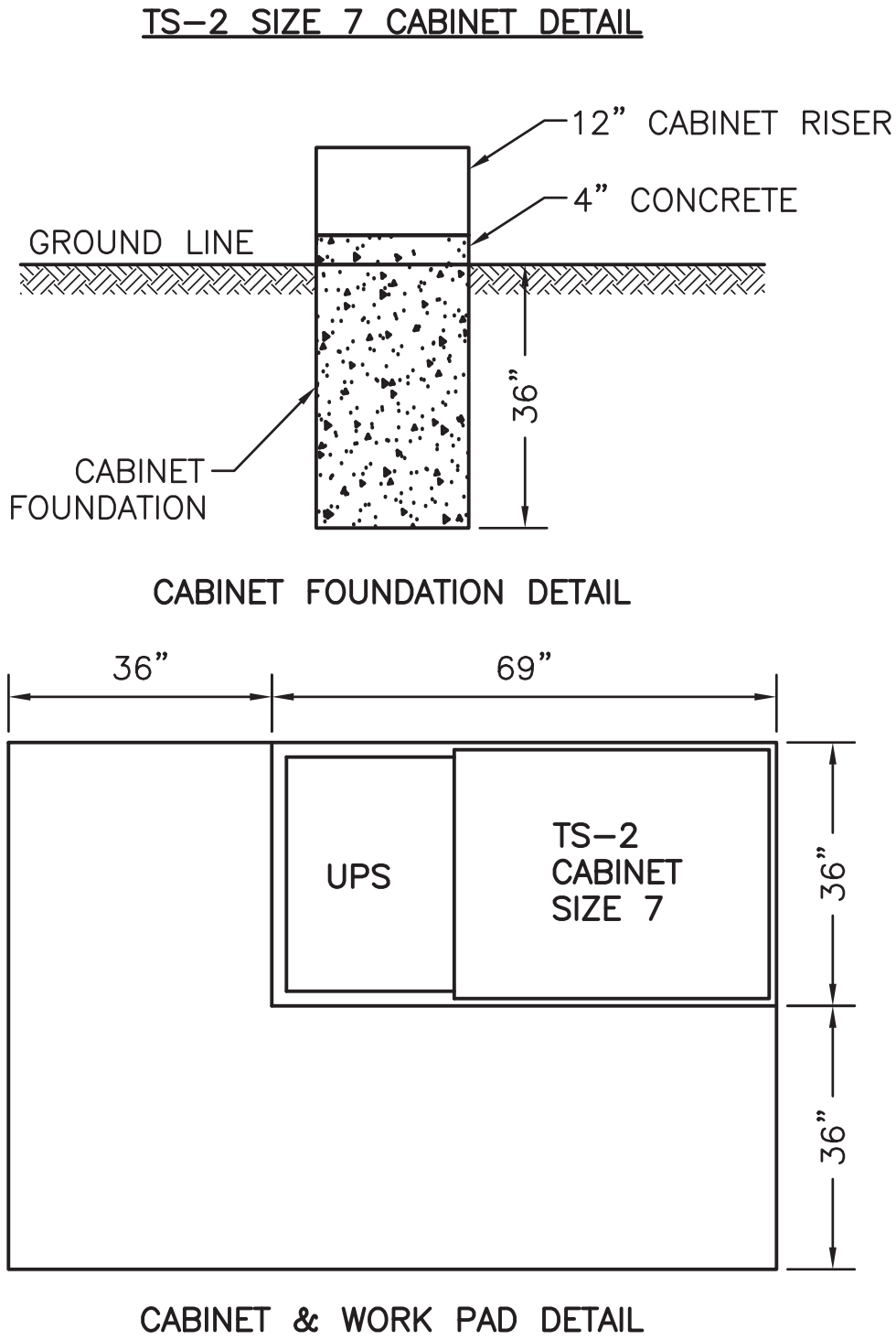
1. TIME OF NOTIFICATION OF MALFUNCTION;
2. TIME OF WORK CREWS ARRIVAL TO CORRECT THE MALFUNCTION;
3. ACTIONS TAKEN TO CORRECT THE MALFUNCTION, INCLUDING A LIST OF PARTS REPAIRED AND REPLACED;
4. A DIAGNOSIS OR REASON FOR THE MALFUNCTION AND PROBABILITY OF REOCCURRENCE;
5. TIME OF COMPLETION OF THE REPAIR AND SYSTEM RESTORED TO FULL SERVICE.

A COPY OF THESE RECORDS SHALL BE PROVIDED TO THE ENGINEER WITHIN THREE (3) WORKING DAYS FOLLOWING COMPLETION OF EACH REPAIR.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

ITEM 632 – SIGNALIZATION, MISC.: RE–USE OF ETHERNET COMMUNICATION, AS PER PLAN CONTRACTOR SHALL CAREFULLY REMOVE THE EXISTING UBIQUITY RADIO, AND REINSTALL ON SIGNAL POLE (SP–2).

PAYMENT FOR ITEM 632 SIGNALIZATION, MISC.: RE–USE ETHERNET COMMUNICATION, AS PER PLAN SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR LUMP SUM, COMPLETE AND IN PLACE INCLUDING ALL REQUIRED HARDWARE, MOUNTING BRACKETS, ETHERNET CABLE AND ANY OTHER NECESSARY HARDWARE TO ESTABLISH A FULLY FUNCTIONAL COMMUNICATION SYSTEM.



- NOTES:
1. THE SIZE OF THE UPS FOUNDATION MAY VARY BASED ON THE CABINET SIZE PROVIDED.
 2. UPS FOUNDATION ELEVATION SHOULD MATCH CABINET FOUNDATION ELEVATION
 3. THE UPS CABINET SHALL BE MOUNTED FLUSH UP AGAINST THE SIGNAL CABINET AND SEALED.
 4. CONDUIT AND WIRING FROM THE SIGNAL CABINET TO THE UPS SHALL BE INSTALLED THROUGH THE CABINET RISER.

\\CDANIEL-ARCON-01\173608915\Transportation\design\plan_set\Signal\173608915.sgp01.dwg TRAFFIC SIGNAL SUBSUMMARY Last Saved: Jan 12, 2019 1:15 PM Plotted: Jan 18, 2019 3:27 PM

ITEM	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHT. NO.
625	61	FT.	CONDUIT, 2" 725.04	
625	18	FT.	CONDUIT, 3" 725.04	
625	18	FT.	CONDUIT, 4" 725.04	
625	79	FT.	TRENCH	
625	1	EACH	PULL BOX, 725.08, 24"	
625	7	EACH	GROUND ROD	
632	408	FT.	TETHER WIRE, WITH ACCESSORIES	
632	408	FT.	MESSANGER WIRE, 7 STRAND, 3/8" DIAMETER WITH ACCESSORIES	
632	7	EACH	VEHICULAR SIGNAL HEAD, (LED), BLACK, 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, WITH BACKPLATE, AS PER PLAN	53
632	3	EACH	VEHICULAR SIGNAL HEAD, (LED), BLACK, 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, WITH BACKPLATE, AS PER PLAN	53
632	8	EACH	PEDESTRIAN SIGNAL HEAD (LED), COUNTDOWN, TYPE D2, AS PER PLAN	54
632	10	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
632	4	EACH	PEDESTRIAN PUSHBUTTON, AS PER PLAN	53
632	806	FT.	LOOP DETECTOR LEAD-IN CABLE, 2 CONDUCTOR, NO. 14 AWG	
632	2394	FT.	SIGNAL CABLE, 7 CONDUTOR, NO. 14 AWG	
632	4	EACH	SIGNAL SUPPORT FOUNDATION	
632	2	EACH	PEDESTAL FOUNDATION	
632	85	FT.	POWER CABLE, 1 CONDUCTOR, NO. 6 AWG	
632	75	FT.	SERVICE CABLE, 1 CONDUCTOR, NO. 6 AWG	
632	1	EACH	POWER SERVICE	
632	4	EACH	STRAIN POLE, TYPE TC-81.10, DESIGN 12	
632	2	EACH	PEDESTAL, 8', TRANSFORMER BASE	
632	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION	
632	1	LUMP	SIGNALIZATION, MISC.: RE-USE OF ETHERNET COMMUNICATION, AS PER PLAN	55
633	1	EACH	CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS2, AS PER PLAN	53
633	1	EACH	CABINET FOUNDATION	
633	1	EACH	CONTROLLER WORK PAD	
633	1	EACH	UNITERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN	54
809	2	EACH	ADVANCE RADAR DETECTION	
809	4	EACH	STOP BAR DETECTION	

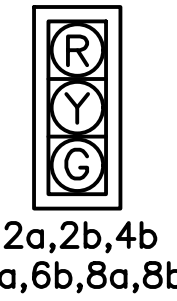
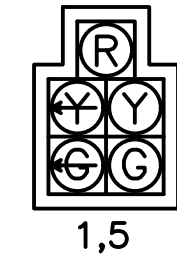
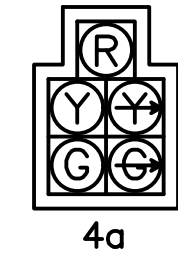
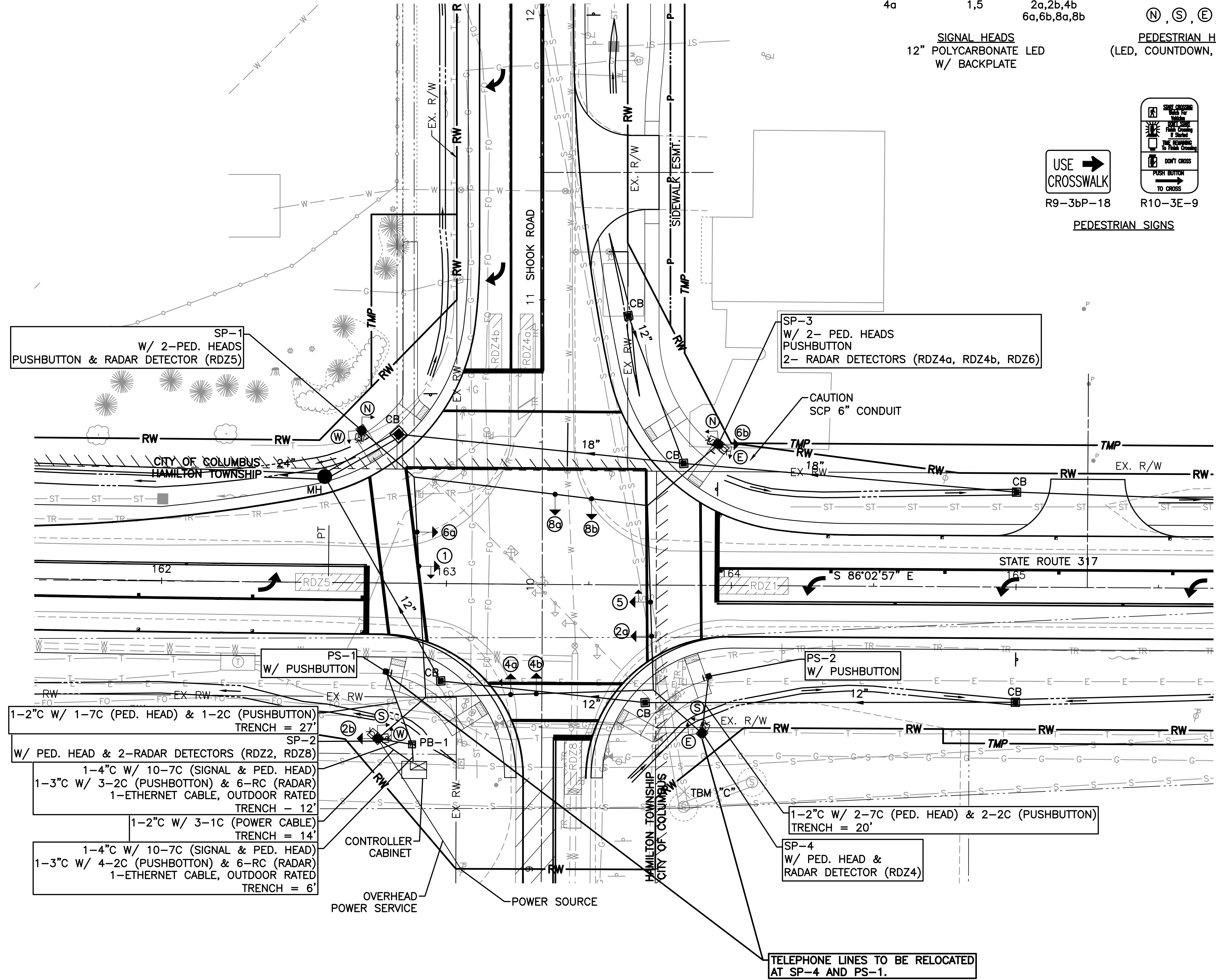
QUANTITIES CARRIED TO GENERAL SUMMARY

K:\LANGTIS_KC_U\173608915\transportation\design\plan_set\Sigmal\173608915sig01.dwg SIGNAL PLAN Last Saved: Jan 12, 2019 1:30 PM Plotted: May 21, 2021 10:00 AM

LEGEND

TRAFFIC SIGNAL, 3 UNIT HEAD, 12"	PROP	EXIST
TRAFFIC SIGNAL, 5 UNIT HEAD, 12"		
SIGNAL SUPPORT POLE		
PEDESTRIAN SIGNAL		
PEDESTRIAN PUSH BUTTON		
PEDESTAL SUPPORT		
CONTROLLER CABINET AND WORK PAD (TS2/A2)		
TRAFFIC CONTROL BOX		
DETECTOR LOOP		
STOP BAR RADAR DETECTION UNIT		
DILEMMA ZONE RADAR DETECTION UNIT		

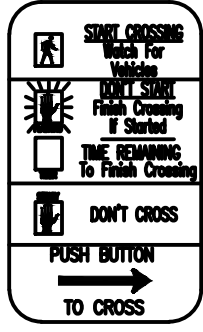
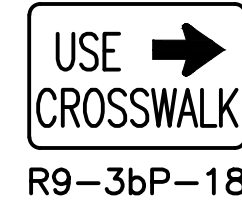
PULL BOX TABLE				
PB#	STATION	SIDE	OFFSET	SIZE
1	9+43.66	LT.	45.51'	24"



(N, S, E, W)

PEDESTRIAN HEADS
(LED, COUNTDOWN, TYPE D2)

SIGNAL HEADS
12" POLYCARBONATE LED
W/ BACKPLATE



R9-3bP-18

R10-3E-9

PEDESTRIAN SIGNS



CALCULATED
CNK
CHECKED
PJM

SIGNAL PLAN
SHOOK ROAD AT STATE ROUTE 317

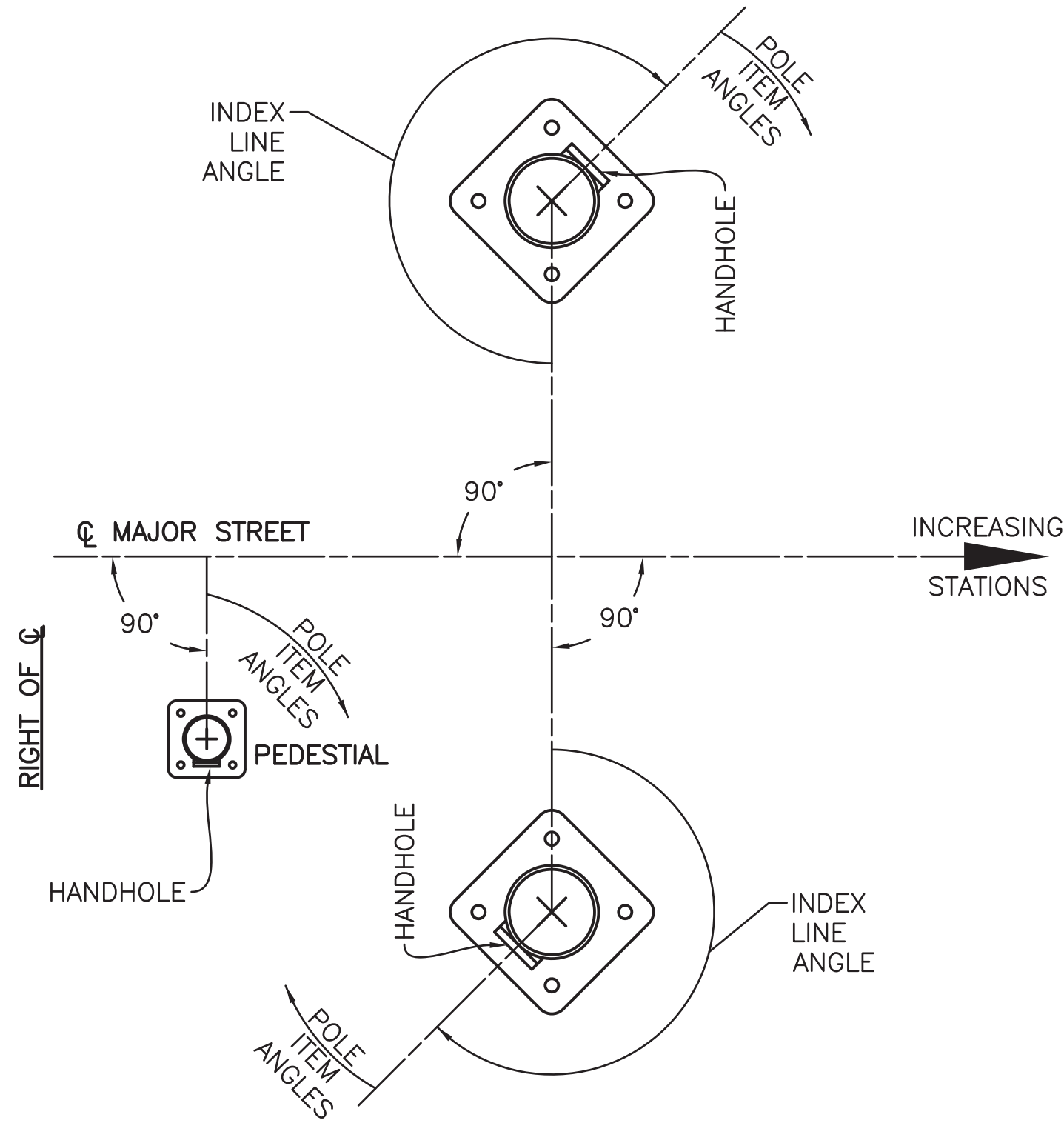
STATE ROUTE 317
SHOOK ROAD - PHASE II

57
71

\\173608915\transportation\design\plan_sas\Signal\173608915sp03.dwg SIGNAL PLAN DETAILS Last Saved: Jan 04, 2019 1:52 PM Plotted: Jan 18, 2019 3:27 PM
MCDANIEL, ARRON U:\173608915\transportation\design\plan_sas\Signal\173608915sp03.dwg SIGNAL PLAN DETAILS Last Saved: Jan 04, 2019 1:52 PM Plotted: Jan 18, 2019 3:27 PM

PLAN DETAILS FOR STRAIN POLES

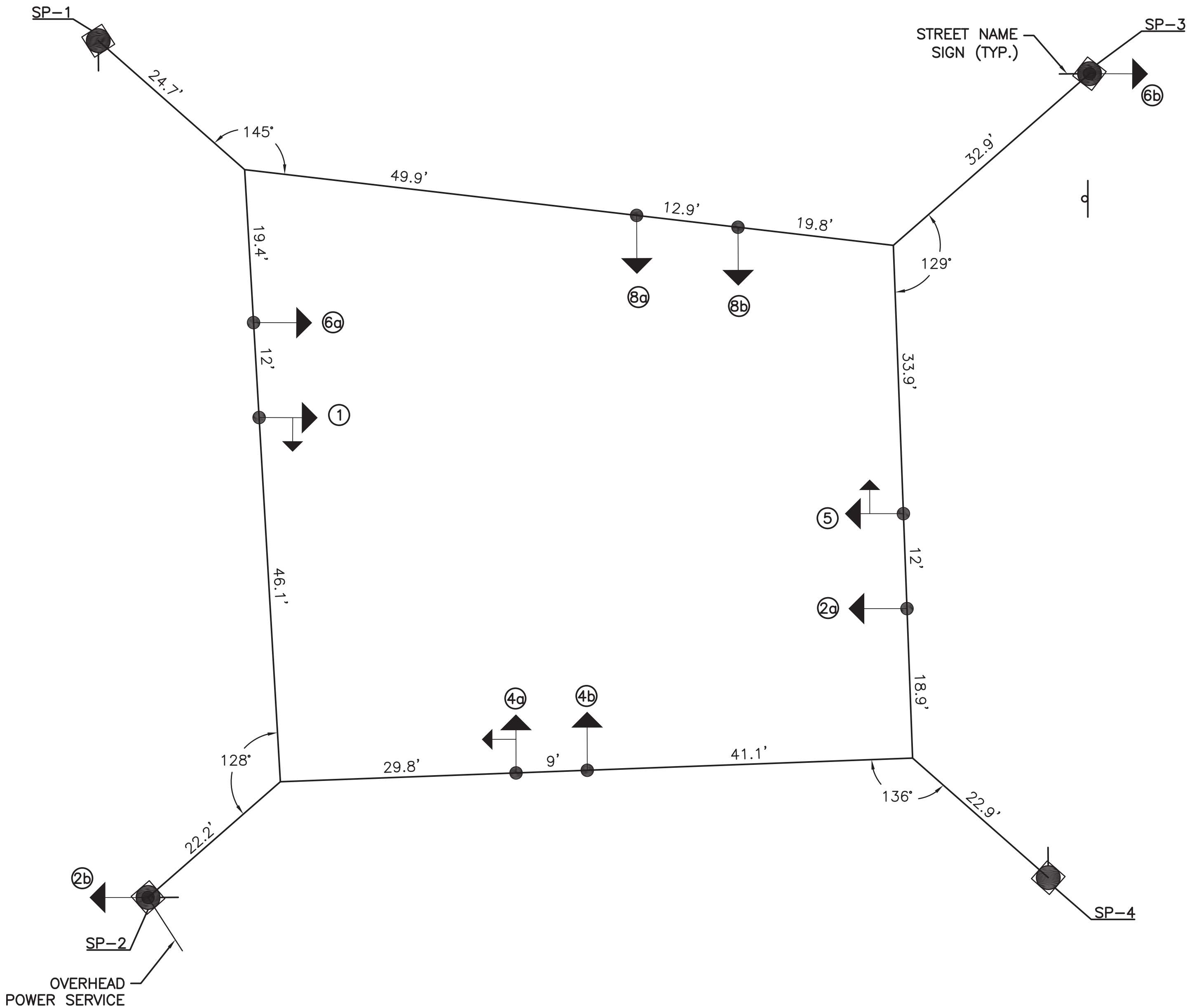
REFERENCE SHEET NO.	STATION & OFFSET	POLE NO.	DESIGN NO.	POLE HEIGHT (FT.)	FOUNDATION ELEV.	SPAN WIRE ATTACHED HEIGHT (FT.)	CABLE ENTRANCE DISTANCE FROM TOP (IN.)	INDEX LINE ANGLE (DEG.)	ANGLES (DEG.) FROM INDEX LINE			
									PEDESTRIAN SIGNALS	PEDESTRIAN PUSH BUTTONS	CABLE ENTRANCE	2" CAPPED
57	162+69.8, 53.6' LT.	SP-1	12	32	744.44	27.7	12	131	50 (N), 314 (W)	195	180	0
57	162+76.4, 54.7' RT.	SP-2	12	32	743.18	28.9	12	229	129		180	0
57	163+95.2, 49.6' LT.	SP-3	12	32	744.72	28.7	12	229	50 (E), 306 (N)	169	180	0
57	163+90.0, 52.0' RT.	SP-4	12	32	744.57	27.4	12	131	234		180	0
57	162+79.1, 31.1' RT.	PS-1		5	744.59			90	11	102		
57	163+92.3, 32.0' RT.	PS-2		5	745.02			90	348	251		



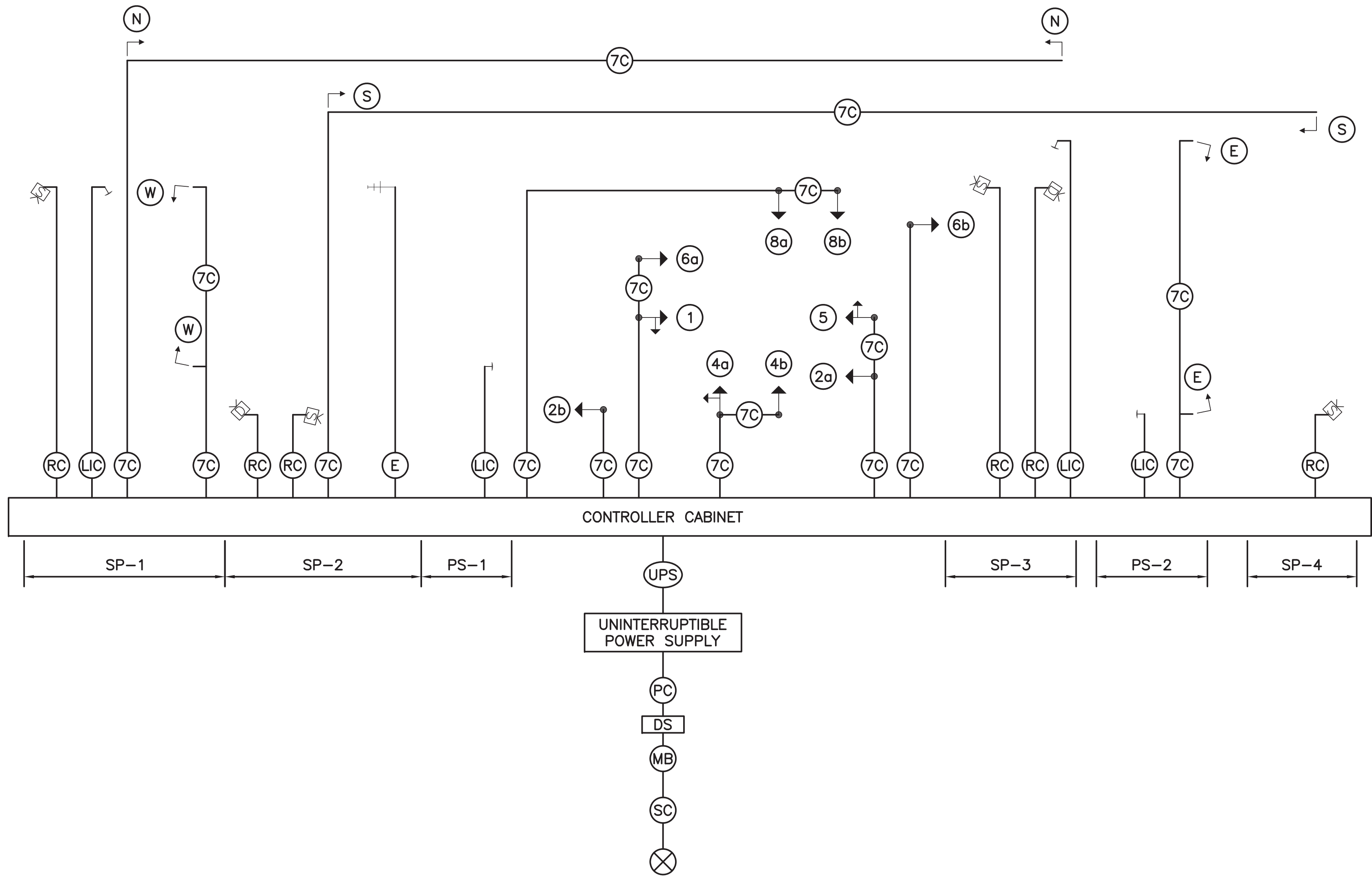
- NOTES:
- ALL ANGLES ARE MEASURED CLOCKWISE.
 - THE INDEX LINE GOES THROUGH THE CENTER OF THE HANDHOLE

POLE DIAGRAM

PLAN VIEW FOR SPANWIRE (BOX) DETAIL



\\CDANIEL-ARRON\U\173608915\Transportation\design\plan_sas\Signal\173608915sig02.dwg - SIGNAL PLAN DETAILS Last Saved: Dec 11, 2018 2:42 PM Plotted: Jan 18, 2019 3:27 PM


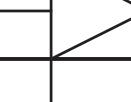



WIRING DIAGRAM

LEGEND

- | | | | | | |
|--|--|--|--|--|--|
| | 3 SECTION VEHICULAR SIGNAL HEAD, 1-WAY | | POWER CABLE, 1 CONDUCTOR, NO. 6 AWG | | EXISTING ETHERNET RADIO, TO BE RE-USED |
| | 5 SECTION VEHICULAR SIGNAL HEAD, 1-WAY | | UNINTERRUPTIBLE SUPPLY CABLE | | SERVICE CABLE, 1 CONDUCTOR, NO. 6 AWG |
| | PEDESTRIAN SIGNAL HEAD | | (LEAD-IN CABLE), 2 CONDUCTOR, NO. 14 AWG | | DISCONNECT SWITCH |
| | PEDESTRIAN PUSH BUTTON | | SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG | | |
| | DILEMMA ZONE RADAR DETECTION UNIT | | RADAR DETECTION CABLE | | |
| | STOP BAR RADAR DETECTION UNIT | | POWER SOURCE | | |
| | METER BASE | | PEDESTAL SUPPORT NUMBER | | |
| | SIGNAL SUPPORT NUMBER | | ETHERNET CABLE, OUTDOOR RATED | | |

FIELD WIRING
HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
1 WBLT	R	ø6R	R
	Y	ø6Y	
	G	ø6G	
	→Y←	ø1Y	
	→G←	ø1G	
2a,2b EB	R	ø2R	R
	Y	ø2Y	
	G	ø2G	
4a SB	R	ø4R	R
	Y	ø4Y	
	G	ø4G	
	→Y←	OLA Y	
	→G←	OLA G	
4b SB	R	ø4R	R
	Y	ø4Y	
	G	ø4G	
5 EBLT	R	ø2R	R
	Y	ø2Y	
	G	ø2G	
	Y	ø5Y	
	G	ø5G	
6 WB	→R←	ø6R	R
	→Y←	ø6Y	
	G	ø6G	
8a,8b NB	R	ø8R	R
	Y	ø8Y	
	G	ø8G	
PEDESTRIAN MOVEMENTS			
N	WALK	ø6G	OFF
	DON'T WALK	ø6R	
S	WALK	ø2G	OFF
	DON'T WALK	ø2R	
E	WALK	ø8G	OFF
	DON'T WALK	ø8R	
W	WALK	ø4G	OFF
	DON'T WALK	ø4R	
OVERLAPS			
OLA	Y	ø5Y	OFF
	G	ø5Y	

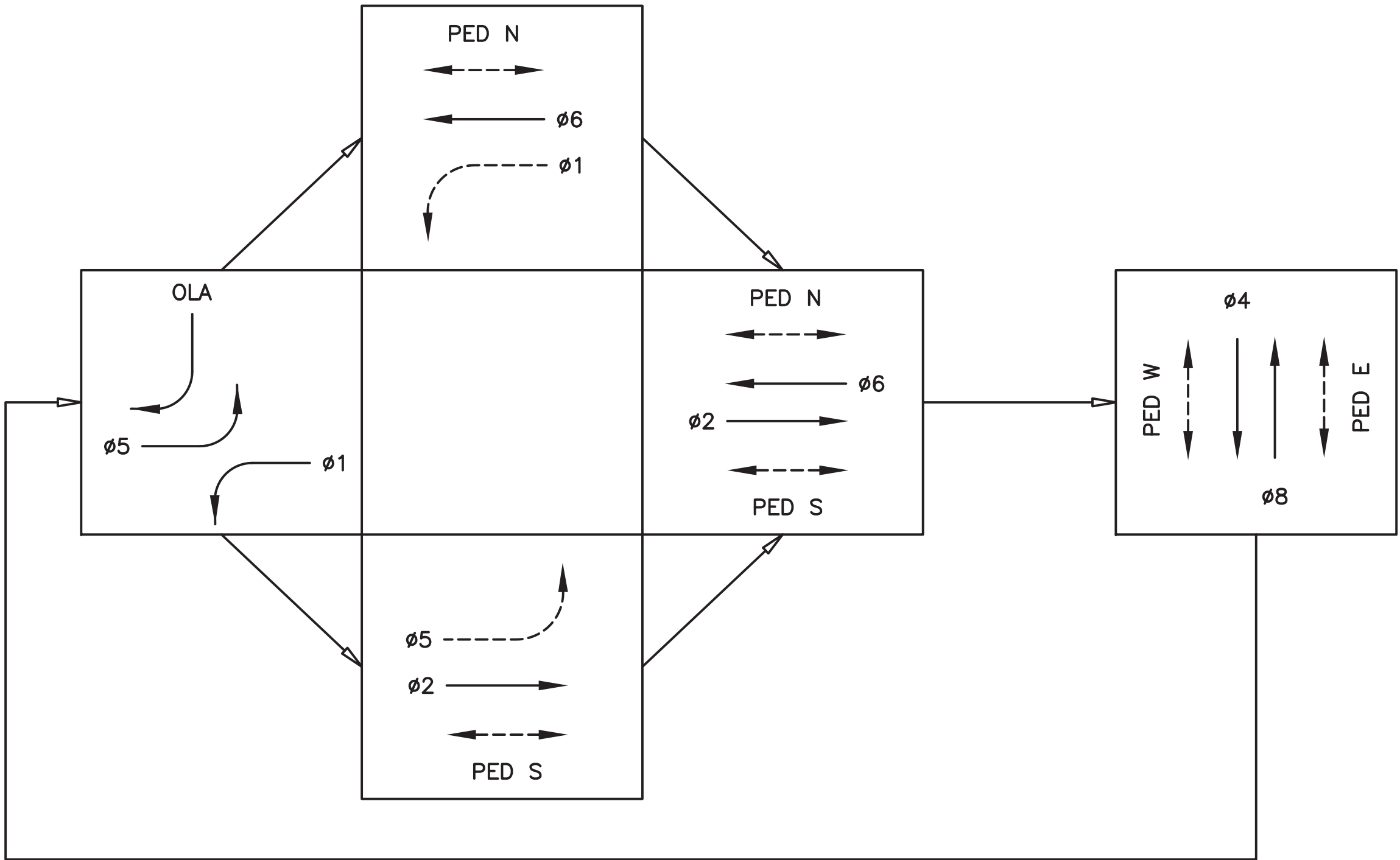
MCDANIEL, AERON U:\173608915\Transportation\design\plan_sct\Signal\173608915sig05.dwg SIGNAL PLAN DETAILS Last Saved: Dec 11, 2018 11:19 AM Plotted: Jan 18, 2019 3:27 PM

SIGNAL TIMING CHART

INTERSECTION:			SHOOK RD / SR 317							
MAINTAINING AGENCY:			ODOT							
START UP			DUAL ENTRY: 4,8			PHASES: -				
			REST IN RED:		RING 1		NO		RING 2	
START IN:	ALL RED	-	OVERLAP				A	B	C	D
TIME FOR FLASH OR ALL RED:										
FIRST PHASE(S):	2 & 6									
COLOR DISPLAYED:	GREEN		PHASES				5	-	-	-
INTERVAL OR FEATURE			CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)			1	2	3	4	5	6	7	8
DIRECTION			WB LT	EB	-	SB	EB LT	WB	-	NB
MINIMUM GREEN (INITIAL) (SEC.)			7	30	-	10	7	30	-	10
ADDED INITIAL *(SEC./ACTUATION)			-	-	-	-	-	-	-	-
MAXIMUM INITIAL (SEC.)			-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP) (SEC.)			3	1	-	3	3	1	-	3
TIME BEFORE REDUCTION *(SEC.)			-	-	-	-	-	-	-	-
MINIMUM GAP *(SEC.)			-	-	-	-	-	-	-	-
TIME TO REDUCE *(SEC.)			-	-	-	-	-	-	-	-
MAXIMUM GREEN I (SEC.)			20	50	-	20	20	50	-	20
MAXIMUM GREEN II (SEC.)			30	60	-	30	30	60	-	30
YELLOW CHANGE (SEC.)			4.5	5.5	-	4	5	5.5	-	4.5
ALL RED CLEARANCE (SEC.)			1.5	1	-	1	1.5	1	-	1
WALK (SEC.)			-	9	-	11	-	9	-	11
PEDESTRIAN CLEARANCE (SEC.)			-	20	-	17	-	20	-	17
RECALL		MAXIMUM (ON/OFF)	OFF	OFF	-	OFF	OFF	OFF	-	OFF
		MINIMUM (ON/OFF)	OFF	ON	-	OFF	OFF	ON	-	OFF
		PEDESTRIAN (ON/OFF)	-	ON	-	OFF	-	ON	-	OFF
MEMORY		(ON/OFF)	-	-	-	-	-	-	-	-

*VOLUME DENSITY CONTROLS

PHASING DIAGRAM



LEGEND		
VEHICLE	ø	→
PERMITTED	ø	- - - - - →
PEDESTRIAN	ø	↔

RADAR DETECTION CHART

DETECTION ZONE	MOVEMENT	PULSE OR PRESENCE	ASSOCIATED PHASE	DELAY IN CONTROLLER (SEC)	DELAY INHIBIT PHASE	PURPOSE	DETECTION ZONE LENGTH (FT)
RDZ1	WB LT	PRESENCE	1	-	-	CALL/EXTEND PHASE 1	25
RDZ2	EB THRU	PULSE	2	-	-	DILEMMA ZONE	MAX
RDZ4a	SB THRU	PRESENCE	4	-	-	CALL/EXTEND PHASE 4	20
RDZ4b	SB RT	PRESENCE	4	8	-	CALL/EXTEND PHASE 4	20
RDZ5	EB LT	PRESENCE	5	-	-	CALL/EXTEND PHASE 5	25
RDZ6	WB THRU	PULSE	6	-	-	DILEMMA ZONE	MAX
RDZ8	NB THRU	PRESENCE	8	4	-	CALL/EXTEND PHASE 8	20

- DILEMMA ZONE DETECTION SHALL BE PROGRAMMED TO USE THE MAXIMUM CAPABILITIES OF THE SENSOR.

CALCULATED
CNK
CHECKED
PJM

SIGNAL PLAN DETAILS
SHOOK ROAD AT STATE ROUTE 317

STATE ROUTE 317
SHOOK ROAD - PHASE II

SHKOLNIK, TODD J:\735089\15\Transportation\Design\plan-set\Right of Way\735089\SR01.dwg RIGHT-OF-WAY LEGEND SHEET Last Saved: Jan 29, 2019 11:44 AM Plotted: Jan 30, 2019 10:18 AM

UTILITY OWNERS
AT&T 111 N. FOURTH STREET COLUMBUS, OHIO 43215 614-223-7276 DAMAGE PREVENTION: 1-937-296-3929 AT&T REPAIR & SERVICE: 1-888-611-4466 GARY VAN ALMSICK
COLUMBIA GAS OF OHIO 3350 JOHNNY APPLESEED COURT COLUMBUS, OHIO 43231 614-818-2108 DAMAGE PREVENTION: 1-866-632-6243 CUSTOMER SERVICE: 1-800-344-4077 MAYA BARRETT
CHARTER COMMUNICATIONS AKA TIME WARNER COMMUNICATIONS/INSIGHT 3760 INTERCHANGE ROAD COLUMBUS, OHIO 43204 614-255-0855 JEFFREY WHATLEY

UTILITY OWNERS
CITY OF COLUMBUS DEPARTMENT OF PUBLIC SERVICE TRAFFIC MANAGEMENT 1820 E. 17TH AVE. COLUMBUS, OH 43219 614-645-7393
CITY OF COLUMBUS DEPARTMENT OF TECHNOLOGY 1355 MCKINLEY AVENUE BUILDING C COLUMBUS, OH 43222 CONTRACTOR LINE: 614-645-7756
CITY OF COLUMBUS DIVISION OF POWER 3500 INDIANOLA AVE. COLUMBUS, OHIO 43214 614-645-7627
CITY OF COLUMBUS DIVISION OF WATER 910 DUBLIN ROAD COLUMBUS, OHIO 43215 614-645-7788
CITY OF COLUMBUS DIVISION OF SEWERAGE & DRAINAGE 1250 FAIRWOOD AVE. COLUMBUS, OHIO 43206 SEWER MAINTENANCE OPERATIONS CENTER (SMOC): 614-645-7102

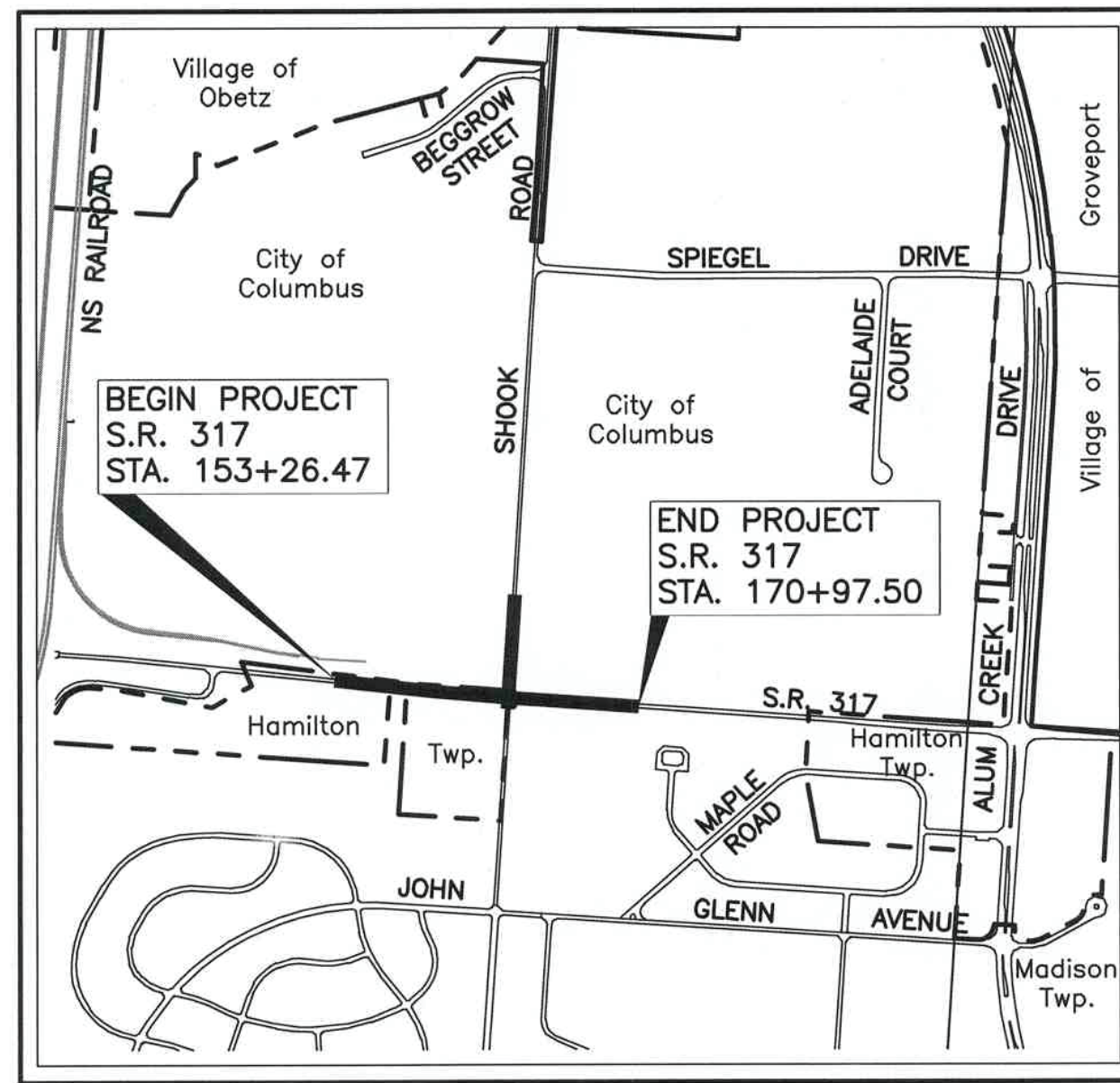
UTILITY OWNERS
CITY OF COLUMBUS SUPPORT SERVICES DIVISION COMMUNICATIONS 4211 GROVES ROAD COLUMBUS, OH 43232 RADIO ROOM: 614-724-4006 TELEPHONE: 614-724-7047
FRANKLIN COUNTY ENGINEER 970 DUBLIN ROAD COLUMBUS, OHIO 43215 614-525-3030
ODOT DISTRICT 6 400 EAST WILLIAMS ST. DELAWARE, OHIO 43015 740-363-1251 800-372-7714
SOUTH CENTRAL POWER 278 COONPATH ROAD NE LANCASTER, OHIO 43130 740-689-6237 CELL: 614-563-9597 PHIL STRINGER

STATE ROUTE 317

SHOOK ROAD - PHASE II

RIGHT-OF-WAY

CITY OF COLUMBUS HAMILTON TOWNSHIP FRANKLIN COUNTY, OHIO



INDEX OF SHEETS:

LEGEND SHEET	1
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PROJECT DESCRIPTION

WIDENING OF SHOOK ROAD (NORTH OF SR 317) TO PROVIDE A SOUTHBOUND RIGHT TURN LANE AND WIDENING OF SR 317 TO PROVIDE BOTH WESTBOUND AND EASTBOUND LEFT TURN LANES AT THE INTERSECTION. CONSTRUCT SIDEWALK ALONG THE WEST AND EAST SIDE OF SHOOK ROAD FROM SR 317 NORTH TO EXISTING SIDEWALK LIMITS. NEW BOX SPAN SIGNAL WILL BE INSTALLED AT THE INTERSECTION OF SR 317 AND SHOOK ROAD.

TYPES OF TITLE LEGEND:

WD = WARRANTY DEED
S = SEWER EASEMENT
P = PERMANENT EASEMENT
T = TEMPORARY CONSTRUCTION
EASEMENT

STRUCTURE KEY

RESIDENTIAL
COMMERCIAL
OUT-BUILDING



THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE OBTAINED FROM THE OWNER OF THE UTILITIES AS REQUIRED BY SECTION 153.64 O.R.C.

CONVENTIONAL SYMBOLS

Ex. Concrete	— E —
Ex. Electric	— OE —
Ex. Overhead Electric	— W —
Ex. Water	— TR —
Ex. Traffic	— G —
Ex. Gas	— T —
Ex. Telephone	— FOC —
Ex. Fiber Optic Cable	— ST —
Ex. Storm	— S —
Ex. Sanitary	— EX RW —
Ex. R/W	— RW —
Pr. R/W	— ST —
Pr. Storm Easement	— P —
Pr. Permanent Esmt.	— TMP —
Temp. Constr. Easement	

Water Valve	Water Valve(proposed)	Fire Hydrant(existing)	Fire Hydrant(proposed)	Water Well	Water Service Valve—	Water Service Valve—(Proposed)	Water Service Valve—Not Found	Gas Gate Valve	Gas Service Valve	Gas Meter	Combined Sewer Manhole	Sanitary Sewer Cleanout	Sanitary Sewer Manhole	Constr. Limits
WSNF	WS	WSNF	WS	WSNF	WSNF	WSNF	WSNF	WSNF	WSNF	WSNF	WSNF	WSNF	WSNF	WSNF

Curb Inlet	Curb Inlet	Circle Catch Basin	Square Catch Basin	Storm Drain Manhole	Electric Manhole	Electric Pull Box	Transformer, pad mounted	Telephone Pull Box	Telephone Pedestal	Telephone Manhole	Fiber Optic Manhole	Push Button on Post	Mailbox	Ex. Fence
MP	MP	MP	MP	MP	MP	MP	MP	MP	MP	MP	MP	MP	MP	MP

Post	Bollard	Parking Meter	Irrigation Sprinkler	Guy wire anchor	Power Pole	Power Pole with Telephone	Power Pole, Telephone and Light	Traffic Signal Strain Pole	Street Light (unspecified type)	Power Pole with Light	Telephone Pole	Telephone Pole with Light	Lamp Post
MP	MP	MP	MP	MP	MP	MP	MP	MP	MP	MP	MP	MP	MP

Pavement Reflector	Mile Post	Sign	Bush (leaves)	Shrub (needles)	Tree w/ leaves	Tree w/ needles	Rock
MP	MP	MP	MP	MP	MP	MP	MP

PLANS PREPARED BY:

FIRM NAME : STANTEC
R/W DESIGNER: TODD J. SHKOLNIK
R/W REVIEWER: STEVEN E. RADER
FIELD REVIEW BY: —
OWNERSHIP VERIFIED BY: —
DATE COMPLETED: —

CERTIFICATION

I, Steven E. Rader, as the Project Surveyor for Stantec, have conducted a survey of the existing conditions for the City of Columbus in 2017. The results of that survey are contained herein. Further more, I have reestablished the locations of the existing property lines and centerline of existing Right of Way for the property takes contained herein. As a part of this project I have established the proposed property lines, calculated the Gross Take, Present Roadway Occupied (PRO), Net Take and Net Residue; as well as prepared the legal descriptions necessary to acquire the parcels as shown herein. The aforementioned survey work was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as, "A Minimum Standards for Boundary Surveys in the State of Ohio", unless so noted. The words I and my as used herein are to mean that either myself or someone working under my direct supervision.



Steven E. Rader, P.S. No. 7191 1/30/19 Date



BASIS OF EXISTING R/W WIDTH AND LOCATION

THE EXISTING R/W WIDTHS AND LOCATIONS WERE DETERMINED USING THE FOLLOWING:

- ROAD RECORD 17, PG 236 AND ROAD RECORD 18, PG 84 (FRANKLIN COUNTY ENGINEER'S OFFICE)
- ODOT RW PLAN S.H. 924 SEC. F (1942) ODOT RW PLAN S.R. 317-16.71 (1957)
- CENTERLINE SURVEY PLAT SHOOK RD. (FCE 2012)
- CENTERLINE SURVEY PLAT LONDON-GROVEPORT ROAD (FCE 2016)
- CENTERLINE SURVEY PLAT SHOOK ROAD - PHASE I (CITY OF COLUMBUS, 2582 DR. E)

STATE ROUTE 317-SHOOK ROAD-PHASE II
S-36, T-4, R-22, CONGRESS LANDS
S-1, T-3, R-22, CONGRESS LANDS
CITY OF COLUMBUS, HAMILTON TOWNSHIP
FRANKLIN COUNTY, OHIO

BEGGROW ST.

REFERENCE MONUMENT, AS PER PLAN

ALL IRON PINS SET ARE 3/4" REBAR (30" LONG) WITH A YELLOW PLASTIC CAP STAMPED "STANTEC" AND ARE TO BE PLACED AT THE COMPLETION OF CONSTRUCTION BY THE CITY OF COLUMBUS SURVEY DEPARTMENT.

THE PLACING OF MONUMENTS SHALL BE UNDER DIRECTION OF A PROFESSIONAL SURVEYOR REGISTERED IN THE STATE OF OHIO AND ARE TO BE SET UPON COMPLETION OF CONSTRUCTION.

BASIS OF BEARINGS

BEARINGS ARE BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM. SOUTH ZONE, NAD 83 (NSRS 2007), AS ESTABLISHED FROM A GPS SURVEY IN 2017, AND ARE BASED ON THE BEARING OF NORTH 03 DEG. 37 MIN. 38 SEC. EAST FOR THE CENTERLINE OF SHOOK ROAD, AS DETERMINED BY OCCUPYING FRANKLIN COUNTY GEODETIC CONTROL MONUMENTS "FCGS 9930" AND FCGS 9927".

LOCAL CONTROL

TO OBTAIN STATE PLANE COORDINATES, SCALE ABOUT THE ORIGIN POINT (FCGS MON. #9930) N = 667058.140, E = 1843651.730 FROM LOCAL COORD. TO SPC = 0.9999359200 FROM SPC TO LOCAL COORD. = 1.0000640841

BASIS OF STATIONING:

THE CENTERLINE OF R/W STATIONING IS BASED ON ODOT'S R/W PLAN, FRA-317-16.71 (PLAN HAS NO PID). AND THE STATIONING ON SHOOK ROAD IS BASED ON THE CITY OF COLUMBUS PLAN 2582 DR. E.

BASIS OF R/W:

THE PROPOSED RIGHT-OF-WAY SHALL BE REFERENCED FROM THE CENTERLINE OF RIGHT-OF-WAY OF STATE ROUTE 317 AND SHOOK ROAD.

SOURCE BENCHMARK

FCGS MONUMENT #9930, AT THE CENTERLINE INTERSECTION OF S.R. 317 AND SHOOK ROAD. VERTICAL DATUM IS NAVD 88. (ELV = 744.605)

C/L CONST. CURVE DATA
STATE ROUTE 317
CURVE NO. 1
P.I. STA. 160+67.91
Δ = 01°54'00" LT.
Dc = 0°29'54"
R = 11,500'
L = 190.70'
T = 381.36'
E = 1.58'
P.C. STA. 158+77.21
P.T. STA. 162+58.57

MONUMENT LEGEND

- ☐ STONE FOUND
- FENCE POST
- ⊙ R.R.S. FOUND
- ⊙ R.R.S. SET
- ⊙ P.K. NAIL FOUND
- ⊙ R/W MONUMENT FOUND
- ⊙ CONTROL POINT
- ⊙ IRON PIN FOUND
- ⊙ I.P.F. WITH I.D. CAP
- 3/4" BAR SET
- ⊙ MONUMENT

EX. MONUMENTS OFF CENTERLINE R/W STATE ROUTE 317				
STATION	OFFSET	NORTH (Y)	EAST (X)	DESCRIPTION
144+00.09	0.00' RT	667198.030	1841723.228	5/8" IPF
147+00.02	69.94' RT	667106.575	1842017.311	SHD RW MON.
147+60.00	104.93' LT	667276.650	1842089.787	SHD RW MON.
148+00.20	39.99' RT	667129.197	1842119.398	MON. - 3/8" IPF
155+29.23	59.87' LT	667176.051	1842853.743	IPF "BERNARD"
155+93.67	18.18' RT	667093.547	1842912.363	CONTROL PT
156+32.65	40.70' RT	667068.265	1842949.614	1" PIPE BENT
156+99.69	49.99' LT	667153.865	1843023.044	SHD RW MON.
157+99.92	40.00' LT	667136.652	1843122.286	SHD RW MON.
160+69.17	59.99' LT	667137.107	1843392.273	IPF "BERNARD"
160+69.29	40.00' LT	667117.107	1843390.963	IPF "BERNARD"
163+16.20	45.70' RT	667013.820	1843631.006	CONTROL PT
163+33.66	0.00' RT	667058.140	1843651.730	FCGS MON #9930
166+83.43	39.80' LT	667073.751	1844003.412	1/2" IPF
169+96.54	54.21' RT	666958.385	1844309.296	CONTROL PT
170+53.89	50.00' RT	666958.691	1844366.848	IPF "CENTRAL SURVEY"
174+88.70	40.15' LT	667018.609	1844806.788	IPF "R.D. ZANDE"
176+81.58	0.00' RT	666965.268	1844996.450	FCGS MON #9961

EX. MONUMENTS OFF CENTERLINE R/W SHOOK ROAD				
STATION	OFFSET	NORTH (Y)	EAST (X)	DESCRIPTION
4+01.10	15.61' LT	666461.617	1843596.172	CONTROL PT
10+00.00	0.00' RT	667058.140	1843651.730	FCGS MON #9930
15+09.56	37.51' RT	667564.310	1843721.404	CONTROL PT
36+66.14	0.00' RT	669718.939	1843820.399	FCGS MON #9927

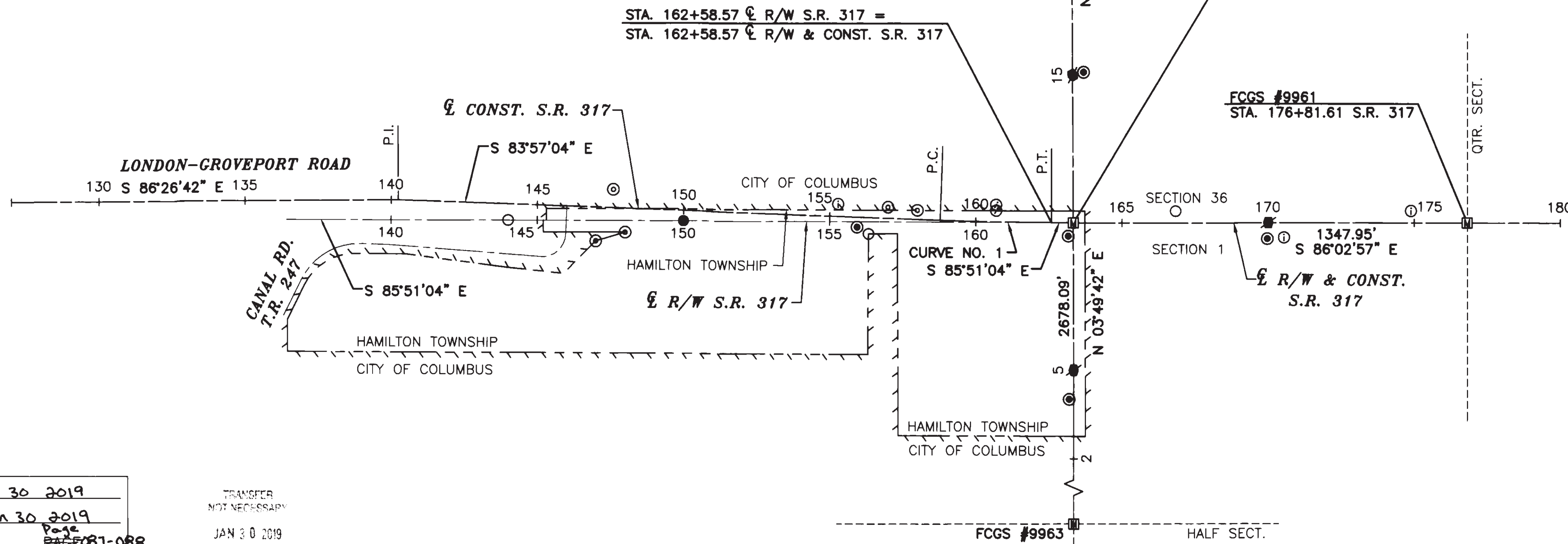
COORDINATES SHOWN ARE LOCAL COORDINATES (SEE LOCAL CONTROL NOTE)

REFERENCE MONUMENTS TO BE SET					
C/L OF R/W STATE ROUTE 317		LOCAL COORDINATES SEE CONTROL NOTE		TO BE SET DURING CONST.	
STATION	OFFSET	NORTH (Y)	EAST (X)	3/4" IPS	RRSS
150+00.00	0.00' RT	667154.628	1842321.566	1	
170+00.00	0.00' RT	667557.138	1844316.488		1

REFERENCE MONUMENTS TO BE SET					
C/L OF R/W SHOOK ROAD		LOCAL COORDINATES SEE CONTROL NOTE		TO BE SET DURING CONST.	
STATION	OFFSET	NORTH (Y)	EAST (X)	3/4" IPS	RRSS
5+00.00	0.00' RT	666559.256	1843618.345		1
15+00.00	0.00' RT	667557.138	1843683.362		1

QUANTITIES CARRIED TO GENERAL SUMMARY

FCGS #9930
STA. 163+33.66 S.R. 317
DEF. = 00°11'53" LT. =
STA. 10+00.00 SHOOK ROAD
DEF. = 00°12'04" LT.



CERTIFICATION

I, Steven E. Rader, as the Project Surveyor for Stantec, have conducted a survey of the existing conditions for the City of Columbus in 2017. The results of that survey are contained herein. Further more, I have reestablished the locations of the existing property lines and centerline of existing Right of Way for the property takes contained herein. As a part of this project I have established the proposed property lines, calculated the Gross Take, Present Roadway Occupied (PRO), Net Take and Net Residue; as well as prepared the legal descriptions necessary to acquire the parcels as shown herein. The aforementioned survey work was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as, "A Minimum Standards for Boundary Surveys in the State of Ohio", unless so noted. The words I and my as used herein are to mean that either myself or someone working under my direct supervision.

Steven E. Rader 1/30/19
Steven E. Rader, P.S. No. 7191 Date



CENTERLINE PLAT

STATE ROUTE 317
SHOOK ROAD - PHASE II

2 / 11

62
71

2873-E



McDANIEL ARRON U:\173608915\Transportation\Design\plan_spl\173608915cp01.dwg CENTERLINE PLAT Last Saved: Oct 24, 2018 10:16 AM Plotted: Jan 29, 2019 11:08 AM

RECEIVED Jan 30 2019
RECORDED Jan 30 2019
Book 125 Page 88
201901300011876
Daniel J. O'Connor
COUNTY RECORDER

TRANSFER
NOT NECESSARY
JAN 30 2019

STANTEC & ASSOCIATES
ADVISOR

SHKOLNIK, TODD U:\\173608915\\transportation\\design\\plan_set\\Right of Way\\173608915pm01.dwg
PROPERTY MAP Last Saved: Jan 30, 2019 10:08 AM Plotted: Jul 18, 2019 2:09 PM

- | | | |
|------------|---------|--|
| CALCULATED | TJS | 

SCALE IN FEET |
| | CHECKED | |
| SER | | |



11

$$\frac{63}{71}$$

REV.	DATE	DESCRIPTION
DATE COMPLETED:		

SHKQJNJK_T0DD_U:\173608915\transportation\design\plan_sheets\Right of Way\173608915RSC01.dwg SUMMARY OF ADDITIONAL RIGHT-OF-WAY Last Saved: Jul 18, 2019 9:01 AM Plotted: Jul 19, 2019 4:12 PM

TOTAL NUMBER OF :
5 OWNERSHIPS
11 PARCELS

0 TOTAL TAKES
0 OWNERSHIPS W/ STRUCTURES INVOLVED

I.N. = INSTRUMENT NUMBER
O.R. = OFFICIAL RECORD

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE
ALL AREAS IN ACRES
UNLESS OTHERWISE NOTED

GRANTEE:
ALL RIGHT OF WAY ACQUIRED IN THE NAME OF
THE CITY OF COLUMBUS
UNLESS OTHERWISE SHOWN.

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD		AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS	AS ACQUIRED	
			BOOK	PAGE								LEFT	RIGHT			BOOK	PAGE
1 - 9	NOT USED																
10	PIZZUTI LAND LLC		I.N. 200611210233258		495-234526-00	87.544									NO R/W REQUIRED		
			I.N. 200611210233257														
			I.N. 200710160180944		495-287286-00	15.000											
	TOTAL					102.544		0.000	0.000	0.000							
11-WD	ICON DP WH COLUMBUS	7, 8, 11	I.N. 201503250036962		495-286103-00	70.709	2.669	0.523	0.442	0.081	NO	84.396		CITY	RESIDUE LEFT OF S.R. 317		
	OWNER POOL 3 MIDWEST, LLC				495-287287-00	16.437	0.000	0.000	0.000	0.000					(*TBR) IRRIG. SYSTEM, INCLUDING (6) VALVES SHOWN		
	TOTAL					87.146	2.669	0.523	0.442	0.081					ON SHEETS 6 & 7		
															(TBR) IRRIG. SYSTEM INCLUDING (2) VALVES ON SHT. 11		
11-S		6	I.N. 201503250036962		495-286103-00			0.068	0.000	0.068	NO				SEWER EASEMENT		
															(*TBR) PRIVATE SIGN		
															(TBR) (1) TREE		
11-T		8	I.N. 201503250036962		495-286103-00			0.031	***	0.011	NO				FOR MINOR GRADING		
															*** = INCLUDING 0.020 ACRES WITHIN THE EXISTING		
															SIDEWALK EASEMENT (I.N. 201010280143948)		
															(TBR) (1) TREE		
12	CITY OF COLUMBUS		I.N. 200009010176507		RW DROP	1.609									WEST SIDE OF SHROCK ROAD		
						0.178									NORTH SIDE OF LONDON-GROVEPORT ROAD		
13	ALICE M. BAUMAN		I.N. 200404120080769		150-000178-00	15.003		0.000	0.000	0.000					NO R/W REQUIRED		
14	GORDO, LLC		I.N. 200602140029278		512-232660-00	46.872		0.000	0.000	0.000					NO R/W REQUIRED		
15-WD	THE COLUMBUS REGIONAL AIRPORT AUTHORITY	7, 8	I.N. 200808190126159		150-000429-00	10.000	1.024	0.692	0.594	0.098	NO		8.878	CITY	RESIDUE IS RIGHT OF S.R. 317		
16-WD	COLUMBUS MUNICIPAL AIRPORT AUTHORITY	8 - 10	I.N. 200301020000768		512-232659-00	13.580	1.409	0.881	0.872	0.009	NO		12.162	CITY	0.009 ACRE NET AREA LIES ENTIRELY WITHIN AN EXISTING		
															SANITARY SEWER EASEMENT (ON GROUND SURFACE)		
															I.N. 200210020245884		
															RESIDUE IS RIGHT OF S.R. 317		
16-T		8, 9	I.N. 200301020000768		512-232659-00			0.011	0.000	0.011	NO				FOR MINOR GRADING		
17	HAMILTON CREEK LIMITED PARTNERSHIP		O.R. 26953	I12	512-232661-00	40.978		0.000	0.000	0.000					NO R/W REQUIRED		
<div><div>TYPES OF TITLE LEGEND: WD = WARRANTY DEED S = SEWER EASEMENT T = TEMPORARY CONSTRUCTION EASEMENT P = PERMANENT EASEMENT</div><div>NOTE: ALL TEMPORARY PARCELS TO BE OF 18 MONTH DURATION. NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.</div><div>(c)= CALCULATED AREA (d)= DEED AREA (TBR) = DENOTES REMOVAL ITEMS, FOR LOCATION SEE CORRESPONDING R/W DETAIL SHEET (*TBR)= DENOTES RIGHT OF WAY ENCROACHMENT TO BE REMOVED</div><div>2873-E</div></div>																	

REV.

DATE

DESCRIPTION

DATE COMPLETED:

STATE ROUTE 317
SHOOK ROAD - PHASE II

4 / 11

64
71

GRANTEE:
ALL RIGHT OF WAY ACQUIRED IN THE NAME OF
THE CITY OF COLUMBUS
UNLESS OTHERWISE SHOWN.

<div style="display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin-right: 10px;"> 65 71 </div> <div style="text-align: center;"> 5 / 11 </div> </div>	STATE ROUTE 317 SHOOK ROAD - PHASE II	SUMMARY OF ADDITIONAL RIGHT-OF-WAY	R/W DESIGNER
			TJS
			R/W REVIEWER
			SER

2873-E

REV.	DATE	DESCRIPTION
DATE COMPLETED:		

MONUMENT LEGEND

- | STA/OFF FROM CENTERLINE
R/W STATE ROUTE 317 | | |
|--|-----------|------------|
| (A) | 157+00.00 | 60.00' LT |
| (B) | 155+29.09 | 60.00' LT |
| (C) | 153+48.32 | 70.58' LT |
| (D) | 153+07.77 | 116.66' LT |
| (E) | 153+26.54 | 133.18' LT |
| (F) | 153+81.42 | 70.80' LT |
| (G) | 155+50.01 | 65.21' LT |
| (H) | 156+32.70 | 0.00' RT |
| (J) | 157+00.00 | 50.00' LT |

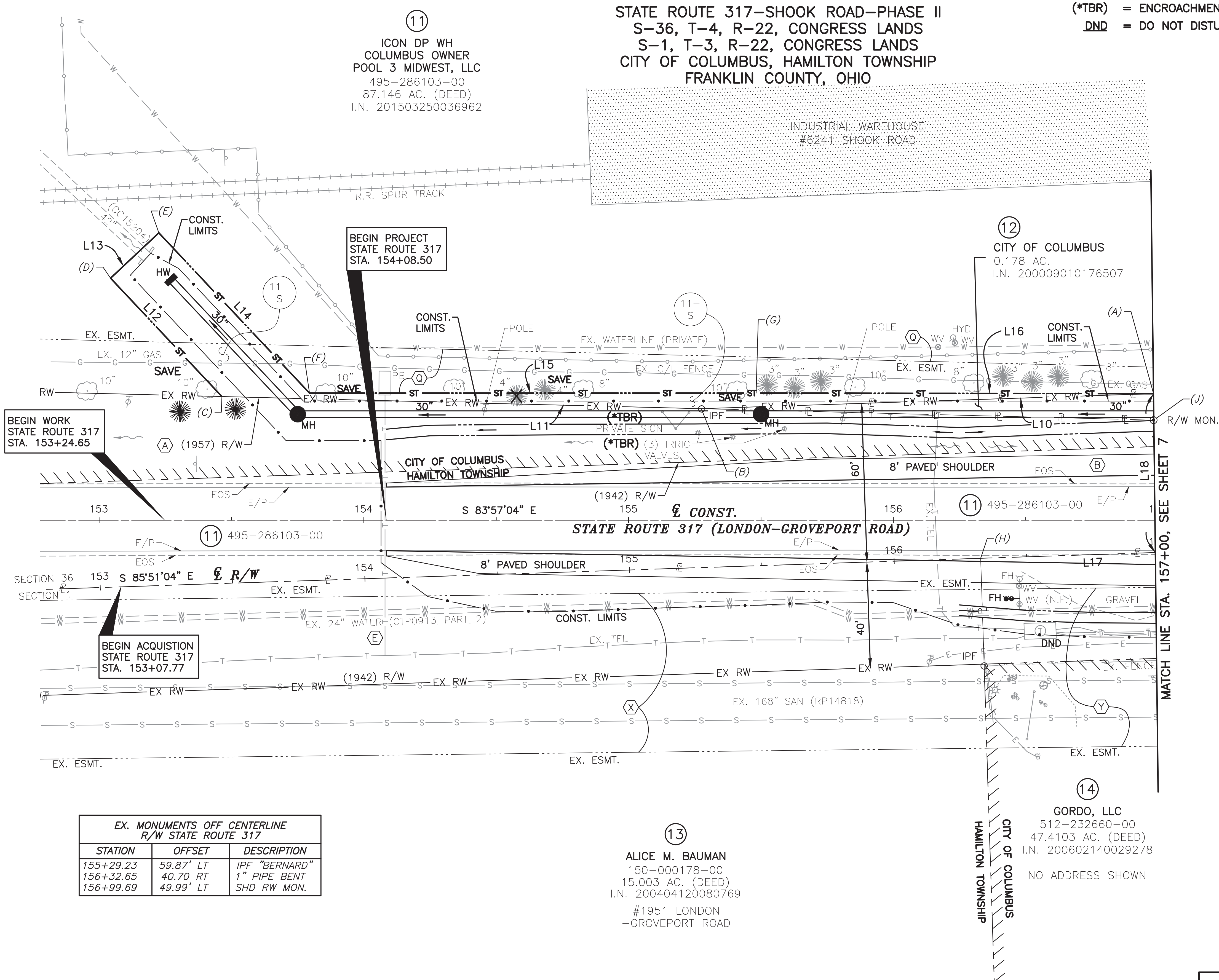
- (A)** HIGHWAY ESMT. (1957)
D.B. 2068, PG. 118
- (B)** HIGHWAY ESMT. (1942)
D.B. 1206, PG. 638
- (Q)** GAS LINE ESMT.
I.N. 200010170210612
- (E)** HIGHWAY ESMT.
D.B. 1206, PG 639
- (X)** SANITARY SEWER ESMT.
I.N. 200306190184298
- (Y)** SANITARY SEWER ESMT.
I.N. 200211120286427

RIGHT OF WAY DETAIL SHEET
STA. 157+00 BACK

STATE ROUTE 317
SHOOK ROAD - PHASE II

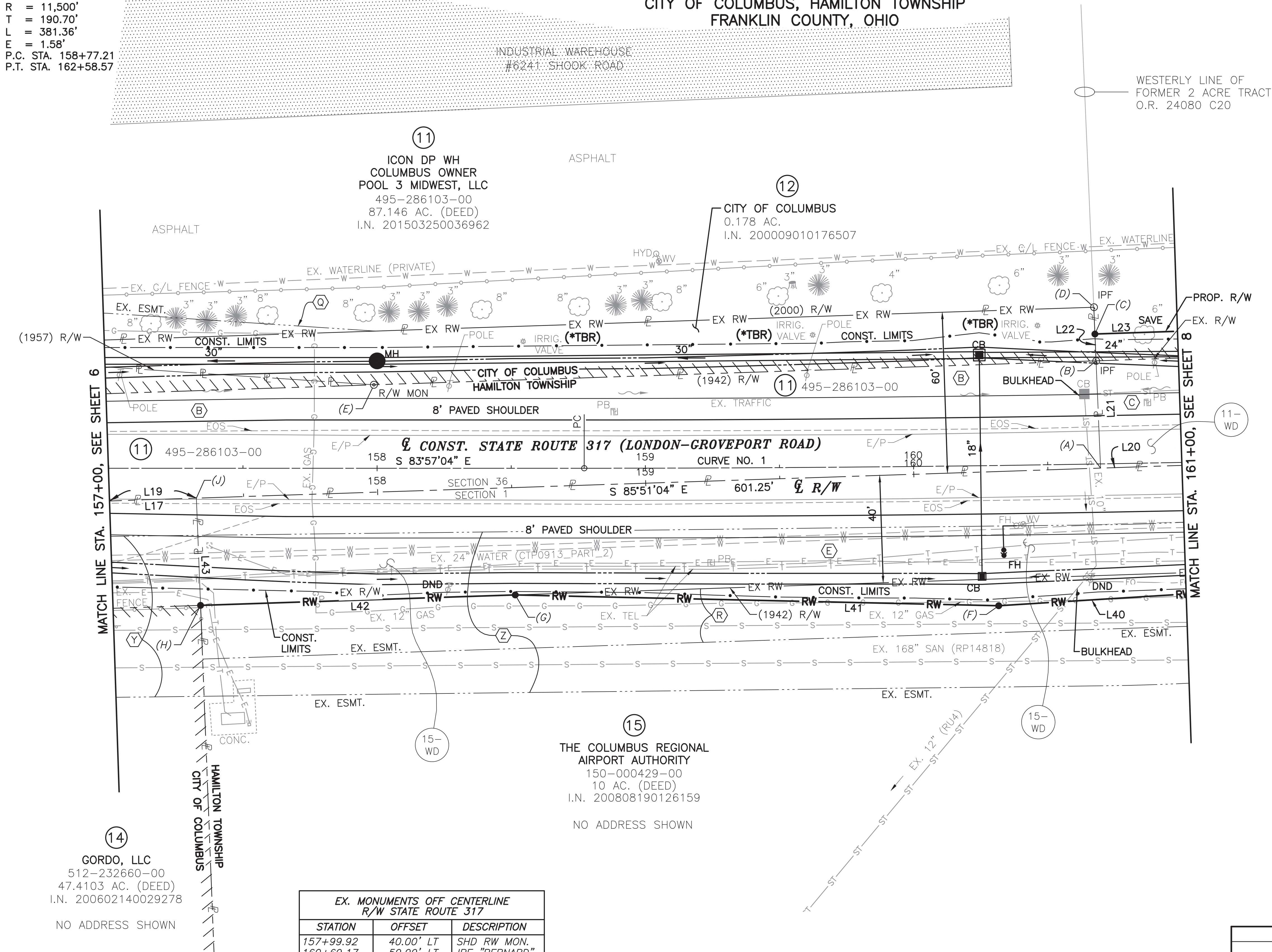
2873-E

REV.	DATE	DESCRIPTION
DATE COMPLETED:		



CURVE DATA
CURVE NO. 1
P.I. STA. 160+67.91
Δ = 01°54'00" LT.
Dc = 0°29'54"
R = 11,500'
T = 190.70'
L = 381.36'
E = 1.58'
P.C. STA. 158+77.21
P.T. STA. 162+58.57

STATE ROUTE 317-SHOOK ROAD-PHASE II
S-36, T-4, R-22, CONGRESS LANDS
S-1, T-3, R-22, CONGRESS LANDS
CITY OF COLUMBUS, HAMILTON TOWNSHIP
FRANKLIN COUNTY, OHIO



- (TBR) = REMOVAL ITEM
(*TBR) = ENCROACHMENT
DND = DO NOT DISTURB

MONUMENT LEGEND

- STONE FOUND
- FENCE POST
- R.R.S. FOUND
- R.R.S. SET
- P.K. NAIL FOUND
- R/W MONUMENT FOUND
- REBAR FOUND
- IRON PIN FOUND
- I.P.F. WITH I.D. CAP
- 3/4" BAR SET
- MONUMENT

STA/OFF FROM CENTERLINE R/W STATE ROUTE 317		
(A)	160+69.66	0.00' RT
(B)	160+69.29	40.00' LT
(C)	160+69.20	50.00' LT
(D)	160+69.11	60.00' LT
(E)	158+00.00	40.00' LT
(F)	160+30.00	50.00' RT
(G)	158+50.00	40.00' RT
(H)	157+32.63	40.00' RT
(J)	157+32.41	0.00' RT

NUMBER	DIRECTION	DISTANCE
L17	N 85°51'04" W	99.71'
L19	N 85°51'04" W	32.41'
L20	N 85°51'04" W	264.00'
L21	N 03°37'38" E	40.00'
L22	N 03°37'38" E	10.00'
L23	S 85°51'04" E	185.80'
L40	N 87°32'09" W	170.07'
L41	N 82°40'17" W	180.28'
L42	N 85°51'04" W	117.37'
L43	N 03°49'42" E	40.00'

- (B) HIGHWAY ESMT. (1957)
D.B. 1206, PG. 638
- (C) HIGHWAY ESMT. (1942)
D.B. 1206, PG. 632
- (E) HIGHWAY ESMT.
D.B. 1206, PG. 639
- (Q) GAS LINE ESMT.
I.N. 200010170210612
- (R) GAS LINE ESMT.
I.N. 200008160164537
- (Y) SANITARY SEWER ESMT.
I.N. 200211120286427
- (Z) SANITARY SEWER ESMT.
I.N. 200203080061504

EX. MONUMENTS OFF CENTERLINE R/W STATE ROUTE 317		
STATION	OFFSET	DESCRIPTION
157+99.92	40.00' LT	SHD RW MON.
160+69.17	59.99' LT	IPF "BERNARD"
160+69.29	40.00' LT	IPF "BERNARD"

2873-E		
REV.	DATE	DESCRIPTION
DATE COMPLETED:		

C	HIGHWAY ESMT. (1942) D.B. 1206, PG. 632	L	ELECTRIC ESMT. I.N. 200806180093819
E	HIGHWAY ESMT. (1942) D.B. 1206, PG 639	R	GAS LINE ESMT. I.N. 200008160164537
F	HIGHWAY ESMT. (1942) D.B. 1209, PG 14	U	SANITARY SEWER ESMT. I.N. 200210020245882
G	HIGHWAY ESMT. (1942) D.B. 1206, PG 650	Z	SANITARY SEWER ESMT. I.N. 200203080061504
H	CHANNEL & STORM SEWER ESMT. I.N. 201010280143944	AA	SANITARY SEWER ESMT. I.N. 200210020245884
I	SIDEWALK ESMT. I.N. 201010280143948	BB	ROAD RECORD 18, PG. 84

(TBR) = REMOVAL ITEM
(*TBR) = ENCROACHMENT
DND = DO NOT DISTURB

FCGS MON. #9930
ANGLE POINT
STA. 163+33.66 \angle R/W & CONST. S.R. 317
DEF. = 00°11'53" LT. =
ANGLE POINT
STA. 10+00 \angle R/W & CONST. SHOOK ROAD
DEF. = 00°12'04" LT.

NUMBER	DIRECTION	DISTANCE
L20	N 85°51'04" W	264.00'
L23	S 85°51'04" E	185.80'
L24	N 47°59'22" E	68.94'
L25	N 03°37'38" E	230.28'
L27	S 03°37'38" W	330.00'
L30	S 47°59'22" W	42.91'
L31	N 03°37'38" E	60.68'
L32	S 86°22'22" E	30.00'
L33	S 03°37'38" W	30.00'
L36	S 03°49'42" W	100.00'
L37	N 86°10'18" W	30.00'
L38	N 36°49'09" W	59.82'
L39	N 77°06'18" W	65.76'
L40	N 87°32'09" W	170.07'
L44	S 85°51'04" E	601.25'
L45	S 86°02'57" E	720.08'
L47	N 86°02'57" W	649.20'
L48	S 55°02'54" W	39.67'
L49	S 03°49'42" W	25.00'
L50	N 86°10'18" W	40.00'
L51	S 86°02'57" E	70.00'
L52	S 86°02'57" E	100.00'
L54	N 86°02'57" W	100.00'
L55	N 03°57'03" E	5.00'
L60	N 03°37'38" E	350.00'
L62	S 03°37'38" W	229.83'
L63	S 23°40'06" E	79.19'
L64	S 78°55'27" E	80.62'
L65	S 86°02'57" E	203.74'
L67	N 86°02'57" W	350.00'
L71	S 03°37'38" W	258.81'
L72	N 23°40'06" W	32.71'
L74	S 03°37'38" W	268.47'
L75	N 23°40'06" W	10.90'
L76	S 86°02'57" E	283.68'

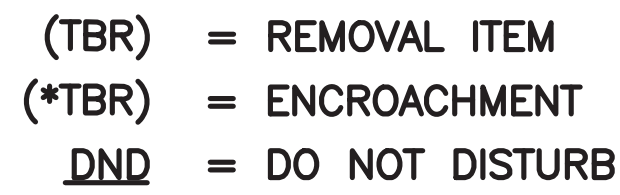
STA/OFF FROM CENTERLINE R/W STATE ROUTE 317		
(A)	162+55.00	50.00' L
(E)	163+02.75	99.72' L
(G)	163+04.22	100.17' R
(H)	162+65.00	55.00' R
(J)	162+00.00	45.00' R
(K)	164+04.69	50.00' R
(L)	163+73.82	74.91' R
(M)	163+73.87	99.91' R
(N)	164+74.69	55.00' R
(P)	164+74.69	50.00' R
(Q)	163+62.98	120.17' L
(R)	163+99.69	50.00' L
(S)	164+79.69	40.00' L

STA/OFF FROM CENTERLINE R/W SHOOK ROAD		
(B)	10+69.32	60.00' LT
(C)	11+30.00	60.00' LT
(D)	11+30.00	30.00' LT
(E)	11+00.00	30.00' LT
(F)	9+00.00	0.00' RT
(G)	9+00.00	30.00' LT
(L)	9+25.00	40.00' RT
(M)	9+00.00	40.00' RT
(Q)	11+20.00	30.00' RT
(T)	10+81.24	50.00' RT
(U)	10+90.93	45.00' RT

2873-E

REV.	DATE	DESCRIPTION
DATE COMPLETED:		

SHKOLNIK, TODD U:\173608915\transportation\design\plan_set\Right of Way\Details\173608915d104.dwg RIGHT OF WAY DETAIL SHEET Last Saved: Jul 19, 2019 12:01 PM Plotted: Jul 19, 2019 4:15 PM



- ☐ STONE FOUND
- FENCE POST
- ↺ R.R.S. FOUND
- R.R.S. SET
- ⊗ P.K. NAIL FOUND
- ⊙ R/W MONUMENT FOUND
- ⊖ REBAR FOUND
- IRON PIN FOUND
- I.P.F. WITH I.D. CAP
- 3/4" BAR SET
- ▣ MONUMENT

STA/OFF FROM CENTERLINE R/W STATE ROUTE 317		
(A)	165+74.69	50.00' RT
(B)	165+74.69	55.00' RT
(C)	166+83.66	0.00' RT
(D)	166+83.43	40.00' LT
(E)	166+83.38	50.00' LT

EX. MONUMENTS OFF CENTERLINE R/W STATE ROUTE 317		
STATION	OFFSET	DESCRIPTION
166+83.43	39.80' LT	1/2" IPF

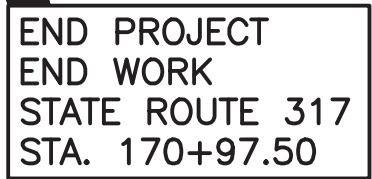
NUMBER	DIRECTION	DISTANCE
L45	S 86°02'57" E	720.08'
L47	N 86°02'57" W	649.20'
L52	S 86°02'57" E	100.00'
L53	S 03°57'03" W	5.00'
L54	N 86°02'57" W	100.00'
L65	S 86°02'57" E	203.74'
L66	S 03°37'38" W	40.00'
L67	N 86°02'57" W	350.00'
L76	S 86°02'57" E	283.68'
L77	N 03°37'38" E	10.00'
L80	S 86°02'57" E	331.32'
L82	N 86°02'57" W	331.26'

- F** HIGHWAY ESMT.
D.B. 1209, PG 14
- G** HIGHWAY ESMT. (1942)
D.B. 1206, PG 650
- V** TELECOMMUNICATION ESMT.
I.N. 199801230015937
- AA** SANITARY SEWER ESMT.
I.N. 200210020245884

REV.	DATE	DESCRIPTION
DATE COMPLETED:		

SHKOLNIK, TODD U:\173608915\transportation\design\plan_set\Right of Way\Details\173608915dtd05.dwg RIGHT OF WAY DETAIL SHEET Last Saved: Jul 19, 2019 12:02 PM Plotted: Jul 19, 2019 4:16 PM

#2235 SPIEGEL DRIVE



NO ADDRESS SHOWN

VARIOUS ADDRESSES
FROM OAK ROAD

- ☒ STONE FOUND
- FENCE POST
- ↺ R.R.S. FOUND
- R.R.S. SET
- ⊙ P.K. NAIL FOUND
- ⊙ R/W MONUMENT FOUND
- ⊙ REBAR FOUND
- IRON PIN FOUND
- I.P.F. WITH I.D. CAP
- 3/4" BAR SET
- ☒ MONUMENT

EX. MONUMENTS OFF CENTERLINE R/W STATE ROUTE 317		
STATION	OFFSET	DESCRIPTION
170+53.89	50.00' RT	IPF "CENTRAL SURVEY"
174+88.70	40.15' LT	IPF "R.D. ZANDE"
176+81.58	0.00' RT	FCGS MON #9961

F HIGHWAY ESMT.
D.B. 1209, PG 14

G HIGHWAY ESMT. (1942)
D.B. 1206, PG 650

T GAS LINE ESMT.
I.N. 201609270130336

V TELECOMMUNICATION ESMT.
I.N. 199801230015937

AA SANITARY SEWER ESMT.
I.N. 200210020245884

STATE ROUTE 317
SHOOK ROAD - PHASE II

REV.	DATE	DESCRIPTION
DATE COMPLETED:		

SHKOLNIK, TODD U:\173608915\transportation\design\plan_set\Right of Way\Details\173608915d06.dwg RIGHT OF WAY DETAIL SHEET Last Saved: Jul 19, 2019 12:02 PM Plotted: Jul 19, 2019 4:16 PM

71
71

2873-E

REV.	DATE	DESCRIPTION
DATE COMPLETED:		