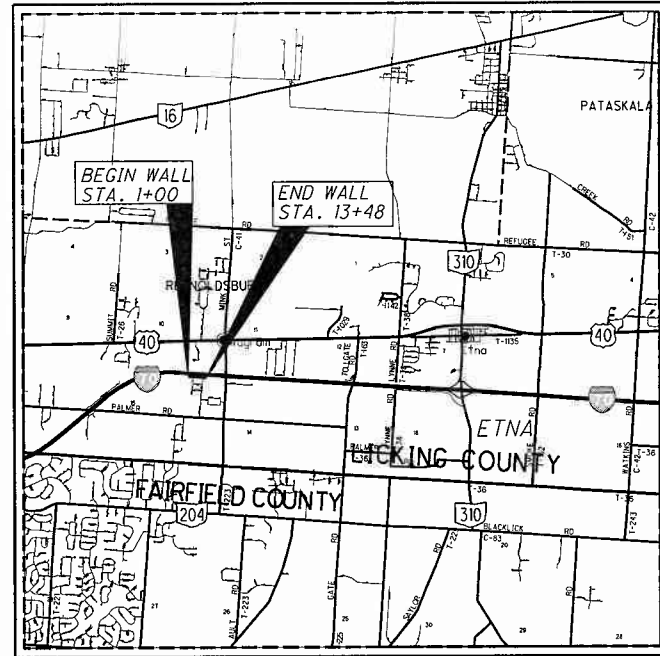


LIC - IR 70-01.90
 210608 PID - 107262
 Dist 5 1/1/18/2021

Contract Proposal available @
 www.contracts.dot.state.oh.us

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LOCATION MAP

LATITUDE: 39°57'05" LONGITUDE: -82°44'16"



PORTION TO BE IMPROVED	-----
INTERSTATE HIGHWAY	-----
FEDERAL ROUTES	-----
STATE ROUTES	-----
COUNTY & TOWNSHIP ROADS	-----
OTHER ROADS	-----

DESIGN DESIGNATION

CURRENT ADT (2022)	63,500
DESIGN YEAR ADT (2042)	80,500
DESIGN HOURLY VOLUME (2042)	7,200
DIRECTIONAL DISTRIBUTION	58.4%
TRUCKS (24 HOUR B&C)	30%
DESIGN SPEED	70 MPH
LEGAL SPEED	70 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
INTERSTATE	
NHS PROJECT	YES

DESIGN EXCEPTIONS

NO

UNDERGROUND UTILITIES
 Contact Two Working Days
 Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764
 (Non-members must be called directly)

PLAN PREPARED BY:
 OHIO DEPARTMENT OF
 TRANSPORTATION
 DISTRICT 5

ENGINEERS SEAL:
 STRUCTURE

SIGNED: *Tracy Allen Greenwald*
 DATE: 7-12-2021

STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION

LIC-70-1.90

**ETNA TOWNSHIP
 LICKING COUNTY**

INDEX OF SHEETS:

TITLE SHEET	1
SCHEMATIC PLAN	2
TYPICAL SECTIONS	3-5
GENERAL NOTES	6
MOT NOTES	7
GENERAL SUMMARY	8
SUBSUMMARY	9
PLAN AND PROFILE	10-12
CROSS SECTIONS	13-19
NOISE BARRIER DATA TABLES	20-22
SOIL BORINGS	23-30

STANDARD CONSTRUCTION DRAWINGS								SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
DM-1.1	7/17/20			MT-95.30	7/19/19	TC-41.20	10/18/13	800	7/16/21
DM-1.2	7/16/21			MT-95.45	1/17/20	TC-42.20	10/18/13	832	10/19/18
DM-4.3	1/15/16			MT-101.90	7/17/20	TC-52.10	10/18/13		
DM-4.4	1/15/16	NBS-1-09	1/15/21	MT-105.10	1/17/20	TC-52.20	1/15/21		
HW-2.1	7/20/18								
HW-2.2	7/20/18								

PROJECT DESCRIPTION

CONSTRUCT A REFLECTIVE NOISE WALL ON THE SOUTH SIDE OF LIC IR 70 EASTBOUND NEAR THE RIGHT OF WAY LINE PARALLEL TO TO FREEWAY DRIVE IN RUSSEL HEIGHTS.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 0.31 ACRES
 ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.34 ACRES
 NOTICE OF INTENT EARTH DISTURBED AREA: N/A

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

CONFORMED SET

APPROVED: *Jim Z. Stoy*
 DATE 7/14/2021 DISTRICT DEPUTY DIRECTOR

APPROVED: *Jade Marchbanks*
 DATE 9/29/21 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO.
E191283

PID NO.
107262

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT
NONE

LIC-70-1.90

1/30

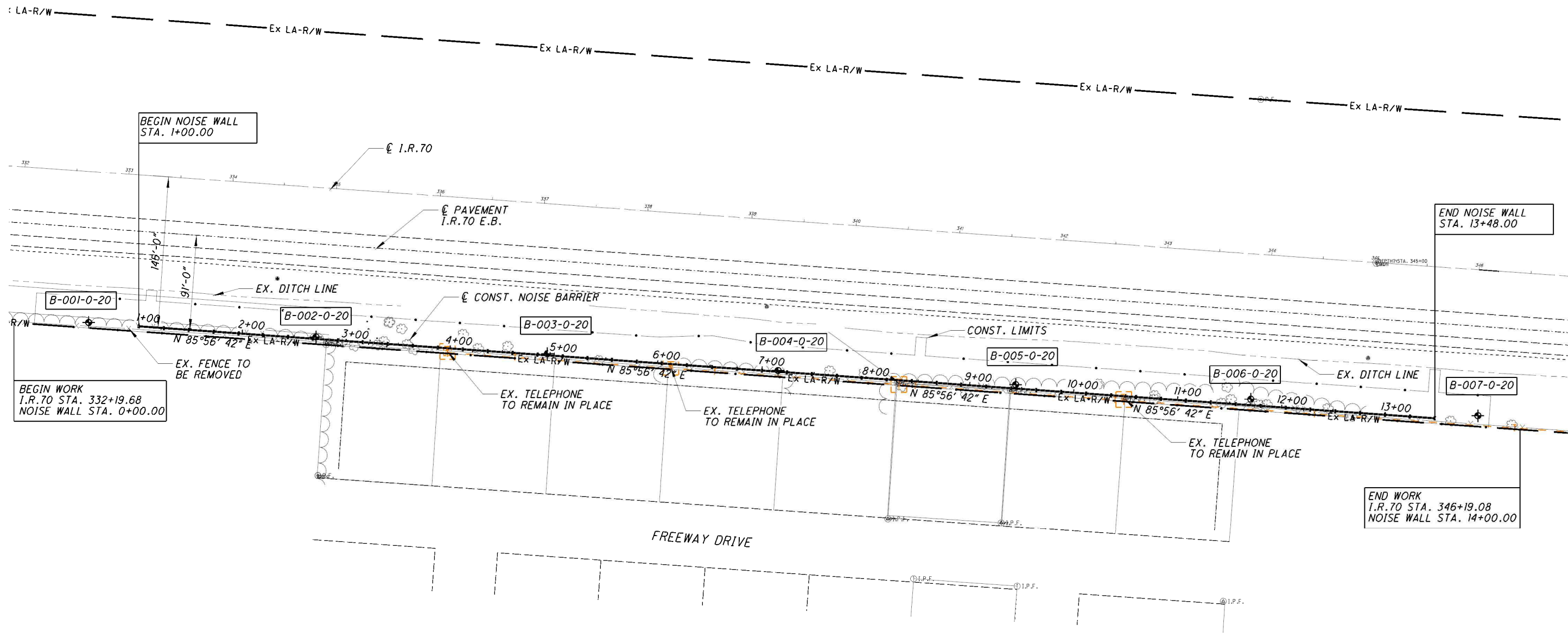


HORIZONTAL SCALE IN FEET

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SCHEMATIC PLAN

LIC-70-1.90



SURVEY CONTROL POINTS								
POINT	NORTHING	EASTING	ELEVATION	STA I-70	OFF	FEATURE	DESCRIPTION	EXPECTED TO BE DISTURBED
SV1	710799.13	1901982.56	1054.13	334+49.61	89.86	CNPT	1" REBAR W/ODOT CAP	
SV2	710722.90	1903029.83	1051.87	344+99.65	91.88	CNPT	1" REBAR W/ODOT CAP	
SV500	710928.85	1901423.34	1048.83	328+82.62	0.00	CMON	1/2" REBAR IN 8" CONCRETE	
SV501	710814.41	1903038.18	1048.83	345+01.51	0.00	CMON	1/2" REBAR IN 8" CONCRETE	
SV502	710708.10	1904534.09	1046.96	360+01.20	0.30	CMON	1/2" REBAR IN 8" CONCRETE	
SV2293	710698.72	1902577.09	1057.89	340+49.76	148.00	IPIN		1
SV2296	710691.62	1902686.29	1057.90	341+59.18	147.36	IPIN		1
SV2300	710684.12	1902795.90	1059.67	342+69.05	147.10	IPIN		1
SV2304	710737.71	1902029.60	1053.90	335+00.88	147.81	IPIN		1
SV2305	710735.66	1902029.37	1053.46	335+00.79	149.87	IPIPE		1
TOTAL =								5

NOISE BARRIER BASELINE GEOMETRY							
P.I. NO.	NOISE BARRIER STA.	I.R.70 STA.	I.R.70 OFFSET	NORTHING	EASTING	BEARING	DISTANCE
1	1+00.00	333+19.63	145	710753.35	1901849.06	N 85°56' 42" E	1250
2	13+50.00	345+69.68	145	710665.10	1903093.94		

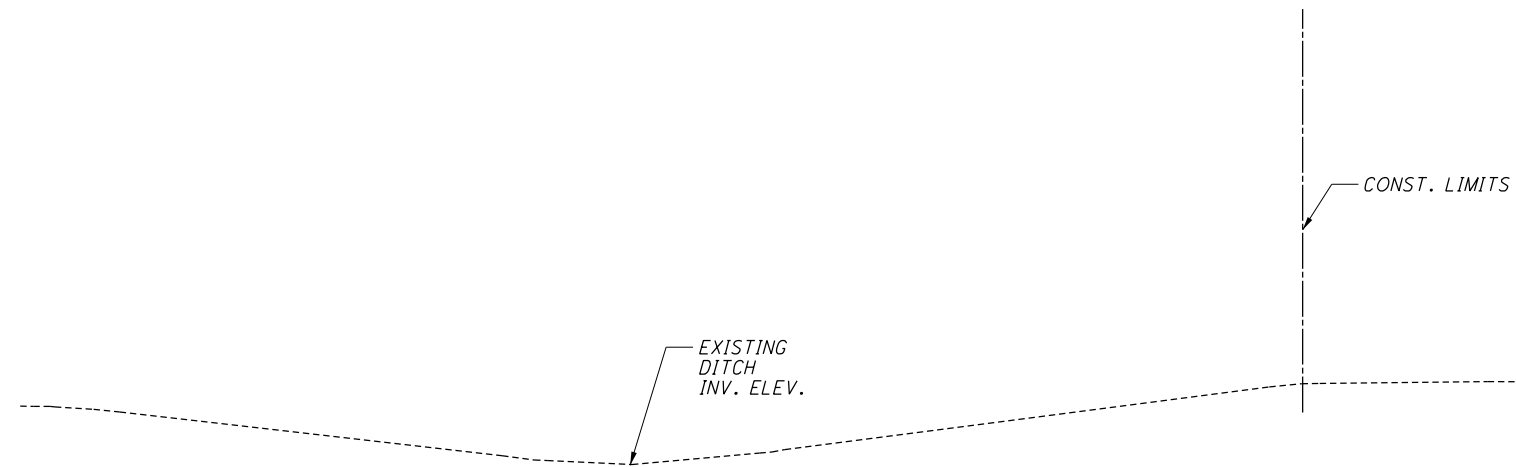
BORING	LABEL	IR-70 STA.	IR-70 OFF.	WALL STA.	WALL OFF.
B-001-0-20	B-01	332+71.48	144.69 RT	0+51.80	0.31 LT.
B-002-0-20	B-02	334+90.46	143.14 RT	2+70.77	1.86 LT.
B-003-0-20	B-03	337+13.00	143.46 RT	4+93.31	1.54 LT.
B-004-0-20	B-04	339+35.17	143.94 RT	7+15.48	1.06 LT.
B-005-0-20	B-05	341+63.75	141.22 RT	9+44.07	3.78 LT.
B-006-0-20	B-06	343+89.69	139.23 RT	11+70.00	5.77 LT.
B-007-0-20	B-07	346+08.72	139.57 RT	13+89.03	5.43 LT.

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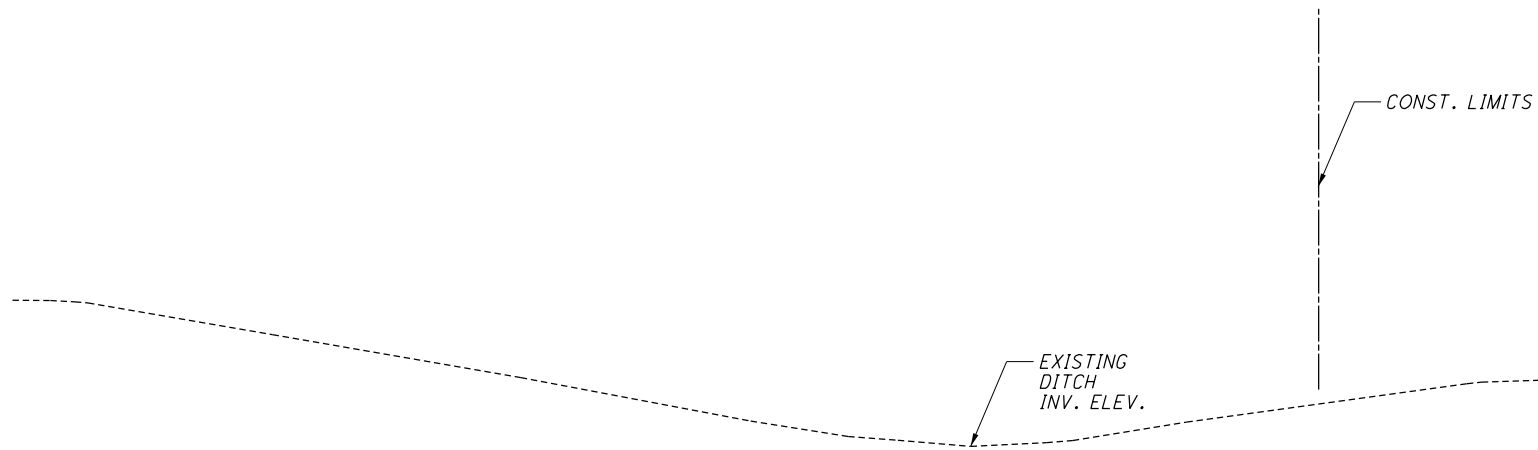
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LEGEND

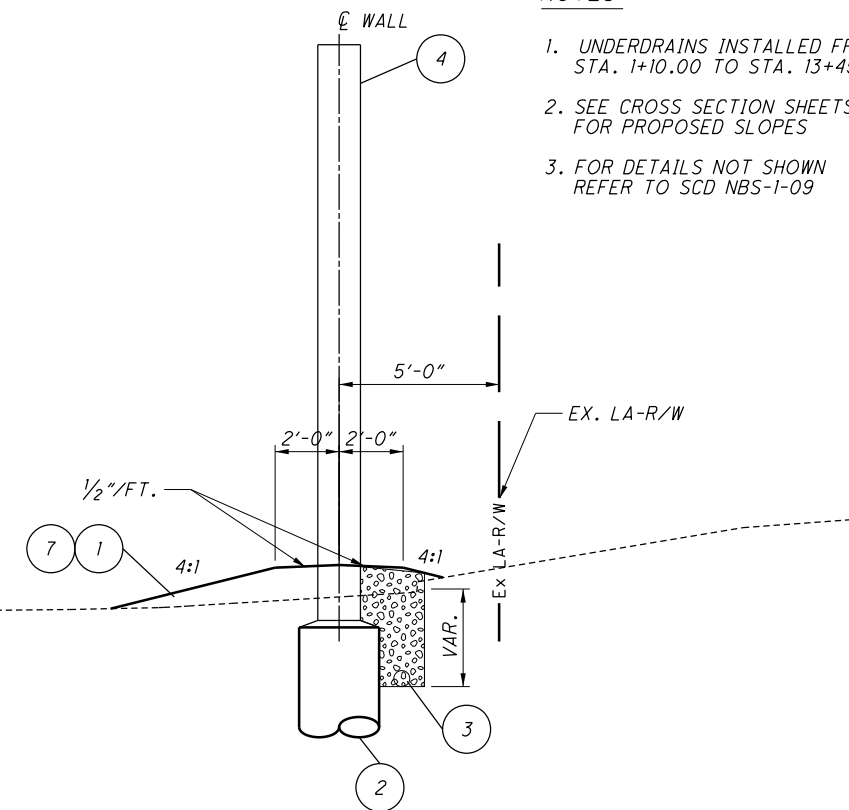
- ① ITEM 201 - CLEARING AND GRUBBING
- ② ITEM 524- DRILLED SHAFTS (TO BE PAID WITH NOISE WALL)
- ③ ITEM 605 - UNDERDRAIN MISC.: BARRIER DRAINAGE
- ④ ITEM 606 - SPECIAL - NOISE BARRIER
- ⑤ ITEM 611 - 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET
- ⑥ ITEM 611 - EROSION CONTROL PAD FOR OUTLET PIPE (6" 4000 PSI COMPRESSIVE STRENGTH CONCRETE)
- ⑦ ITEM 659 - SEEDING AND MULCHING



TYPICAL SECTION 1
 STA. 1+00.00, STA. 8+50.00,
 STA. 9+00.00, STA. 9+50.00



TYPICAL SECTION 2
 STA. 1+50.00, STA. 4+00.00,
 STA. 4+50.00, STA. 5+00.00,
 STA. 5+50.00, STA. 10+00.00,
 STA. 11+00.00, STA. 11+50.00,



- NOTES:**
1. UNDERDRAINS INSTALLED FROM STA. 1+10.00 TO STA. 13+45.00
 2. SEE CROSS SECTION SHEETS FOR PROPOSED SLOPES
 3. FOR DETAILS NOT SHOWN REFER TO SCD NBS-1-09

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TYPICAL DETAILS

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NOTES:

1. UNDERDRAINS INSTALLED FROM STA. 1+10.00 TO STA. 13+45.00
2. SEE CROSS SECTION SHEETS FOR PROPOSED SLOPES
3. FOR DETAILS NOT SHOWN REFER TO SCD NBS-1-09

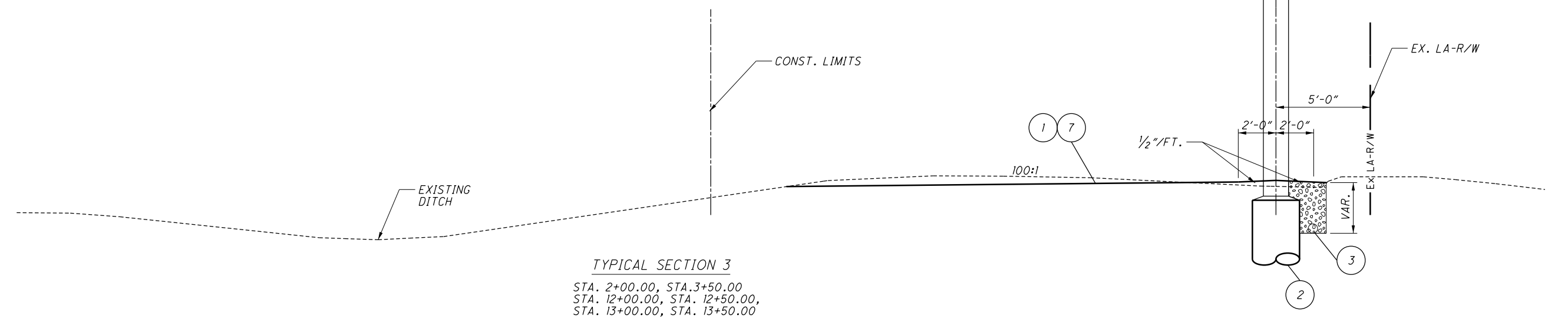
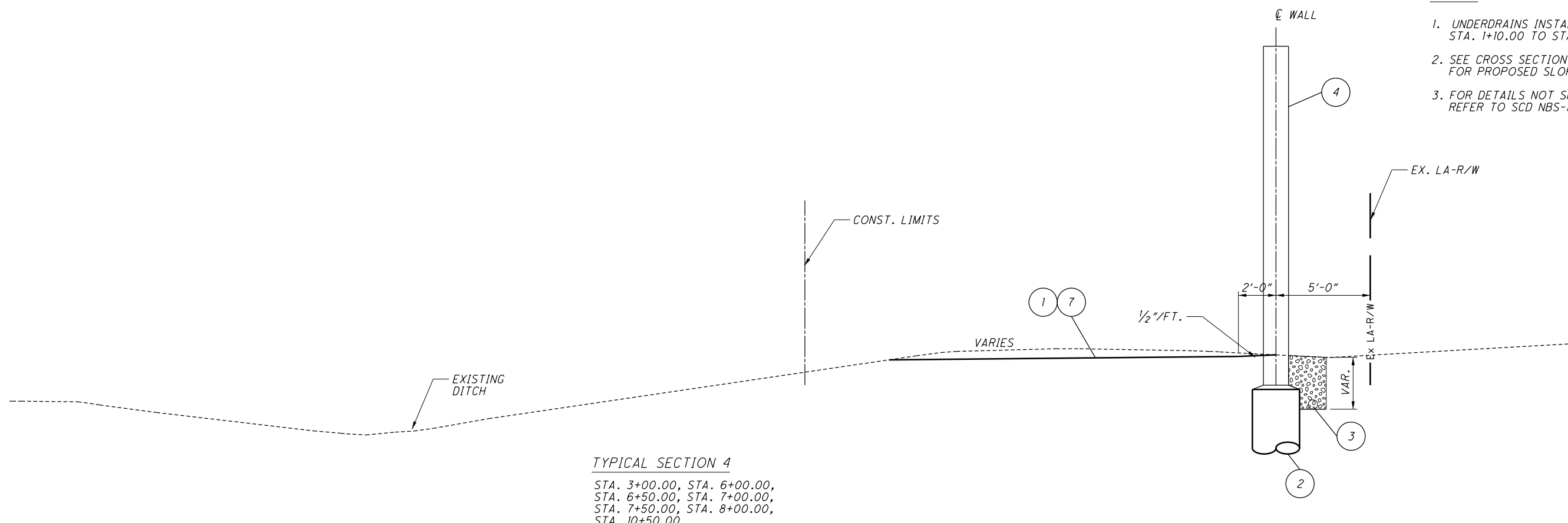
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TYPICAL DETAILS

LIC-70-1.90

LEGEND

- 1 ITEM 201 - CLEARING AND GRUBBING
- 2 ITEM 524- DRILLED SHAFTS (TO BE PAID WITH NOISE WALL)
- 3 ITEM 605 - UNDERDRAIN MISC.: BARRIER DRAINAGE
- 4 ITEM 606 - SPECIAL - NOISE BARRIER
- 5 ITEM 611 - 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET
- 6 ITEM 611 - EROSION CONTROL PAD FOR OUTLET PIPE (6" 4000 PSI COMPRESSIVE STRENGTH CONCRETE)
- 7 ITEM 659 - SEEDING AND MULCHING

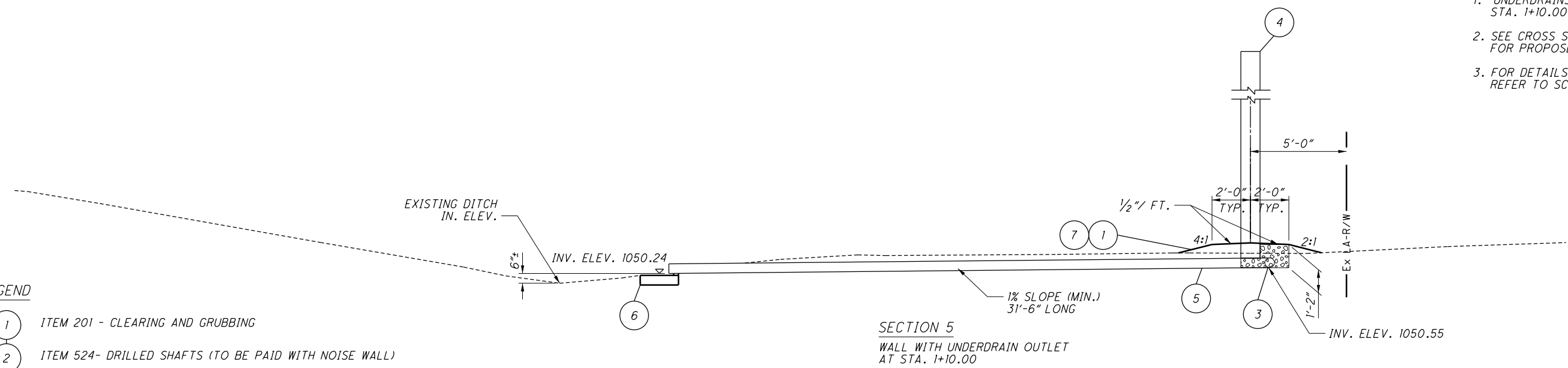


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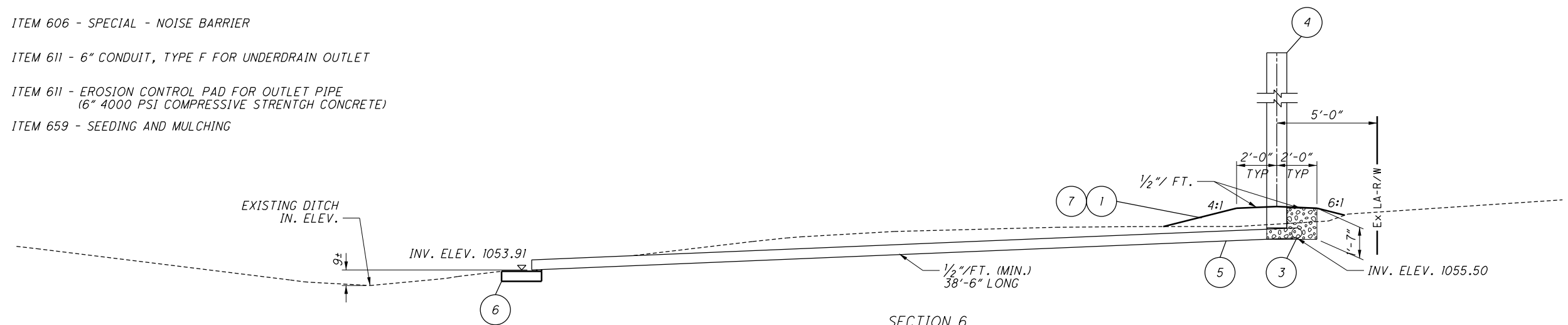
1. UNDERDRAINS INSTALLED FROM STA. 1+10.00 TO STA. 13+45.00
2. SEE CROSS SECTION SHEETS FOR PROPOSED SLOPES
3. FOR DETAILS NOT SHOWN REFER TO SCD NBS-1-09

LEGEND

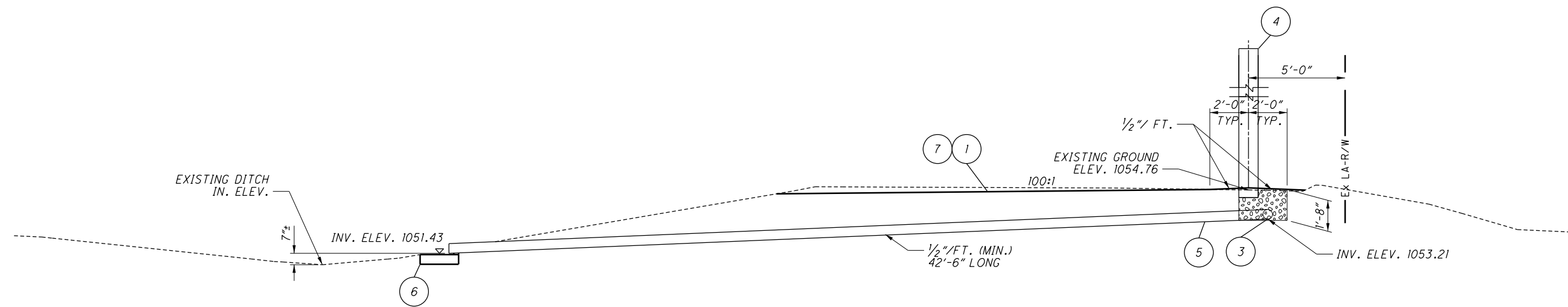
- 1 ITEM 201 - CLEARING AND GRUBBING
- 2 ITEM 524- DRILLED SHAFTS (TO BE PAID WITH NOISE WALL)
- 3 ITEM 605 - UNDERDRAIN MISC.: BARRIER DRAINAGE
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- 5 ITEM 611 - 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET
- 6 ITEM 611 - EROSION CONTROL PAD FOR OUTLET PIPE (6" 4000 PSI COMPRESSIVE STRENGTH CONCRETE)
- 7 ITEM 659 - SEEDING AND MULCHING



SECTION 5
WALL WITH UNDERDRAIN OUTLET
AT STA. 1+10.00



SECTION 6
WALL WITH UNDERDRAIN OUTLET
AT STA. 8+50.00



SECTION 7
WALL WITH UNDERDRAIN OUTLET
AT STA. 13+45.00

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GENERAL

THE CONTRACTOR SHALL SUBMIT IN WRITING A SCHEDULE OF OPERATIONS TO THE ENGINEER (SEE 108.02) AND RECEIVE APPROVAL IN WRITING BEFORE WORK IS STARTED ON THIS PROJECT. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

CONTRACTORS EQUIPMENT - OPERATION AND STORAGE

THE CONTRACTOR'S EQUIPMENT SHALL BE OPERATED IN THE DIRECTION OF TRAFFIC WHERE PRACTICAL. EQUIPMENT SHALL HAVE AT LEAST ONE AMBER FLASHING LIGHT. WHEN PARKED ALONG THE HIGHWAY, THE EQUIPMENT SHALL BE LOCATED EITHER A MINIMUM OF THIRTY FEET FROM THE EDGE OF PAVEMENT OR SIX FEET BEHIND GUARDRAIL WITH A MINIMUM OF 125 FEET OF GUARDRAIL PRECEDING THE EQUIPMENT. ALL OTHER EQUIPMENT, INCLUDING PRIVATE VEHICLES, SHALL BE STORED AT AN APPROVED CONTRACTOR'S STORAGE AREA.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

PIO PLAN NOTE:

CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER A MINIMUM OF 14 DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES, LANE RESTRICTIONS, LANE CLOSURES, AND ROAD CLOSURES. THE PROJECT ENGINEER WILL FORWARD THIS INFORMATION TO THE FOLLOWING:

DISTRICT PUBLIC INFORMATION OFFICER (PIO), BY FAX AT 614-887-4510 OR EMAIL AT D05.PIO@DOT.OHIO.GOV

DISTRICT PERMIT SECTION BY FAX AT 614-887-4525 OR EMAIL AT BRIAN.BOSCH@DOT.OHIO.GOV

CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION BY FAX AT 614-728-4099 OR EMAIL AT HAULING.PERMIT@DOT.OHIO.GOV

THE PIO WILL, IN TURN, NOTIFY THE PUBLIC, THE LOCAL EMERGENCY SERVICES, AFFECTED SCHOOLS AND BUSINESS, AND ANY OTHER IMPACTED LOCAL PUBLIC AGENCY OF ANY OF THE ABOVE MENTIONED ITEMS, VIA MEDIA SOURCES.

MOBILIZATION

THE CONTRACTOR SHALL ON ANY CONTRACT FOR WHICH HIS BID EXCEEDS \$50,000.00 INCLUDE AN AMOUNT TO COVER ANY APPLICABLE EXPENDITURES REFERRED TO UNDER ITEM 624 OF THE 2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS. PAYMENT SHALL BE THE LUMP SUM BID PRICE FOR ITEM 624, MOBILIZATION.

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

ITEM SPECIAL NOISE BARRIER (REFLECTIVE),

10' HEIGHT AND UNDER

OVER 10' TO 14' HEIGHT

OVER 14' TO 20' HEIGHT

4' TALL PANELS SHALL BE USED TO CONSTRUCT THE WALL WITH THE EXCEPTION OF SOME OF THE BOTTOM PANELS AS SHOWN ON THE PLAN AND PROFILE SHEETS (SHEET 10-12). THE SHOP DRAWINGS SHALL FOLLOW

THE PANEL HEIGHTS ON THE PLAN AND PROFILE SHEETS. POST CAPS SHALL BE INTEGRAL.

POSTS SHALL USE A CONCRETE WATERPROOFING ADMIXTURE, NOT AN EXTERIOR SEALER. PENETRON, BASF MASTERLIFE 300D, SIKA WT-240 P, SIKA MIX AE-6, AND CONBLOCK CDA ARE ODOT APPROVED CONCRETE WATERPROOFING ADMIXTURES.

THE NOISE WALL SHALL BE PAID FOR UNDER PAY ITEM ITEM 606 SPECIAL NOISE BARRIER (REFLECTIVE) THE 6" POST RUSTICATION GROOVE SHALL MEET THE TOP OF THE HIGHEST ADJACENT PANEL.

ROADWAY SIDE TEXTURE WILL BE ARCHITECTURAL POLYMERS ASHLAR 905 OR ENGINEER-APPROVED EQUAL. ROADWAY SIDE COLOR SHALL BE GREY, FEDERAL COLOR NUMBER 16515.

RESIDENT SIDE TEXTURE SHALL BE ARCHITECTURAL POLYMERS LARGE STONE OHIO DRYSTACK #9110 OR ENGINEER APPROVED EQUAL. RESIDENT SIDE COLOR SHALL BE BEIGE, FEDERAL COLOR NUMBER 17778.

CONTACT THE ODOT PROJECT ENGINEER AFTER INSTALLING THE FIRST ROW OF PANELS AND BEFORE INSTALLING THE NEXT ROW OF PANELS. THE ODOT PROJECT ENGINEER WILL DIRECT THE CONTRACTOR TO BEGIN INSTALLING THE NEXT ROW OF PANELS.

THE PROJECT ENGINEER SHOULD CONTACT OES TO PERFORM ACOUSTIC MEASUREMENTS AFTER EACH ROW IS INSTALLED IN ORDER TO AVOID DELAYING CONSTRUCTION. THE MEASUREMENTS WILL TAKE NO MORE THAN A HALF HOUR AFTER EACH ROW IS INSTALLED.

ITEM - 605 UNDERDRAIN MISC.: BARRIER DRAINAGE

WALL DRAINAGE HAS BEEN PROVIDED IN ACCORDANCE WITH ODOT STANDARD DRAWING NSB-1-09. TO ASSURE POSITIVE DRAINAGE TO THE PRECAST OUTLETS, THE 6" UNDERDRAINS AND GRANULAR MATERIAL (#8, #9 or #57 STONE) SHALL BE PLACED AT A MINIMUM OF 1% SLOPE AS DETAILED IN THE PLANS. PERFORM ALL WORK ACCORDING TO CMS, STANDARD CONSTRUCTION DRAWINGS AND AS DETAILED IN THE NOISE WALL PLANS.

PAYMENT WILL INCLUDE THE COST OF LABOR, EQUIPMENT AND MATERIAL TO CONSTRUCT THE TRENCH, 6" UNDERDRAIN PIPE AND BACKFILL WITH STONE.

THE FOLLOWING QUANTITY HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM UNDERDRAIN, MISC.: BARRIER DRAINAGE 1235 FT.

TOPSOIL

TOPSOIL SHALL BE STRIPPED FROM AREAS TO BE EXCAVATED OR FILLED. ADDITIONAL SUITABLE MATERIAL REQUIRED TO FILL THE TOPSOIL STRIP AREA IN EMBANKMENT AREAS, TOPSOIL STRIPPING, AND ANY STOCKPILING INCLUDING ALL LABOR, EQUIPMENT, AND MATERIAL SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT BID ITEM 203 - EXCAVATION OR ITEM 203- EMBANKMENT. NO ADDITIONAL COMPENSATION WILL BE PROVIDED.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 9:00PM AND 7:00AM . IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER 4 M. GAL.

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

AMERICAN ELECTRIC POWER CO. (DISTRIBUTION)
777 HOPEWELL DRIVE
HEATH, OHIO 43056
ATTN: PAUL PAXTON
PHONE: 740-348-5322
EMAIL: ptpaxton@aep.com

LUMEN (FORMERLY CENTURYLINK)
2025 AKRON RD.
WOOSTER, OHIO 44691
ATTN: JEFF SCHOONOVER
PHONE: 330-262-1128
EMAIL: Jeffery.l.schoonover@lumen.com

ENDANGERED BAT HABITAT

INDIANA BAT/NORTHERN LONG-EARED BAT: THE PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. THE CONTRACTOR SHALL NOT REMOVE TREES UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THE CONTRACTOR SHALL DEMARCAT CLEARING LIMITS IN THE FIELD TO AVOID ANY UNAUTHORIZED TREE CLEARING. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 2/62 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL

POSITIONING METHOD: GPS
MONUMENT TYPE: 1" rebar w/ODOT cap,
1/2 " rebar in 8" concrete

VERTICAL POSITIONING ODOT VRS Derived, NAVD88

ORTHOMETRIC HEIGHT DATUM: STATE PLANE COORDINATE SYSTEM
GEOID: GEOID18

SURVEYING PARAMETERS (CONTINUED)

HORIZONTAL POSITIONING NAD83(2011), SPCS, Ohio
South 3402 Grid Values

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

IN ADDITION TO THE REQUIREMENTS OF ITEM 623 CONSTRUCTION LAYOUT STAKES AND SURVEYING, THE CONTRACTOR SHALL PROVIDE THE FOLLOWING INFORMATION TO THE DEPARTMENT:

THE CONTRACTOR SHALL PROVIDE AS-BUILT DATA FOR THE SPECIFIED COMPLETED CONSTRUCTION ITEMS IN OHIO STATE PLANE COORDINATES (GRID). THE CONSTRUCTION ITEMS SHALL BE LOCATED AS PER THE SURVEY FEATURE CODE LIST FOUND ON THE OHIO DEPARTMENT OF TRANSPORTATION OFFICE OF CADD & MAPPING SERVICES WEBSITE. AN EMAIL CONTAINING A COMMA DELIMITED ASCII FILE AND A SURVEYOR'S CERTIFICATION SHALL BE DELIVERED TO Cody.Gierhart@dot.ohio.gov AFTER ALL INFORMATION HAS BEEN COLLECTED. THE ASCII FILE SHALL INCLUDE A HEADER CONTAINING NAME OF SURVEYOR, DATE(S) OF COLLECTION, HORIZONTAL DATUM (I.E. NAD83 (2011), OHIO STATE PLANE COORDINATE SYSTEM NORTH OR SOUTH), VERTICAL DATUM (I.E. NAVD 88, GEOID12A) AND METHOD OF COLLECTION (I.E. OHIO VRS, GPS RTK, TOTAL STATION, ETC.) AND BE IN A TABLE FORM AS FOLLOWS:

POINT NUMBER, NORTHING, EASTING, ELEVATION, FEATURE CODE, DESCRIPTION

BELOW IS A LIST OF THE ITEMS THE CONTRACTOR IS REQUIRED TO PROVIDE.
- NOISE BARRIER WALL

THE ABOVE ITEMS SHALL BE COLLECTED USING SURVEY GRADE EQUIPMENT MEETING THE REQUIREMENTS OF SECTION 400 IN THE OHIO DEPARTMENT OF TRANSPORTATION SURVEY & MAPPING SPECIFICATIONS MANUAL.

ALL COST ASSOCIATED WITH OBTAINING THE INFORMATION LISTED ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 623 CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN.

IN ADDITION TO THE ABOVE REQUIREMENTS, THE LOCATIONS OF ALL PROPOSED GUARDRAIL INSTALLATIONS SHALL BE STAKED BY THE CONTRACTOR PRIOR TO INSTALLATION ON THIS PROJECT. THE CONTRACTOR IS REQUIRED TO STAKE EACH LOCATION TO INDICATE THE BEGINNING AND END OF THE PROPOSED GUARDRAIL RUN. THIS WILL ALSO INCLUDE INDICATING THE TYPE OF END TREATMENT TO BE INSTALLED AT EACH LOCATION. THE CONTRACTOR SHALL STAKE EACH LOCATION AT LEAST TWO (2) DAYS PRIOR TO INSTALLATION.

BEFORE GIVING THE CONTRACTOR FINAL APPROVAL TO INSTALL THE RUN OF GUARDRAIL, THE PROJECT ENGINEER MAY ADJUST THE LOCATION AS STAKED TO PROVIDE THE MAXIMUM PROTECTION FOR THE TRAVELING PUBLIC. NO GUARDRAIL WILL BE INSTALLED UNTIL THE PROJECT ENGINEER GIVES THE CONTRACTOR APPROVAL FOR EACH LOCATION.

PAYMENT FOR STAKING WILL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO PERFORM THE WORK AS DESCRIBED ABOVE AND WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 623 CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN.

THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO PERFORM THE WORK AS DESCRIBED ABOVE.

ITEM 623 CONSTRUCTION LAYOUT STAKES AND SURVEYING,
AS PER PLAN LUMP SUM

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GENERAL NOTES

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GENERAL:

ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (CURRENT EDITION). COPIES ARE AVAILABLE FROM:

THE OHIO DEPARTMENT OF TRANSPORTATION
BUREAU OF TRAFFIC,
1980 WEST BROAD STREET
COLUMBUS, OHIO 43223.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRES.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN

NOTIFICATION OF CONSTRUCTION INITIATION:

AT LEAST FOURTEEN DAYS PRIOR TO STARTING INITIAL CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL ADVISE THE DISTRICT OFFICE OF COMMUNICATIONS BY FAX AT 614-887-4510 OR EMAIL AT D05.PIO@DOT.OHIO.GOV

DISTRICT PERMIT SECTION BY FAX AT 614-887-4525 OR EMAIL AT BRIAN.BOSCH@DOT.OHIO.GOV

CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION BY FAX AT 614-728-4099 OR EMAIL AT HAULING.PERMIT@DOT.OHIO.GOV

NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION OF TRAFFIC RESTRICTIONS TIME TABLE

ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
RAMP & ROAD CLOSURES	>= 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	<= 12 HOURS	4 CALENDAR DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

PERMITTED LANE CLOSURE SCHEDULE (PLCS)

LANE CLOSURE(S) SHALL CONFORM TO THE PLCS. PUBLISHED PLCS INFORMATION CAN BE FOUND ON THE ODOT WEBSITE AT: [HTTPS://WWW.TRANSPORTATION.OHIO.GOV/WPS/PORTAL/GOV/ODOT/WORKING/DATA-TOOLS/RESOURCES/PERMITTED-LANE-CLOSURE](https://www.transportation.ohio.gov/wps/portal/gov/odot/working/data-tools/resources/permited-lane-closure)

THE MONTHLY PUBLISHED SCHEDULES REQUIRED TO BE USED, FOR EACH PLCS SEGMENT WITHIN THE PROJECT AREA, ARE THOSE THAT COMPRISE THE CONSECUTIVE 12-MONTH PERIOD BEGINNING 15 MONTHS PRIOR TO THE MONTH AND YEAR OF SALE AND ENDING 4 MONTHS PRIOR TO THE MONTH AND YEAR OF SALE. THESE SAME 12 MONTHS APPLY FOR THE LIFE OF THE PROJECT AND SHALL BE APPLIED TO EACH RESPECTIVE MONTH OF CONSTRUCTION (MONTH OF LANE CLOSURE(S) SHALL MATCH MONTH OF PLCS USED). LANE CLOSURE(S) IN PLACE FOR MULTIPLE MONTHS SHALL ALWAYS COMPLY WITH THE CURRENT RESPECTIVE MONTH.

(FOR EXAMPLE: IF THE SALE DATE FOR THE PROJECT WAS MARCH OF 2021, THE MONTHLY PUBLISHED SCHEDULES FOR EACH APPLICABLE PLCS SEGMENT WOULD BE DECEMBER 2019 TO NOVEMBER 2020. IF THIS WAS A THREE-YEAR PROJECT, YEAR THREE WOULD STILL BE USING THE DECEMBER 2019 TO NOVEMBER 2020 MONTHLY SCHEDULES. IF THE PROJECT DESIRED TO CLOSE TWO LANES IN JUNE 2021, REFERENCE WOULD BE MADE TO THE JUNE 2020 SCHEDULE(S) FOR THE RESPECTIVE PLCS SEGMENT(S). IF THE SAME TWO LANES WERE DESIRED TO BE CLOSED AGAIN IN JULY 2021, REFERENCE WOULD BE MADE TO THE JULY 2020 SCHEDULE(S) FOR THE RESPECTIVE PLCS SEGMENT(S).)

MORE RESTRICTIVE CHANGES TO THE ALLOWABLE LANE CLOSURE HOURS ARE AT THE DISCRETION OF THE ENGINEER IN ORDER TO COMPLY WITH THE TRAFFIC MANAGEMENT IN WORK ZONES POLICY (21-008(P)) AND STANDARD PROCEDURE (123-001(KSP)).

LESS RESTRICTIVE CHANGES TO THE ALLOWABLE LANE CLOSURE HOURS ARE SUBJECT TO THE TRAFFIC MANAGEMENT IN WORK ZONES POLICY (21-008(P)) AND STANDARD PROCEDURE (123-001(KSP)) AND SHALL NOT BE IMPLEMENTED UNTIL, AND UNLESS, APPROVED BY THE PROPER ODOT AUTHORITY. [EXISTING MOT EXCEPTIONS THAT HAVE ALREADY BEEN APPROVED IN ACCORDANCE TO THE TRAFFIC MANAGEMENT IN WORK ZONES POLICY AND STANDARD PROCEDURE ARE DETAILED IN THE APPROVED MAINTENANCE OF TRAFFIC (MOT) POLICY EXCEPTION(S) PLAN NOTE.]

ALLOWABLE LANE CLOSURE HOURS FOR FACILITIES NOT COVERED BY THE PLCS, IF ANY, SHALL BE AS SPECIFIED ELSEWHERE IN THE PLANS.

ITEM 614. MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS FOURTH OF JULY
NEW YEAR'S LABOR DAY
MEMORIAL DAY THANKSGIVING
(OTHER HOLIDAY OR EVENT)

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00AM FRIDAY
THURSDAY	(THANKSGIVING ONLY) 6:00AM WEDNESDAY THROUGH 6:00AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE PER THE LANE VALUE CONTRACT (PN 127).

WORK SITE LIGHTING:

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

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SHEET NUMBER	LOCATION STA. TO STA. CL. WALL	203	203	659
		EXCAVATION	EMBANKMENT	SEEDING AND MULCHING
		CY	CY	SY
13	0+75.00 - 1+00.00	0	2	39
13	1+00.00 - 1+50.00	0	2	78
13	1+50.00 - 2+00.00	5	0	97
13	2+00.00 - 2+50.00	9	0	158
14	2+50.00 - 3+00.00	0	3	150
14	3+00.00 - 3+50.00	0	4	100
14	3+50.00 - 4+00.00	0	2	67
14	4+00.00 - 4+50.00	0	0	56
14	4+50.00 - 5+00.00	0	0	56
15	5+00.00 - 5+50.00	0	0	56
15	5+50.00 - 6+00.00	1	0	69
15	6+00.00 - 6+50.00	6	0	142
15	6+50.00 - 7+00.00	0	12	183
16	7+00.00 - 7+50.00	11	0	161
16	7+50.00 - 8+00.00	9	0	156
16	8+00.00 - 8+50.00	5	6	131
16	8+50.00 - 9+00.00	0	12	111
17	9+00.00 - 9+50.00	0	12	114
17	9+50.00 - 10+00.00	0	6	89
17	10+00.00 - 10+50.00	3	1	111
17	10+50.00 - 11+00.00	3	0	106
18	11+00.00 - 11+50.00	0	0	56
18	11+50.00 - 12+00.00	0	6	119
18	12+00.00 - 12+50.00	6	8	200
18	12+50.00 - 13+00.00	11	3	214
19	13+00.00 - 13+50.00	8	2	211
19	13+50.00 - 13+75.00	4	1	67
TOTALS CARRIED TO GENERAL SUMMARY		81	82	3097

ITEM 659 - SEEDING AND MULCHING = 3097 SQ YD

ITEM 659 - TOPSOIL:
THE APPLICATION RATE FOR THIS ITEM IS
111 CU YDS PER 1000 SQ YDS OF SEEDING

3097 SQ YD / 1000 = 3.1
3.1 X 111 CU YDS = 344 CU YDS

ITEM 659 - REPAIR SEEDING AND MULCHING:
THE APPLICATION RATE FOR THIS ITEM IS
5% OF THE SEEDING AREA.

3,097 SQ YD OF SEEDING AND MULCHING (FROM TABLE)

3097 SQ YD X 0.05 = 155 SQ YDS

TOTAL CARRIED TO GENERAL SUMMARY:
ITEM 659 - REPAIR SEEDING = 155 SQ YD
AND MULCHING

ITEM 659 - COMMERCIAL FERTILIZER:
THE APPLICATION RATE FOR THIS ITEM IS
30 POUNDS PER 1000 SQ FT OF SEEDING.

3,097 SQ YD OF SEEDING AND
MULCHING (FROM TABLE)

3097 X 9 SQ FT / SQ YD = 27,873 SQ FT
27873 / 1,000 = 27.9
27.9 X 30 POUNDS = 837 POUNDS = 0.4 TONS

TOTAL CARRIED TO GENERAL SUMMARY:
ITEM 659 - COMMERCIAL FERTILIZER = 0.4 TON

ITEM 659 - INTER-SEEDING:
THE APPLICATION RATE FOR THIS ITEM IS
5% OF THE SEEDING AREA.

3,007 SQ YD OF SEEDING AND MULCHING (FROM TABLE)

3097 SQ YD X 0.05 = 155 SQ YDS

TOTAL CARRIED TO GENERAL SUMMARY:
ITEM 659 - INTER-SEEDING = 155 SQ YD

ITEM 659 - WATER:
THE APPLICATION RATE FOR THIS ITEM IS
2 APPLICATIONS OF 300 GALLONS PER 1000

3,097 SQ YD OF SEEDING AND MULCHING (FROM TABLE)

3097 X 9 SQ FT / SQ YD = 27,873 SQ FT

27873 / 1,000 = 27.9

27.9 X 300 GAL. X 2 = 16,740 GALLONS = 17 M GAL

TOTAL CARRIED TO GENERAL SUMMARY:
ITEM 659 - WATER = 17 M GAL

ITEM 659 - LIME:
THE APPLICATION RATE FOR THIS ITEM IS
BASED ON THE AREA OF SEEDING.

3,097 SQ YD OF SEEDING AND MULCHING (FROM TABLE)

3097 X 9 SQ FT / SQ YD = 27,873 SQ FT

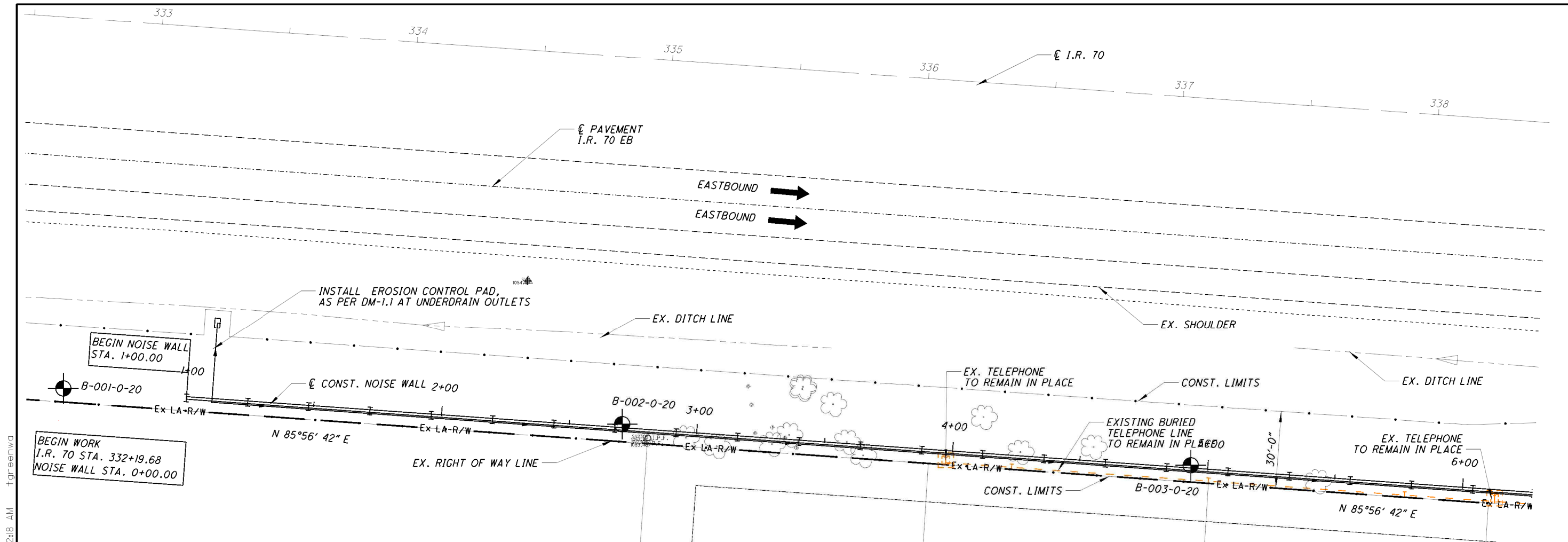
27873 / 43,560 SQ FT / ACRE = 0.64 ACRE

TOTAL CARRIED TO GENERAL SUMMARY:
ITEM 659 - LIME = 0.64 ACRE

CALCULATED
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CHECKED
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EARTHWORK SUBSUMMARY

LIC-70-1.90



I.R. 70 EB ELEV.	1054.87	1055.10	1055.25	1055.46	1055.30	1055.39	1055.38	1055.65	1055.64	1055.56	1055.90	1056.31	1056.11	1056.36	1056.26	1056.29	1056.55	1056.46	1056.37	1056.69	1056.83	I.R. 70 EB ELEV.	
TOP OF WALL ELEV.	1062.33	1066.33	1070.33	1070.33	1070.33	1070.33	1070.33	1070.33	1070.33	1070.33	1070.33	1070.33	1070.33	1070.33	1070.33	1070.33	1071.33	1072.33	1073.33	1073.33	1073.33	TOP OF WALL ELEV.	
BOT. OF WALL ELEV.	1051.33	1051.33	1052.33	1053.33	1053.33	1053.33	1053.33	1053.33	1052.33	1052.33	1052.33	1052.33	1053.33	1053.33	1054.33	1054.33	1055.33	1055.33	1056.33	1056.33	1056.53	1056.83	BOT. OF WALL ELEV.
1,070			TOP OF WALL	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	1,070
1,065		2																					1,065
1,060		1																					1,060
1,055	EX. GROUND	PROP. GROUND	I.R. 70 EB	PROP. GROUND	PROP. GROUND	PROP. GROUND	PROP. GROUND	PROP. GROUND	PROP. GROUND	PROP. GROUND	PROP. GROUND	PROP. GROUND	PROP. GROUND	PROP. GROUND	PROP. GROUND	PROP. GROUND	PROP. GROUND	PROP. GROUND	PROP. GROUND	PROP. GROUND	PROP. GROUND	PROP. GROUND	1,055
1,050	STA. 1+10.00 INV. EL. = 1050.55																						1,050
PRO. GRADE ELEV.	1051.83	1052.02	1052.89	1053.97	1054.26	1054.26	1054.26	1053.94	1053.46	1052.88	1052.88	1053.11	1053.61	1054.24	1054.87	1055.49	1056.03	1056.43	1056.83	1057.14	1057.61	1057.61	PRO. GRADE ELEV.
EX. GROUND ELEV.	1051.29	1052.02	1052.89	1053.97	1054.32	1054.67	1054.41	1053.94	1053.46	1052.50	1052.81	1053.11	1053.61	1054.24	1054.87	1055.49	1056.03	1056.43	1056.83	1057.14	1057.61	1057.61	EX. GROUND ELEV.
1+00		2+00																					6+00

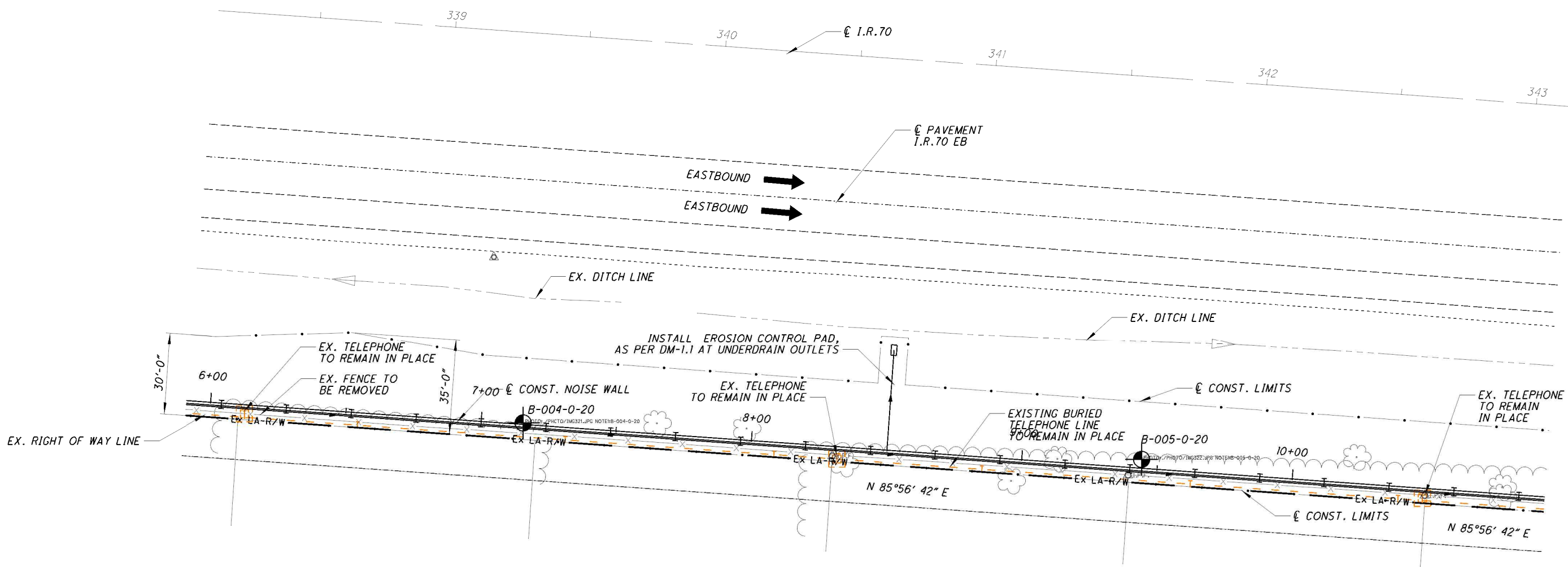
PLAN AND PROFILE
STA. 1+00.00 TO STA. 6+00.00

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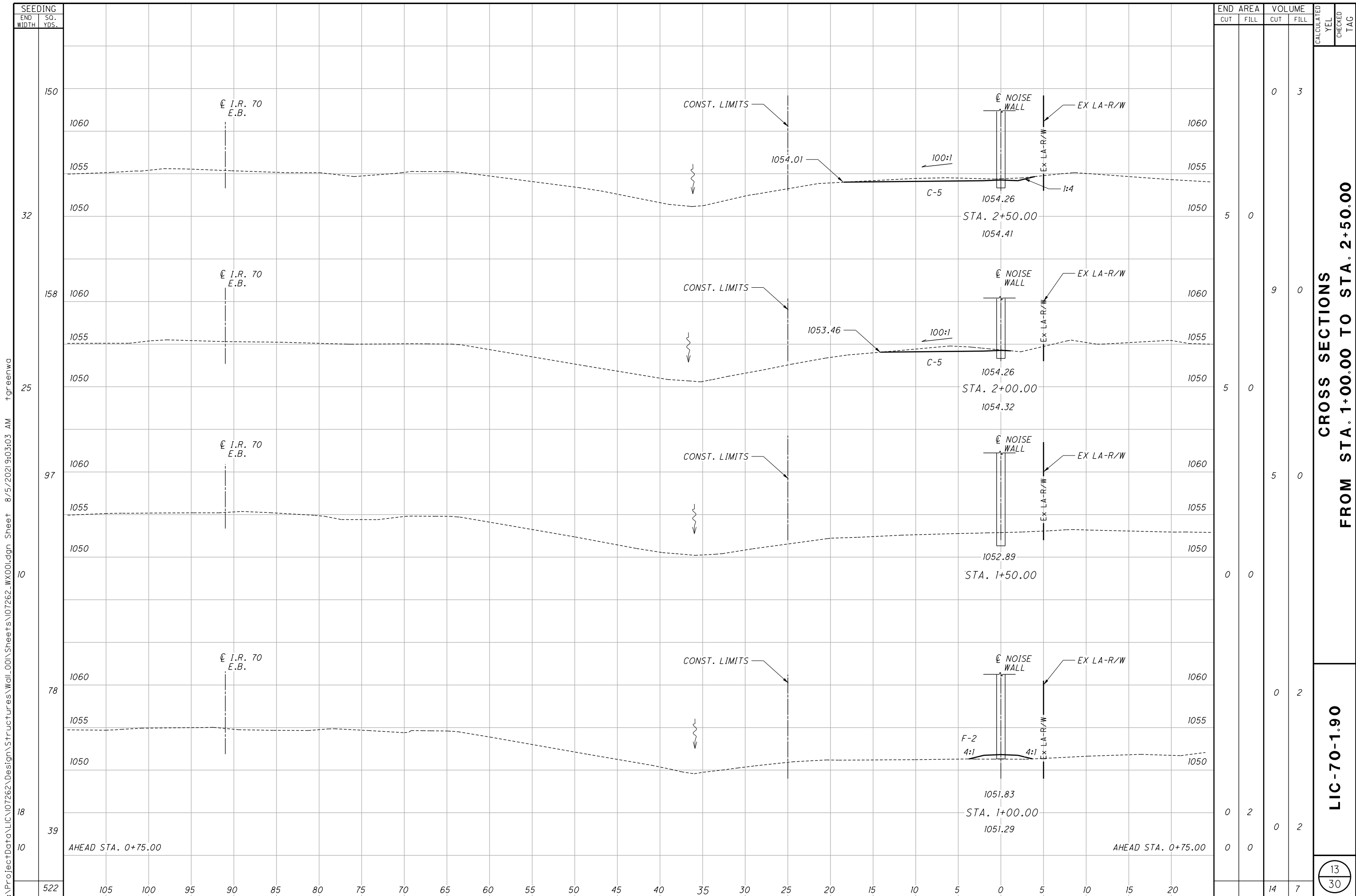
PLAN AND PROFILE
FROM STA. 6+00.00 TO STA. 10+50.00

LIC-70-1.90



I.R. 70 EB ELEV.	1056.83	1056.26	1056.44	1056.46	1056.42	1056.50	1056.36	1056.07	1056.14	1055.80	1055.86	1055.71	1055.62	1055.26	1055.17	1054.89	1054.86	1054.74	1054.78	I.R. 70 EB ELEV.	
TOP OF WALL ELEV.		1073.33	1073.33	1073.33	1073.33	1073.33	1073.33	1073.33	1073.33	1073.33	1073.33	1073.33	1073.33	1073.33	1073.33	1073.33	1073.33	1073.33	1073.33	1073.33	TOP OF WALL ELEV.
BOT. OF WALL ELEV.		1057.33	1057.33	1057.33	1057.33	1057.33	1057.33	1057.33	1057.33	1056.33	1056.33	1056.33	1056.33	1056.33	1056.33	1056.33	1056.33	1056.33	1057.33	1057.33	BOT. OF WALL ELEV.
1,070		22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	1,070
1,065		19 - PANELS @ 24'-00" = 456'-0"																			
1,060																					
1,055	EX. GROUND	PROP. GROUND																			PROP. GROUND
1,050																					
PRO. GRADE ELEV.	1057.61	1057.90	1058.20	1058.45	1058.61	1058.75	1058.50	1057.99	1057.48	1057.37	1057.37	1057.37	1057.37	1057.37	1057.37	1057.37	1057.37	1057.41	1057.87	1058.14	PRO. GRADE ELEV.
EX. GROUND ELEV.	1057.61	1057.90	1058.20	1058.45	1058.61	1058.75	1058.50	1057.99	1057.48	1056.91	1056.52	1056.46	1056.40	1056.33	1056.49	1056.94	1057.41	1057.87	1058.14	1058.14	EX. GROUND ELEV.
	6+00				7+00				8+00					9+00				10+00			

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SEEDING	
END WIDTH	SO. YDS.
522	
105	
100	
95	
90	
85	
80	
75	
70	
65	
60	
55	
50	
45	
40	
35	
30	
25	
20	
15	
10	
5	
0	
5	
10	
15	
20	

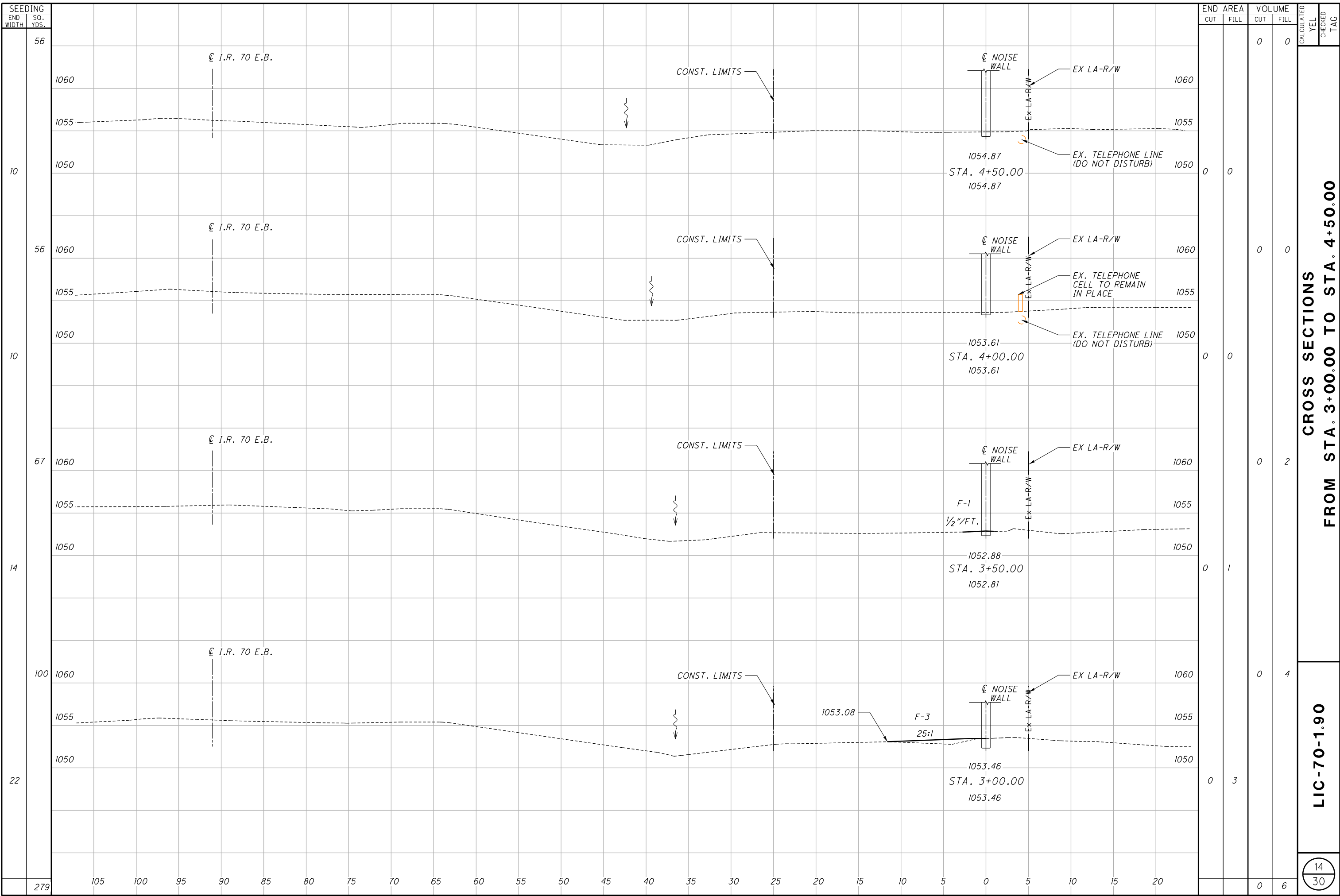
END AREA		VOLUME		CALCULATED YEL	CHECKED TAG
CUT	FILL	CUT	FILL		
		0	3		
5	0	5	0		
5	0	5	0		
0	0	0	0		
0	2	0	2		
0	0	0	0		
		14	7		

CROSS SECTIONS
FROM STA. 1+00.00 TO STA. 2+50.00

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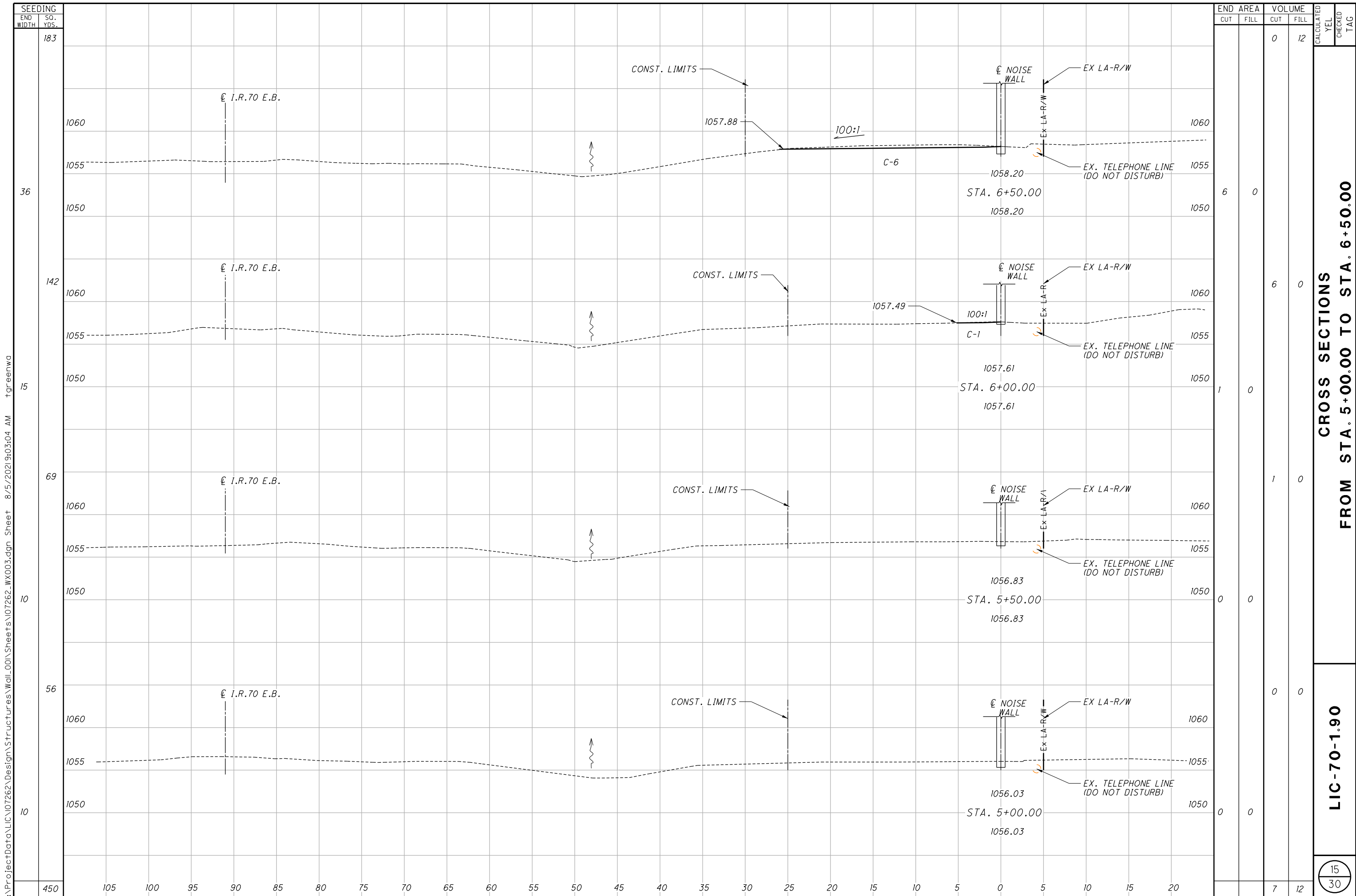
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CROSS SECTIONS FROM STA. 3+00.00 TO STA. 4+50.00

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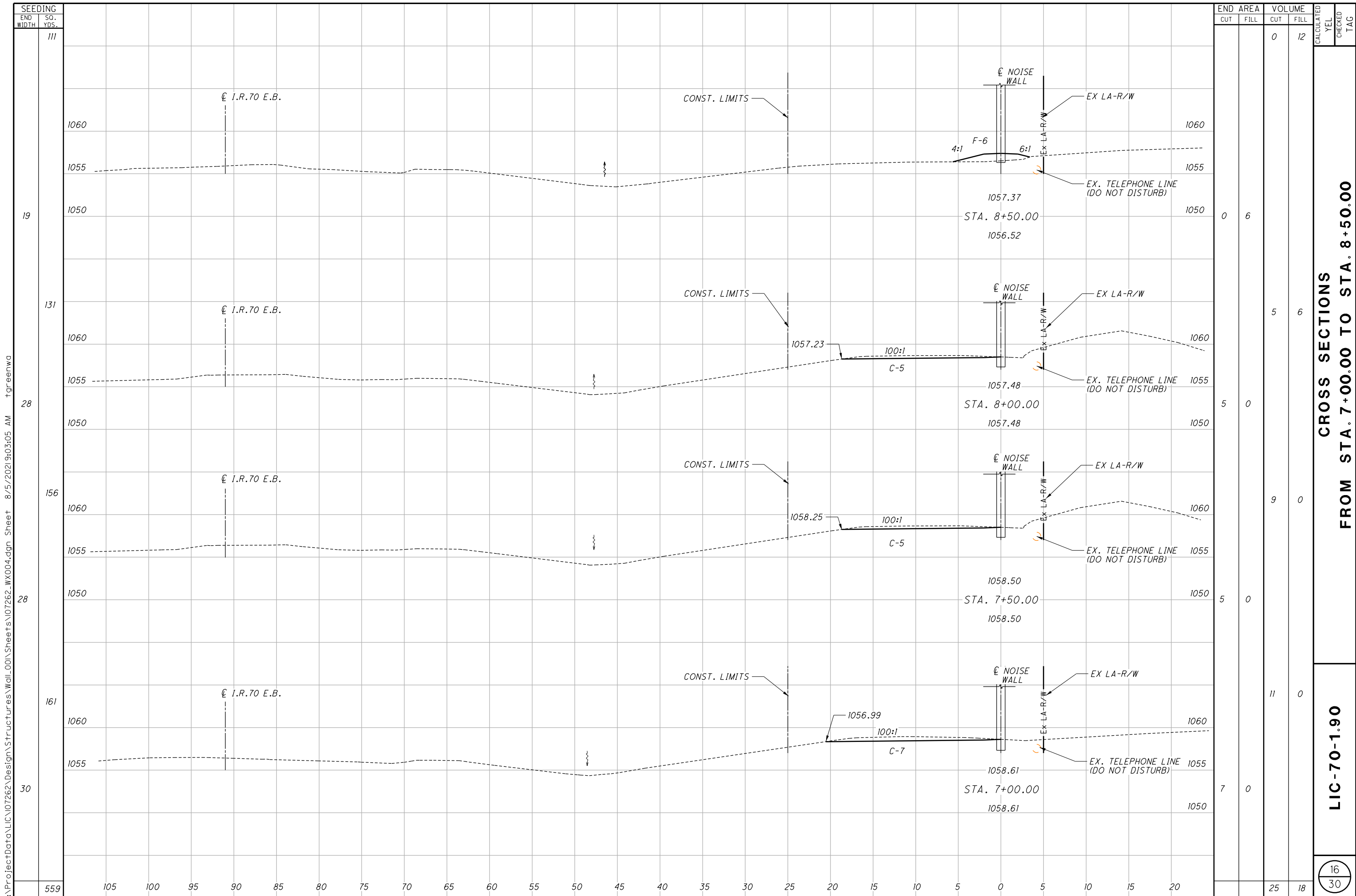
SEEDING	
END WIDTH	SO. YDS.
183	
36	
142	
15	
69	
10	
56	
10	
450	

END AREA		VOLUME		CALCULATED YEL	CHECKED TAG
CUT	FILL	CUT	FILL		
		0	12		
6	0	6	0		
1	0	1	0		
0	0	0	0		
0	0	0	0		
7	12	7	12		

**CROSS SECTIONS
FROM STA. 5+00.00 TO STA. 6+50.00**

LIC-70-1.90

15
30



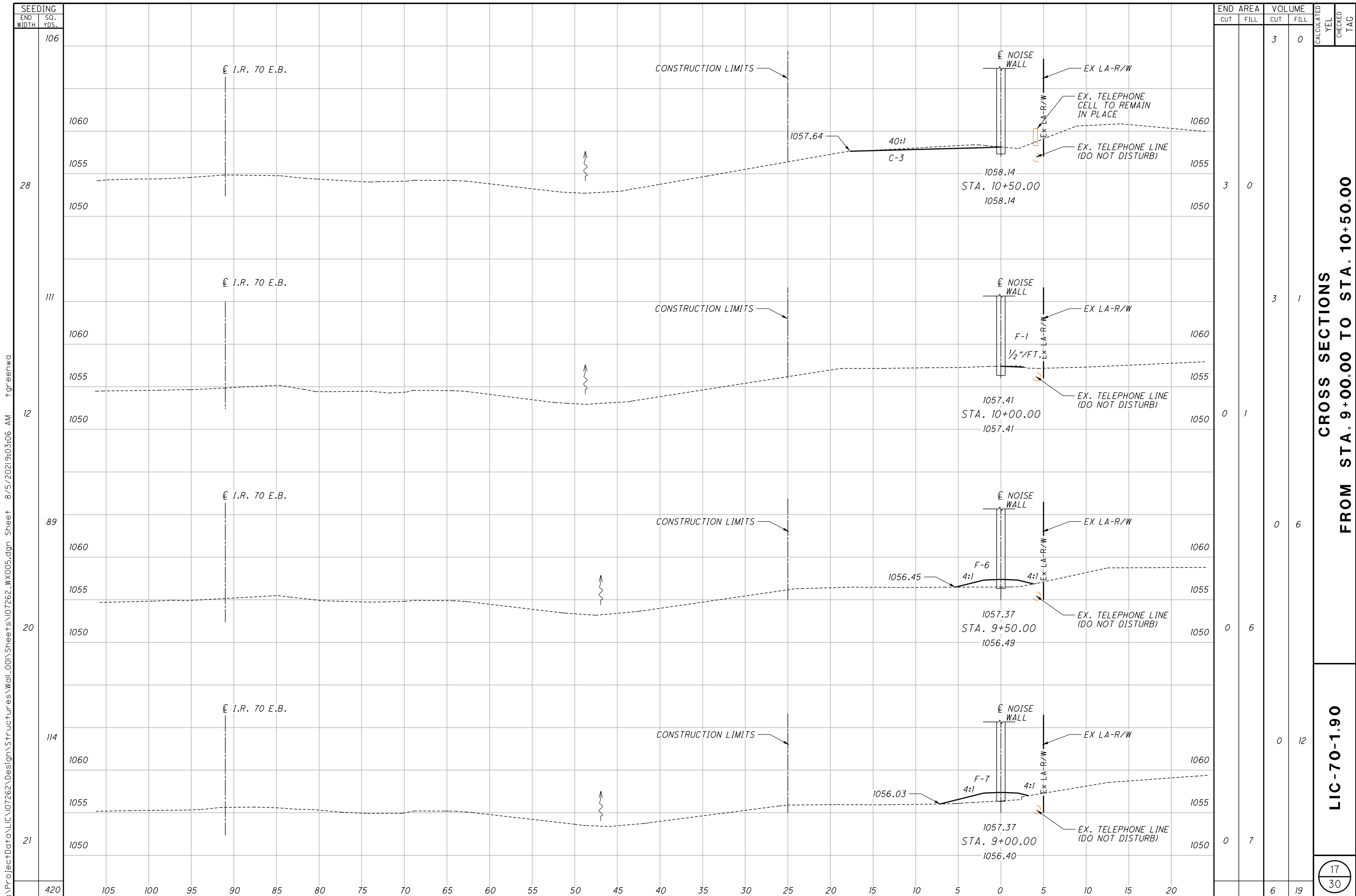
SEEDING	
END WIDTH	SO. YDS.
111	
19	
131	
156	
161	
559	

END AREA		VOLUME		CALCULATED YEL	CHECKED TAG
CUT	FILL	CUT	FILL		
		0	12		
0	6				
5	0	5	6		
5	0	9	0		
5	0	11	0		
7	0	25	18		

CROSS SECTIONS
FROM STA. 7+00.00 TO STA. 8+50.00

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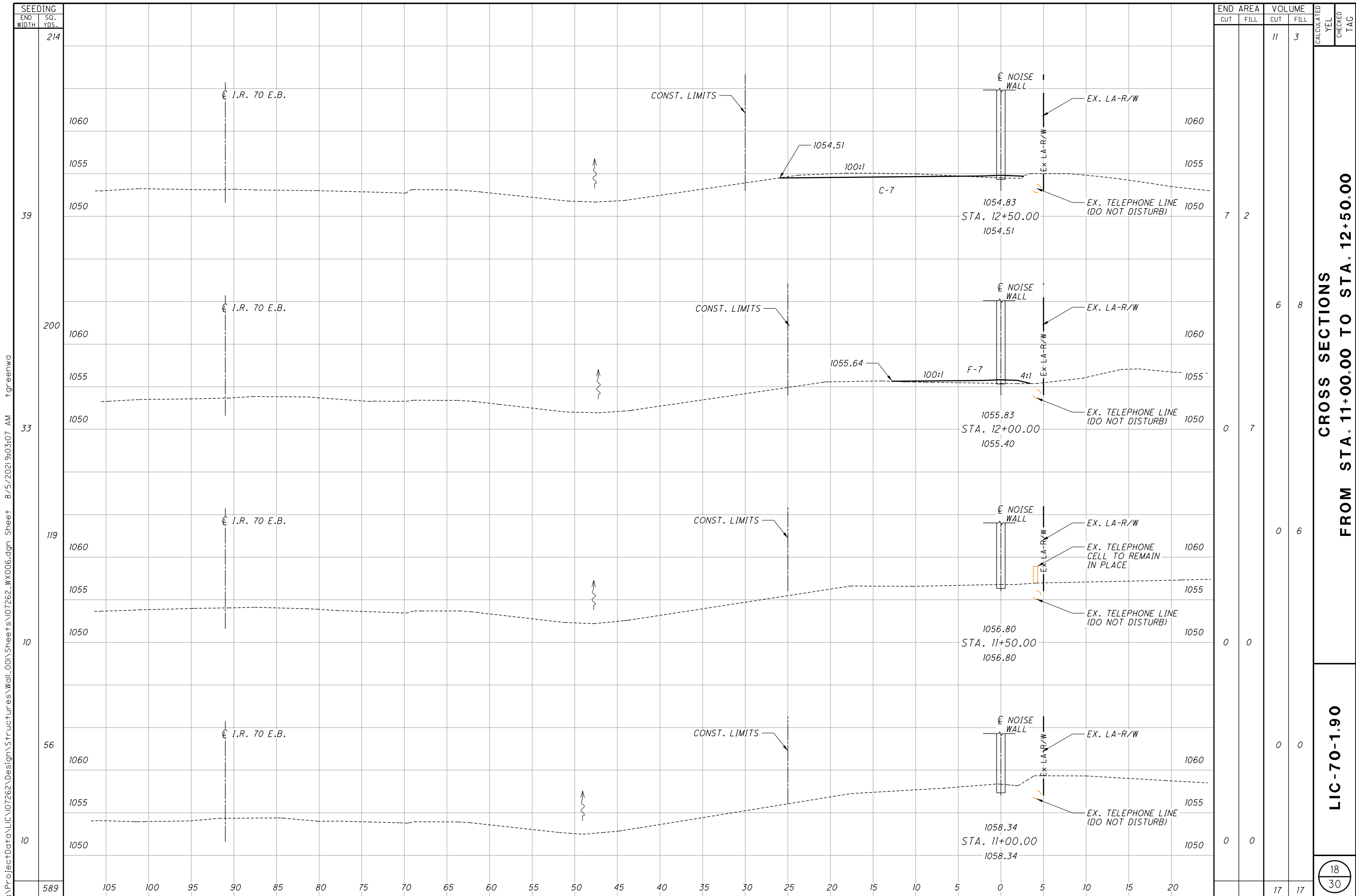
SEEDING	
END WIDTH	SO. YDS.
28	106
111	106
89	106
114	106
420	106

END AREA		VOLUME		CALCULATED YEL	CHECKED TAG
CUT	FILL	CUT	FILL		
3	0	3	0		
0	1	0	1		
0	6	0	6		
0	12	0	12		
0	7	0	7		
6	19	6	19		

CROSS SECTIONS FROM STA. 9+00.00 TO STA. 10+50.00

LIC-70-1.90

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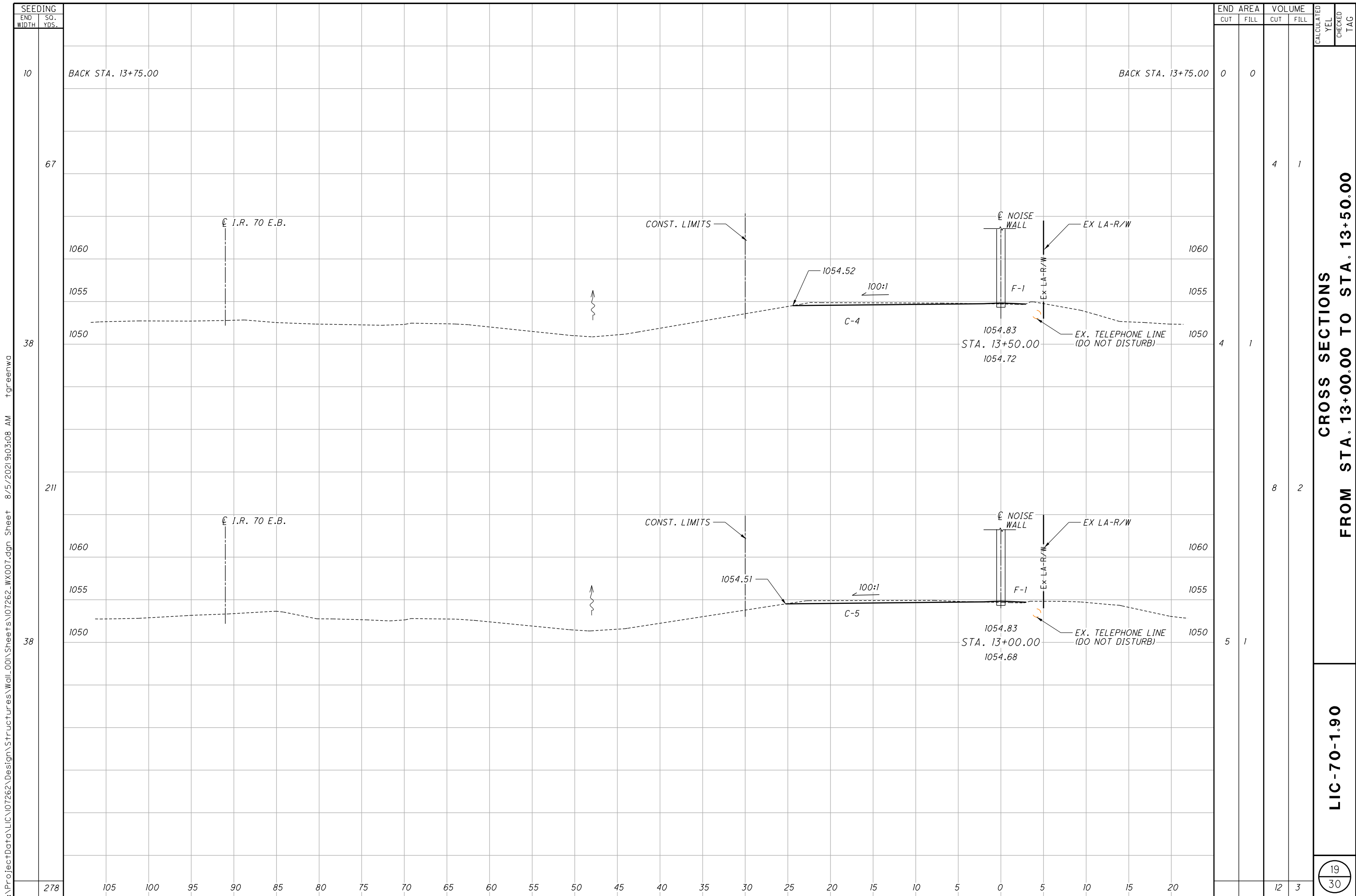
SEEDING	
END WIDTH	SO. YDS.
39	214
200	
33	
119	
10	
56	
10	
589	

END AREA		VOLUME		CALCULATED YEL	CHECKED TAG
CUT	FILL	CUT	FILL		
7	2	11	3		
0	7	6	8		
0	0	0	6		
0	0	0	0		
0	0	0	0		
0	0	17	17		

CROSS SECTIONS FROM STA. 11+00.00 TO STA. 12+50.00

LIC-70-1.90

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SEEDING	
END WIDTH	SO. YDS.
10	BACK STA. 13+75.00
67	
38	
211	
38	
278	

END AREA		VOLUME		CALCULATED	
CUT	FILL	CUT	FILL	YEL	CHECKED TAG
0	0	4	1		
4	1	8	2		
5	1	12	3		

CROSS SECTIONS FROM STA. 13+00.00 TO STA. 13+50.00

LIC-70-1.90

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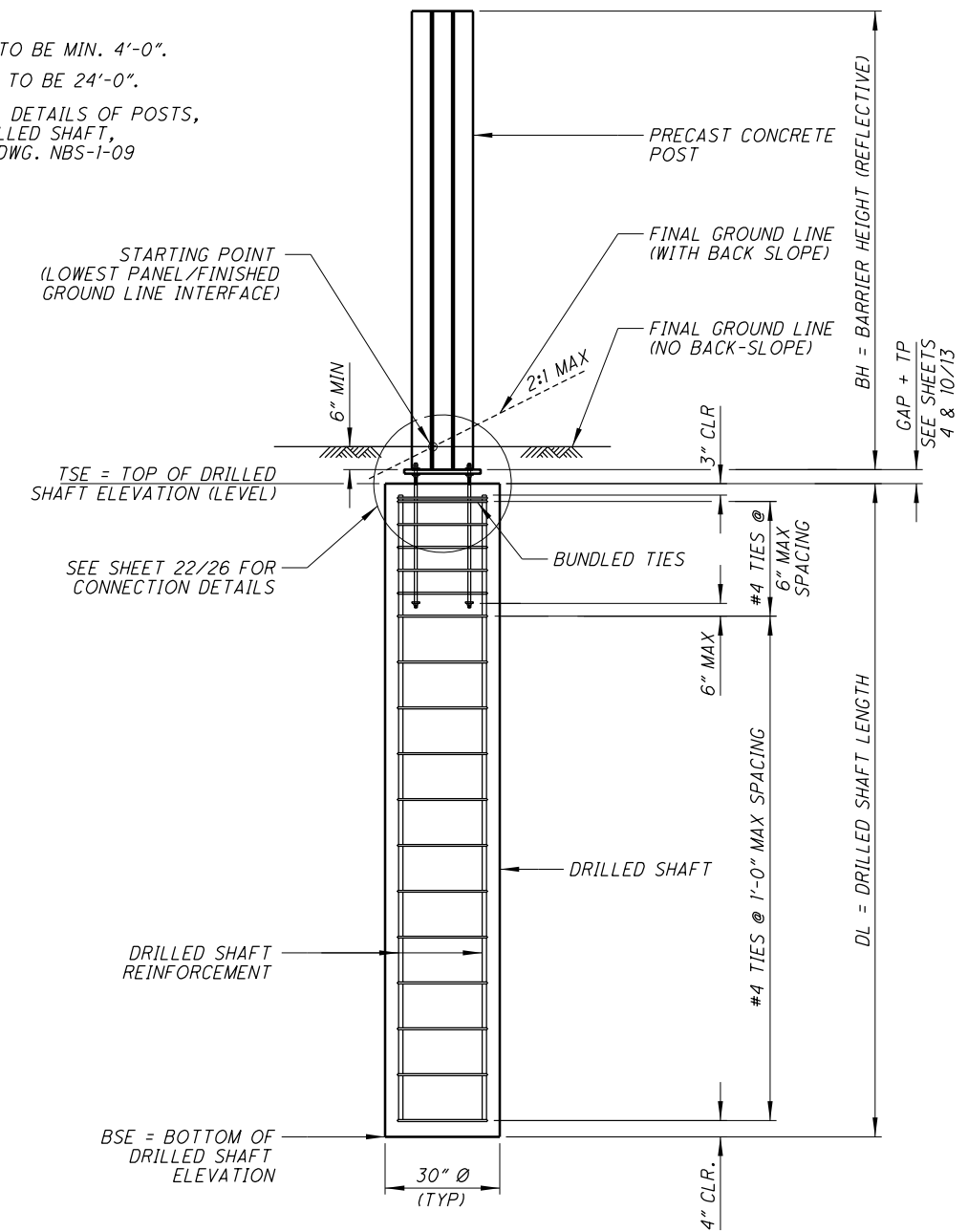
NOISE BARRIER DRILL SHAFT DATA

DRILLED SHAFT NO.	NOISE BARRIER STATION	TYPE OF 20" PRECAST CONCRETE POST	TOP OF SHAFT ELEVATION	BOTTOM OF SHAFT ELEVATION	SHAFT LENGTH (FT.)	BORING USED
1	1+00.00	B	1051.04	1038.04	13	B-001
2	1+24.00	A	1051.04	1038.04	13	
3	1+48.00	A	1051.04	1038.04	13	
4	1+72.00	A	1052.04	1043.04	9	B-002
5	1+96.00	A	1053.04	1044.04	9	
6	2+20.00	A	1053.04	1044.04	9	
7	2+44.00	A	1053.04	1044.04	9	
8	2+68.00	A	1053.04	1044.04	9	
9	2+92.00	A	1052.04	1043.04	9	
10	3+16.00	A	1052.04	1043.04	9	B-003
11	3+40.00	A	1052.04	1043.04	9	
12	3+64.00	A	1052.04	1043.04	9	
13	3+88.00	A	1052.04	1039.04	13	
14	4+12.00	A	1053.04	1040.04	13	
15	4+36.00	A	1053.04	1040.04	13	
16	4+60.00	A	1054.04	1041.04	13	
17	4+84.00	A	1054.04	1041.04	13	
18	5+08.00	A	1055.04	1042.04	13	
19	5+32.00	A	1055.04	1042.04	13	
20	5+56.00	A	1056.04	1043.04	13	
21	5+80.00	A	1056.04	1043.04	13	
22	6+04.00	A	1056.04	1043.04	13	
23	6+28.00	A	1057.04	1048.04	9	
24	6+52.00	A	1057.04	1048.04	9	
25	6+76.00	A	1057.04	1048.04	9	
26	7+00.00	A	1057.04	1048.04	9	
27	7+24.00	A	1057.04	1048.04	9	
28	7+48.00	A	1057.04	1048.04	9	
29	7+72.00	A	1057.04	1048.04	9	
30	7+96.00	A	1056.04	1047.04	9	
31	8+20.00	A	1056.04	1047.04	9	
32	8+44.00	A	1056.04	1047.04	9	
33	8+68.00	A	1056.04	1047.04	9	B-005
34	8+92.00	A	1056.04	1047.04	9	
35	9+16.00	A	1056.04	1047.04	9	
36	9+40.00	A	1056.04	1047.04	9	
37	9+64.00	A	1056.04	1047.04	9	
38	9+88.00	A	1056.04	1047.04	9	
39	10+12.00	A	1056.04	1047.04	9	
40	10+36.00	A	1057.04	1048.04	9	B-006
41	10+60.00	A	1057.04	1038.04	19	
42	10+84.00	A	1057.04	1038.04	19	
43	11+08.00	A	1057.04	1038.04	19	
44	11+32.00	A	1056.04	1037.04	19	
45	11+56.00	A	1055.04	1036.04	19	
46	11+80.00	A	1055.04	1036.33	19	B-007
47	12+04.00	A	1054.04	1035.04	19	
48	12+28.00	A	1054.04	1035.04	19	
49	12+52.00	A	1054.04	1035.04	19	
50	12+76.00	A	1054.04	1035.04	19	
51	13+00.00	A	1054.04	1041.04	13	
52	13+24.00	A	1054.04	1041.04	13	
53	13+48.00	B	1054.04	1041.04	13	

NOISE BARRIER SUBSUMMARY						
BARRIER WALL NO.	BARRIER HEIGHT (TOTAL)	BOTTOM MOST PANEL HEIGHT	POST SPACING	606	606	606
				SPECIAL - NOISE BARRIER (REFLECTIVE), 10' HEIGHT AND UNDER	SPECIAL - NOISE BARRIER (REFLECTIVE), OVER 10' TO 14' HEIGHT	SPECIAL - NOISE BARRIER (REFLECTIVE), OVER 14' TO 20' HEIGHT
	FT.	FT.	FT.	SF.	SF.	SF.
1	11	7	24		264	
2	15	7	24			360
3	18	6	24			432
4	17	5	24			408
5	17	5	24			408
6	17	5	24			408
7	17	5	24			408
8	17	5	24			408
9	18	6	24			432
10	18	6	24			432
11	18	6	24			432
12	18	6	24			432
13	17	5	24			408
14	17	5	24			408
15	16	4	24			384
16	16	4	24			384
17	16	4	24			384
18	17	5	24			408
19	17	5	24			408
20	17	5	24			408
21	17	5	24			408
22	16	4	24			384
23	16	4	24			384
24	16	4	24			384
25	16	4	24			384
26	16	4	24			384
27	16	4	24			384
28	16	4	24			384
29	16	4	24			384
30	17	5	24			408
31	17	5	24			408
32	17	5	24			408
33	17	5	24			408
34	17	5	24			408
35	17	5	24			408
36	17	5	24			408
37	17	5	24			408
38	17	5	24			408
39	16	4	24			384
40	16	4	24			384
41	16	4	24			384
42	16	4	24			384
43	16	4	24			384
44	17	5	24			408
45	18	6	24			432
46	18	6	24			432
47	18	6	24			432
48	17	5	24			408
49	16	4	24			384
50	16	4	24			384
51	12	4	24		288	
52	8	4	24	192		
TOTAL =				192	552	19,704

NOTES:

- 1) PANEL HEIGHTS TO BE MIN. 4'-0".
- 2) POST SPACINGS TO BE 24'-0".
- 1) FOR ADDITIONAL DETAILS OF POSTS, PANELS AND DRILLED SHAFT, REFER TO STD. DWG. NBS-1-09



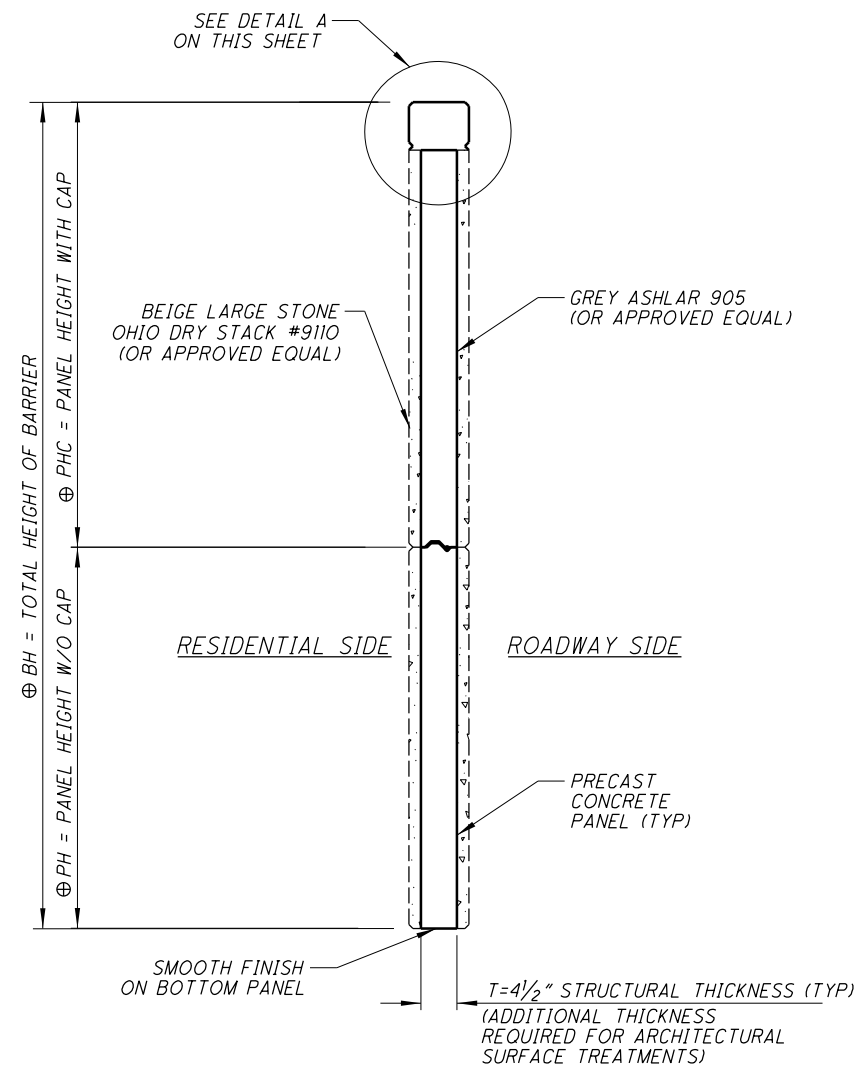
TYPICAL DRILLED SHAFT ELEVATION

PRECAST CONCRETE PANEL DESIGN DATA TABLE										
DESIGN WIND PRESSURE = 25 PSF, SOIL UNIT WEIGHT = 120 PCF										
POST SPACING (SPAN) (FT.)	PANEL HEIGHT (FT.)	WELDED WIRE FABRIC ** WWF AxB-WCxD				MIN. REINFORCING STEEL AREA (in ² /ft)		*LIFTING INSERTS		MAX. ALLOWABLE PANEL BURY DEPTH
		A	B	C	D	HORIZONTAL	VERTICAL	MIN. NO.	MIN. CAPACITY	
24'	4'-0"	4	4	16	6.5	0.477	0.195	2	4.0	3'-8"
24'	5'-0"	4	4	12	5	0.360	0.147	4	4.9	3'-8"
24'	6'-0"	4	4	12	5	0.360	0.147	4	5.9	3'-8"
24'	7'-0"	4	4	12	5.5	0.360	0.165	4	6.9	3'-8"

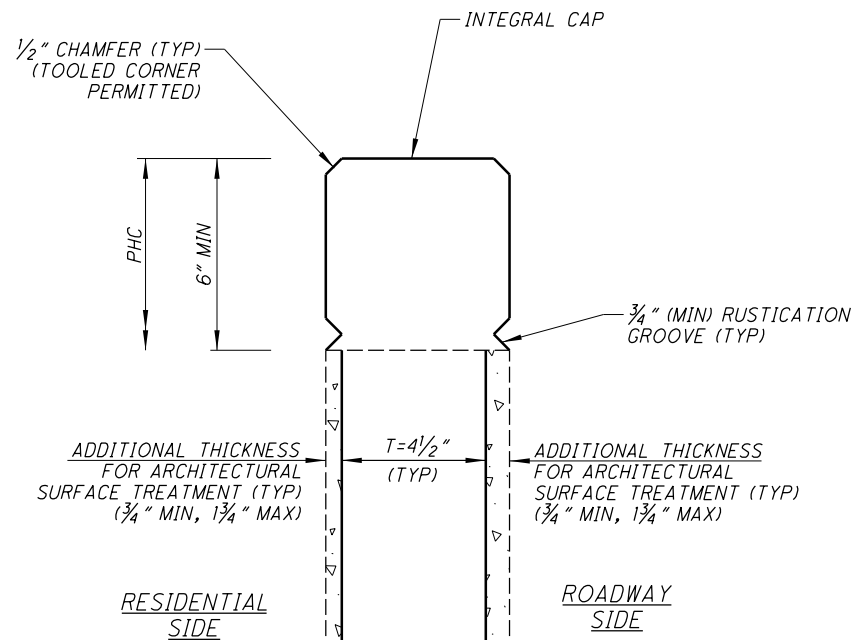
* MIN. INSERT CAPACITY IS SPECIFIED IN TONS. THE MIN. NUMBER OF LIFTING INSERTS SHALL BE USED WHEN ROTATING THE PANEL ABOUT ITS EDGE FROM A HORIZONTAL TO VERTICAL POSITION. IT IS PERMISSIBLE TO USE ONLY THE OUTER-MOST INSERTS FOR HANDLING IF THE PANEL REMAINS IN A VERTICAL POSITION (± 14°).

** WWF AxB-WCxD (U.S. CUSTOMARY) WHERE A = SPACING OF HORIZONTAL BARS - INCHES B = SPACING OF VERTICAL BARS - INCHES C = HORIZONTAL WIRE SIZE D = VERTICAL WIRE SIZE WWF = WELDED WIRE FABRIC

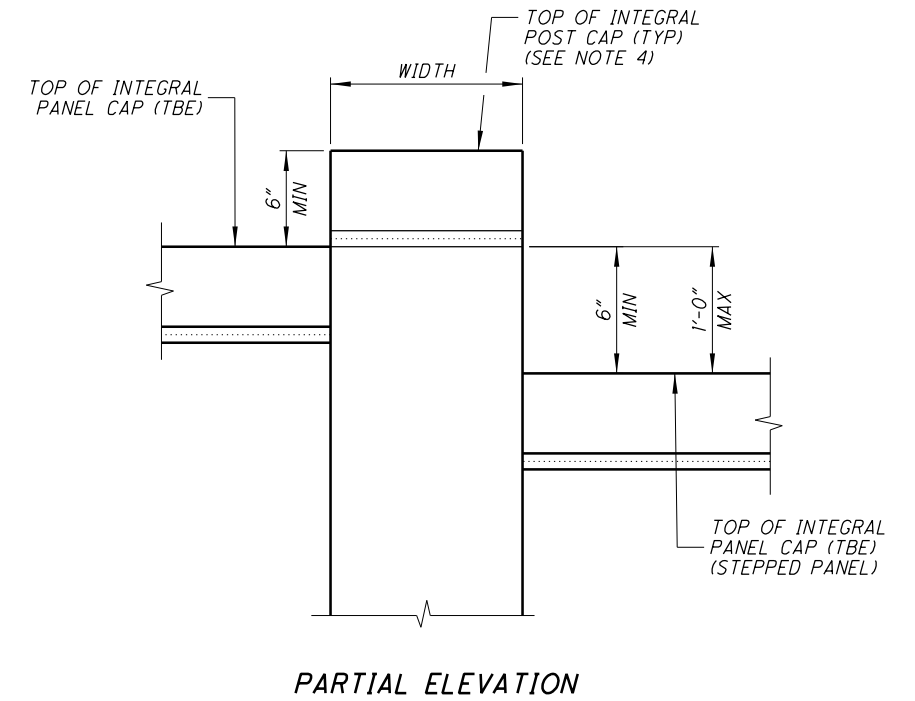
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STACKED PANEL DETAIL



DETAIL A - REFLECTIVE PANEL WITH INTEGRAL CAP

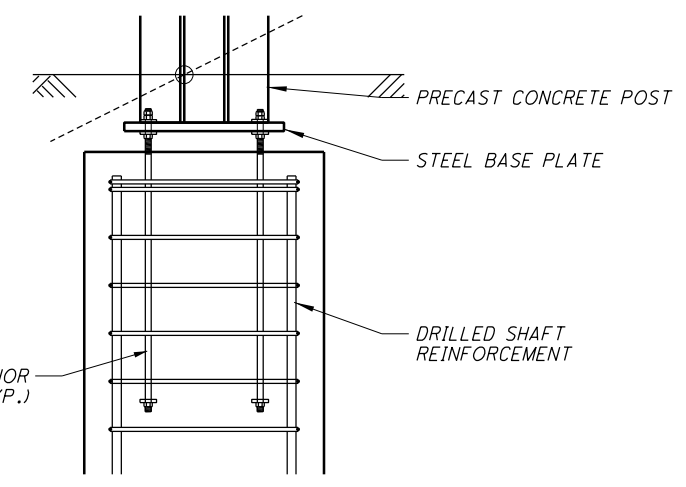


PARTIAL ELEVATION

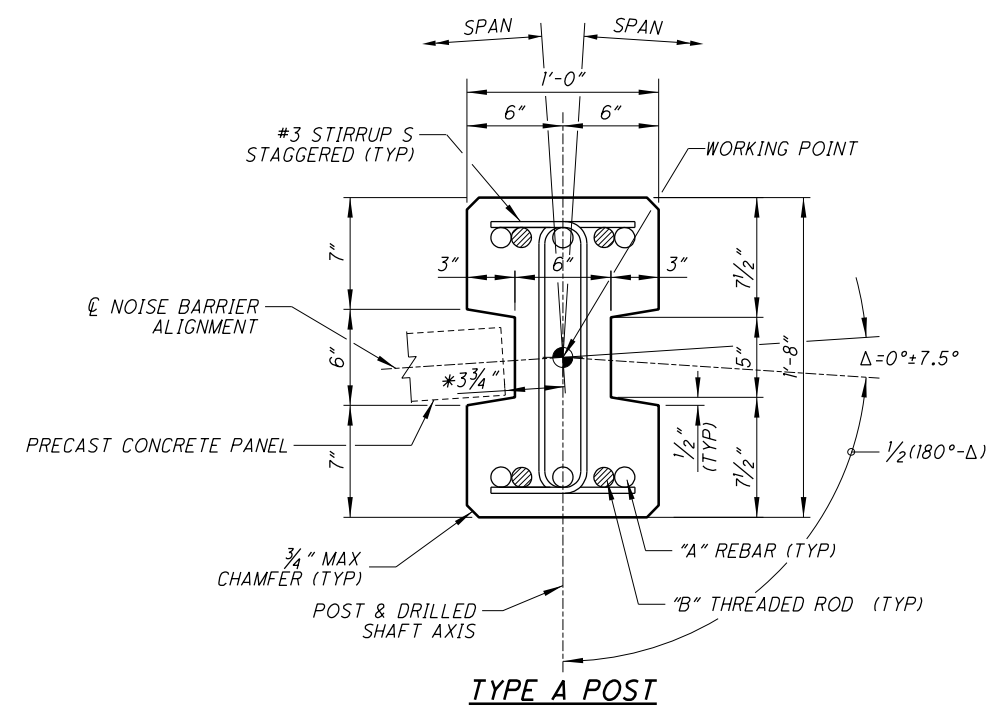
NOTES:
1. REFER TO NOISE BARRIER SPECIFICATIONS AND STANDARD DRAWING NBS-01-09.

NOTES:

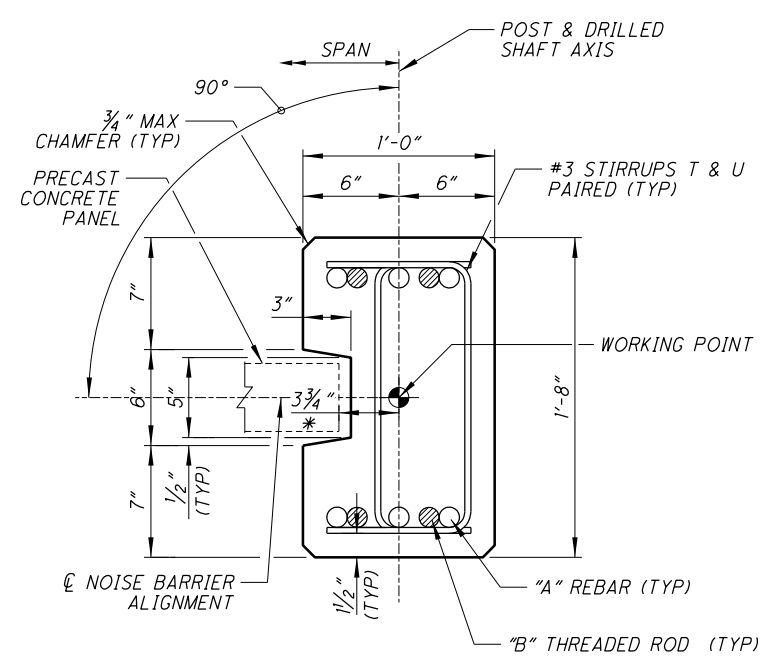
1) FOR ADDITIONAL DETAILS OF POSTS, PANELS AND DRILLED SHAFT, REFER TO STD. DWG. NBS-1-09



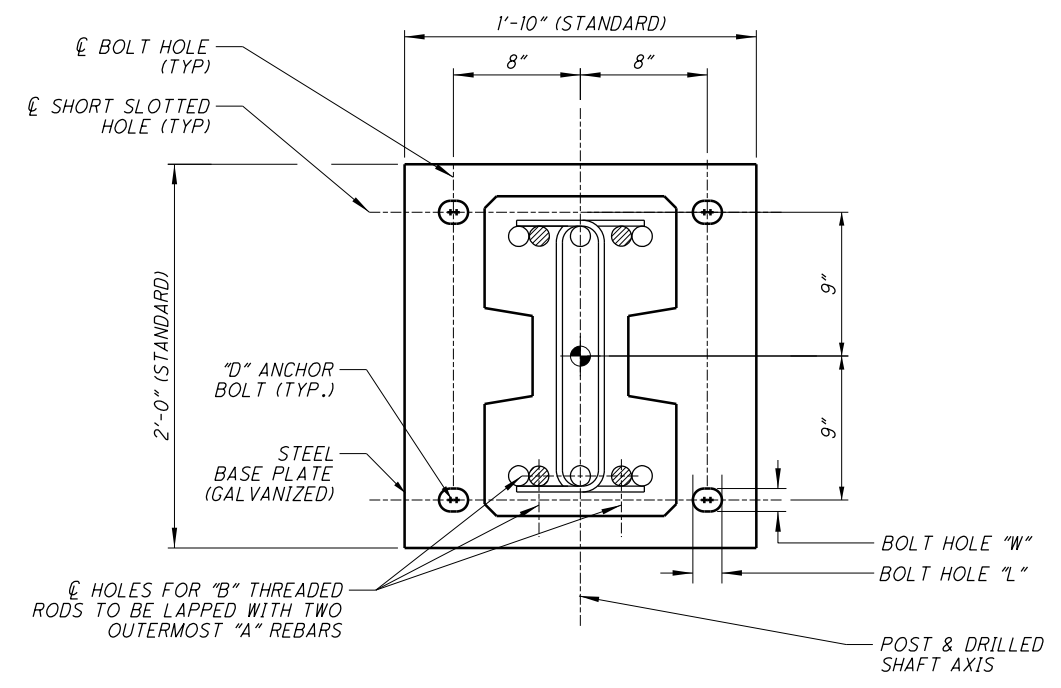
CONNECTION DETAILS



TYPE A POST



TYPE B POST



STEEL BASE PLATE PLAN

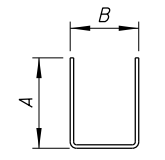
20" PRECAST CONCRETE POST DATA												
GEOMETRY		TYPE A POST					TYPE B POST					
BARRIER HEIGHT (BH)	MAX POST SPACING (SPAN)	"A" REBAR SIZE	"B" THREADED ROD SIZE	STIRRUP SPACING (SS)	TR.E.	"A" REBAR SIZE	"B" THREADED ROD SIZE	STIRRUP SPACING (SS)	TR.E.	"A" REBAR SIZE	"B" THREADED ROD SIZE	
			φ	(IN.)	(IN.)		φ	(IN.)	(IN.)		φ	(IN.)
BH<=23'	24'-0"	#10	#10	1 1/4	67	12	#7	#7	7/8	34	13	

BASE PLATE DATA FOR 20" PRECAST CONCRETE POSTS									
GEOMETRY		TYPE A POST				TYPE B POST			
BARRIER HEIGHT (BH)	MAX POST SPACING (SPAN)	PLATE THICKNESS (PT)	"D" ANCHOR BOLT φ	BOLT HOLE L X W	PLATE THICKNESS (PT)	"D" ANCHOR BOLT φ	BOLT HOLE L X W		
		(IN.)	(IN.)	(AB.E, IN.)	(IN. X IN.)	(IN.)	(IN.)	(AB.E, IN.)	(IN. X IN.)
BH<=23'	24'-0"	2	1 3/8	39	1 3/8 X 1 1/2	1/2	7/8	25	1 3/8 X 1

LEGEND:
 TR.E = THREADED ROD EMBEDMENT
 SS = STIRRUP SPACING
 φ = MINIMUM NOMINAL THREAD DIAMETER
 * = PANEL LENGTH DEDUCTION
 ⊕ = CENTER OF DRILLED SHAFT

#3 STIRRUP SCHEDULE					
MARK	TYPE	LENGTH	DIMENSIONS		
			A	B	C
S	1	2'-3"	6"	1'-5"	
T	1	2'-9"	9"	1'-5"	
U	1	2'-3"	6"	1'-5"	

BENDING DIAGRAMS



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PROJECT DESCRIPTION

CONSTRUCT A REFLECTIVE NOISE WALL ON THE SOUTH SIDE OF LIC I.R. 70 EASTBOUND NEAR THE RIGHT OF WAY LINE PARALLEL TO FREEWAY DRIVE IN RUSSELL HEIGHTS.

HISTORIC RECORDS

HISTORICAL GEOTECHNICAL RECORDS WERE FOUND FOR FRA/LIC-40-24.65/0.00 FOR THE CONSTRUCTION OF THE CURRENT ALIGNMENT OF I.R. 70 WITHIN THE PROJECT AREA. THE BORINGS ENCOUNTERED PREDOMINATELY COHESIVE SOILS SAMPLED FROM THE EXPLORATION POINTS WITHIN THE PROJECT LIMITS. THIS INFORMATION IS NOT SHOWN FOR CLARITY.

GEOLOGY

THE AREA IS LOCATED WITHIN THE GALION GLACIATED LOW PLATEAU PHYSIOGRAPHIC REGION. THE AREA IS CHARACTERIZED AS A TRANSITIONAL AREA BETWEEN THE GENTLY ROLLING GLACIAL TILL PLAINS TO THE WEST AND THE HILLY GLACIATED ALLEGHENY PLATEAU TO THE EAST. THE AREA IS CHARACTERIZED A ROLLING TOPOGRAPHY WITH MODERATE RELIEF WITH THIN TO THICK GLACIAL DRIFT. UNDERLYING THE GLACIAL DRIFT IS SANDSTONE AND SHALE OF MISSISSIPPIAN AGED LOGAN AND CUYAHOGA FORMATIONS.

RECONNAISSANCE

FIELD RECONNAISSANCE WAS COMPLETED ON JULY 8, 2020 BY PERSONNEL FROM THE OFFICE OF GEOTECHNICAL ENGINEERING. THE PROPOSED WALL LOCATION WILL BE LOCATED AT THE TOP OF A MINOR CUT SECTION CONSTRUCTED FOR THE CURRENT I.R. 70 GRADE LOCATED SOUTH OF THE EXISTING ROAD. THE SLOPE IS WELL VEGETATED AND DOES NOT SHOW ANY SIGNS OF DISTRESS. THE ADJACENT LAND USAGE IS NOTED AS BEING RURAL RESIDENTIAL ADJACENT TO THE PROPOSED WALL LOCATION.

SUBSURFACE EXPLORATION

SEVEN (7) BORINGS, B-001-0-20 THROUGH B-007-0-20, WERE COMPLETED AS PART OF THE SUBSURFACE EXPLORATION ON JULY 16 THROUGH 23, 2020. THE BORINGS WERE DRILLED WITH EITHER A TRUCK MOUNTED CME 55 ROTARY DRILL RIG, USING 2 1/4-INCH I.D. HOLLOW STEM AUGERS OR AN ACKER XLS TRACK MOUNTED ROTARY DRILL RIG, USING 2 1/4-INCH I.D. HOLLOW STEM AUGERS. ALL BORINGS WERE ADVANCED THROUGH THE SOIL UTILIZING HOLLOW STEM AUGERS. DISTURBED SAMPLES WERE COLLECTED IN ACCORDANCE WITH THE STANDARD PENETRATION TEST (AASHTO T206) AT 2.5-FOOT INTERVALS FOR THE FULL DEPTH OF THE BORINGS. THE HAMMER SYSTEMS USED WERE CALIBRATED ON APRIL 15, 2020 FOR THE CME 55 AND ON MAY 1, 2019 FOR THE ACKER, WITH AVERAGE DRILL ROD ENERGY RATIOS (ER) OF 84% AND 90%, RESPECTIVELY.

EXPLORATION FINDINGS

ALL BORINGS WERE COMPLETED OUTSIDE OF THE EXISTING ROADWAY, ENCOUNTERING 8 INCHES OF TOPSOIL AT THE GROUND SURFACE UNDERLAIN BY COHESIVE SOILS. COHESIVE SOILS WERE PREDOMINATELY ENCOUNTERED IN ALL THE BORINGS, CONSISTING OF SANDY SILT (A-4a), SILT AND CLAY (A-6a), SILTY CLAY (A-6b), AND CLAY (A-7-6) WHICH RANGED FROM MEDIUM STIFF TO HARD IN CONSISTENCY AND DAMP TO MOIST IN CONDITION. NON-COHESIVE STRATA WERE ENCOUNTERED IN B-001 BELOW ELEVATION 1032.2 FEET CONSISTING OF MEDIUM DENSE TO DENSE GRAVEL AND STONE FRAGMENTS WITH SAND (A-1-b) IN WET CONDITION AND DENSE SANDY SILT (A-4a) IN DAMP CONDITION WITHIN B-003. B-001 REPORTED COBBLES AND BOULDERS AT ELEVATION 1034.7 FEET AND HEAVING SANDS WITHIN THE NON-COHESIVE LAYERS.

SEEPAGE WAS NOTED IN B-001, B-002 AND B-007 AT ELEVATIONS 1032.2, 1030.3, AND 1035.8 FEET, RESPECTIVELY.

WATER LEVELS WERE REPORTED AT COMPLETION B-001 AND B-002 AT ELEVATIONS 1037.2 AND 1030.8 FEET, RESPECTIVELY.

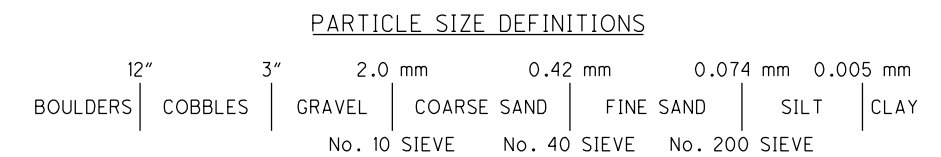
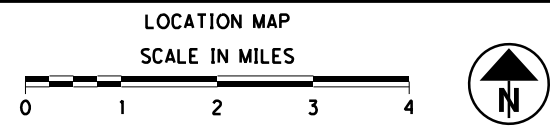
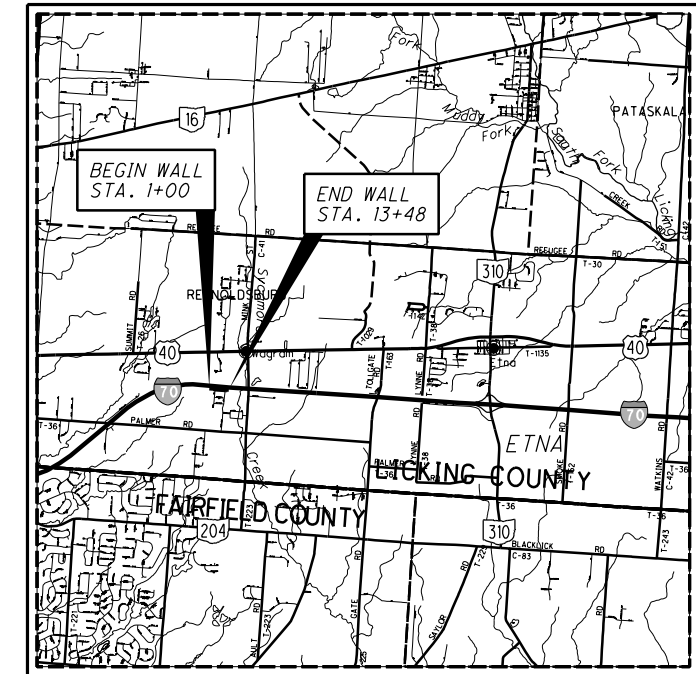
SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JULY 2020.

AVAILABLE INFORMATION

THE SOIL, BEDROCK, AND GROUNDWATER INFORMATION COLLECTED FOR THIS SUBSURFACE EXPLORATION THAT CAN BE CONVENIENTLY DISPLAYED ON THE SOIL PROFILE SHEETS HAS BEEN PRESENTED. GEOTECHNICAL REPORTS, IF PREPARED, ARE AVAILABLE FOR REVIEW ON THE OFFICE OF CONTRACT SALES WEBSITE.

LEGEND		ODOT CLASS	CLASSIFIED MECH./VISUAL	
DESCRIPTION				
GRAVEL AND STONE FRAGMENTS WITH SAND		A-1-b	1	2
SANDY SILT		A-4a	12	13
SILT AND CLAY		A-6a	7	13
SILTY CLAY		A-6b	6	13
CLAY		A-7-6	1	2
		TOTAL	27	43
BOULDERY ZONE		VISUAL		
TOPSOIL = X = APPROXIMATE THICKNESS		VISUAL		
B-ZZZ-W-20 PROJECT BORING LOCATION - PLAN VIEW.				
DRIVE SAMPLE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.				
WC INDICATES WATER CONTENT IN PERCENT.				
N ₆₀ INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.				
—W INDICATES FREE WATER ELEVATION.				
—▽ INDICATES WATER AT COMPLETION.				
NP INDICATES A NON-PLASTIC SAMPLE.				
SS INDICATES A SPLIT SPOON SAMPLE.				



RECON. - AMJ 07/08/20
 DRILLING - KAM 07/16-23/20 (ACKER)
 KAM 07/20-22/20 (CME 55)
 DRAWN - ARR 06/23/21
 REVIEWED - SAT 07/02/21

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DESIGN AGENCY
 OHIO DEPARTMENT OF TRANSPORTATION
 OFFICE OF GEOTECHNICAL ENGINEERING
 1960 W. BROAD ST., COLUMBUS, OH 43223

PID NO.
107262

SOIL PROFILE - NOISE WALL
LIC-70-1.90 NOISE WALL

LIC-70-1.90


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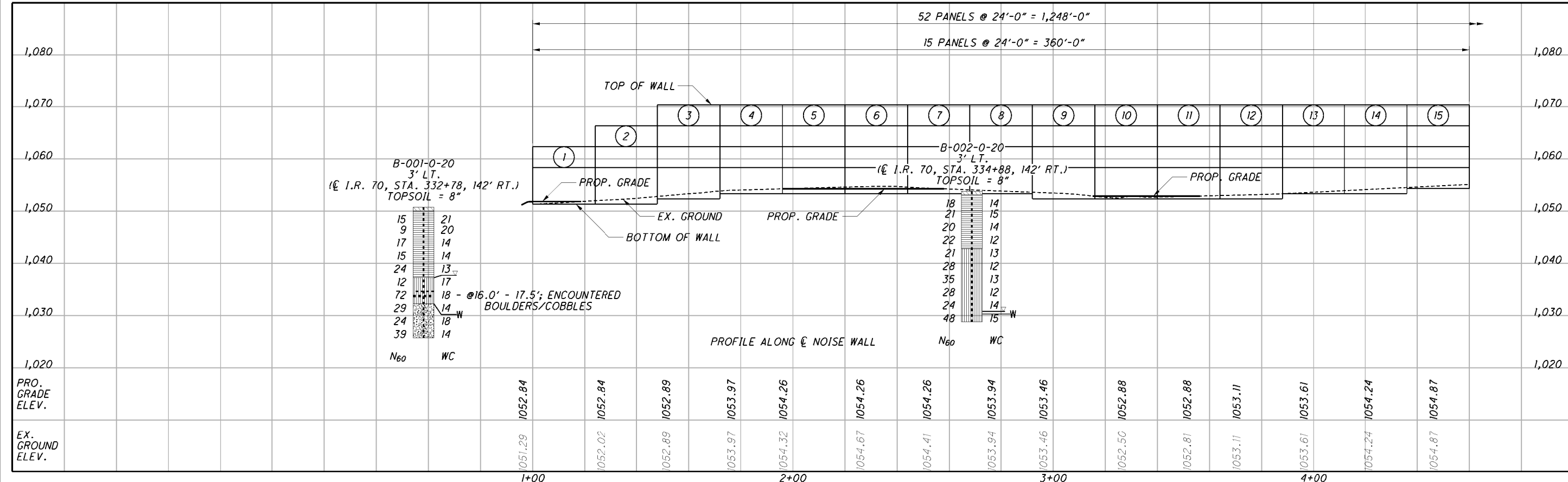
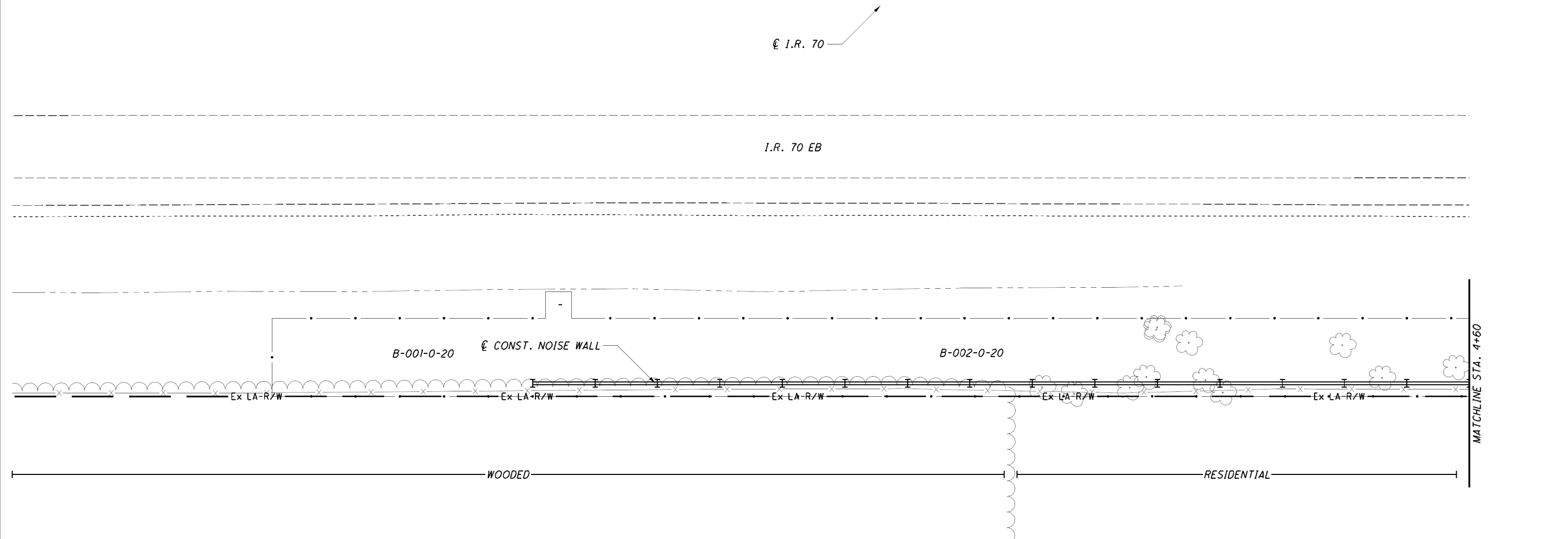




 HORIZONTAL SCALE IN FEET

SOIL PROFILE - NOISE WALL
STA. 1+00 TO STA. 4+60

LIC-70-1.90
 2 / 8




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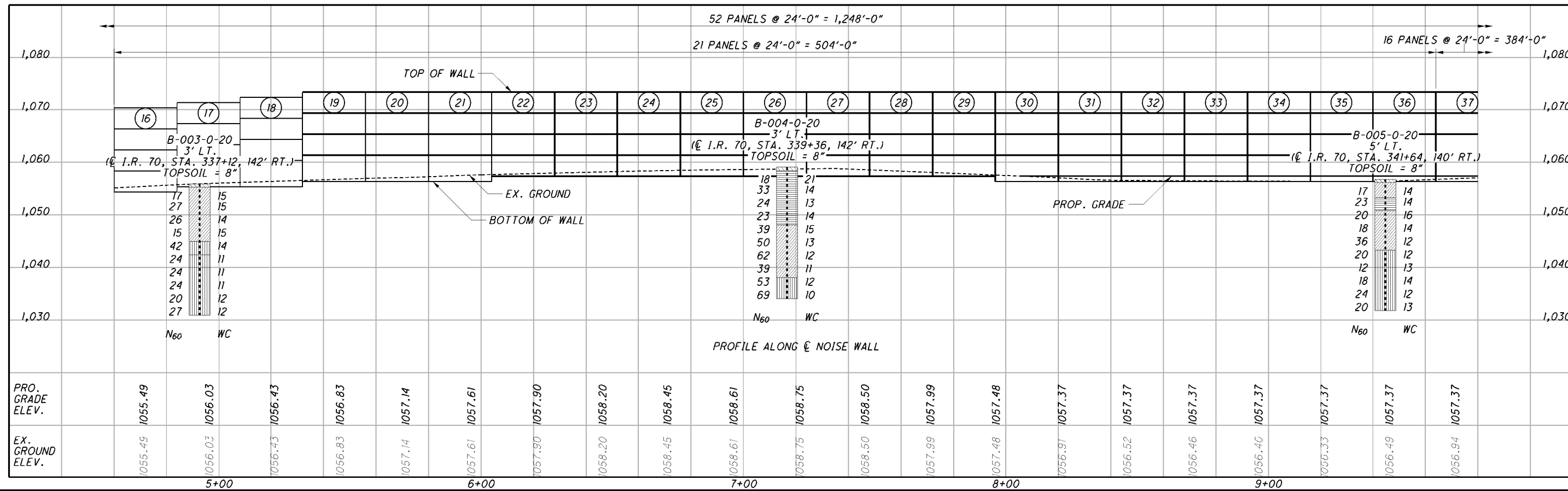
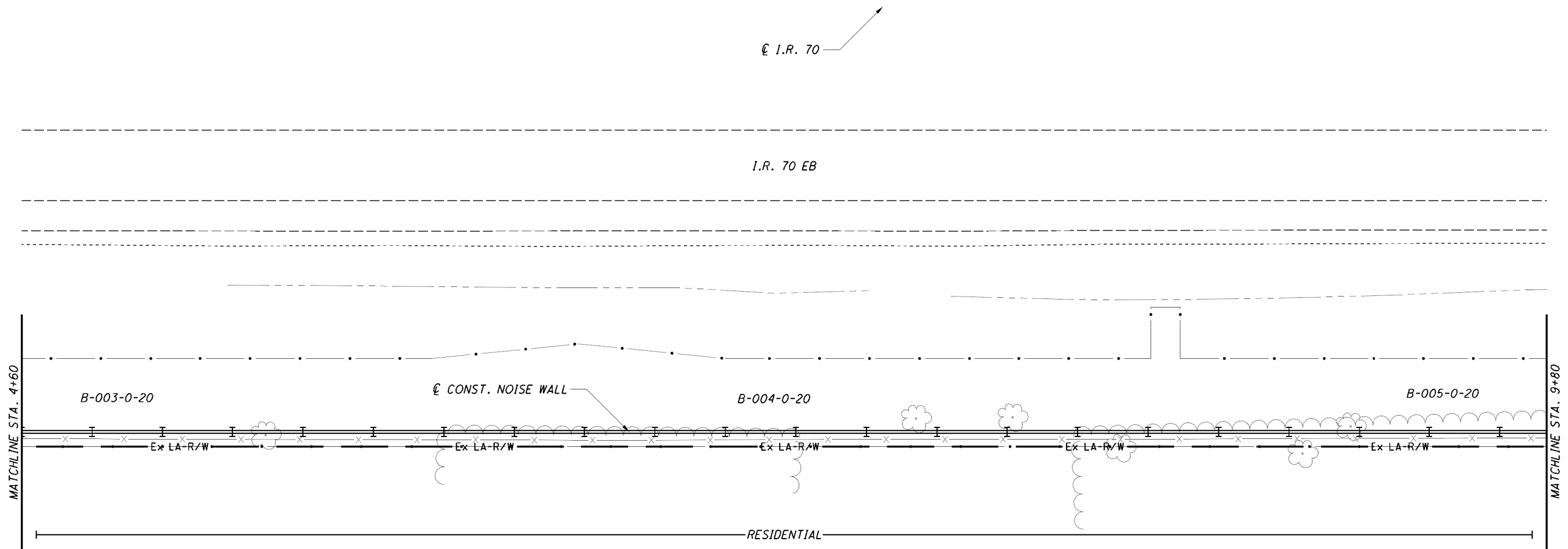
0 20 40
10
HORIZONTAL SCALE IN FEET

**SOIL PROFILE - NOISE WALL
STA. 4+60 TO STA. 9+80 NOISE WALL**


LIC-70-1.90


3 / 8

25 / 30



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 HORIZONTAL SCALE IN FEET

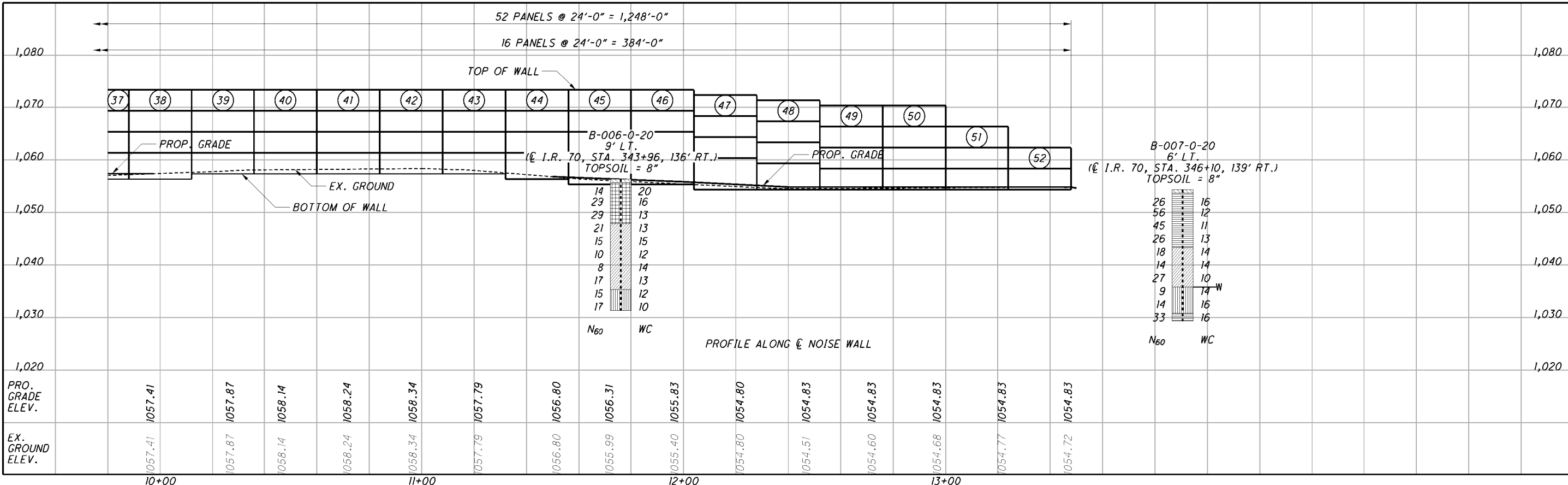
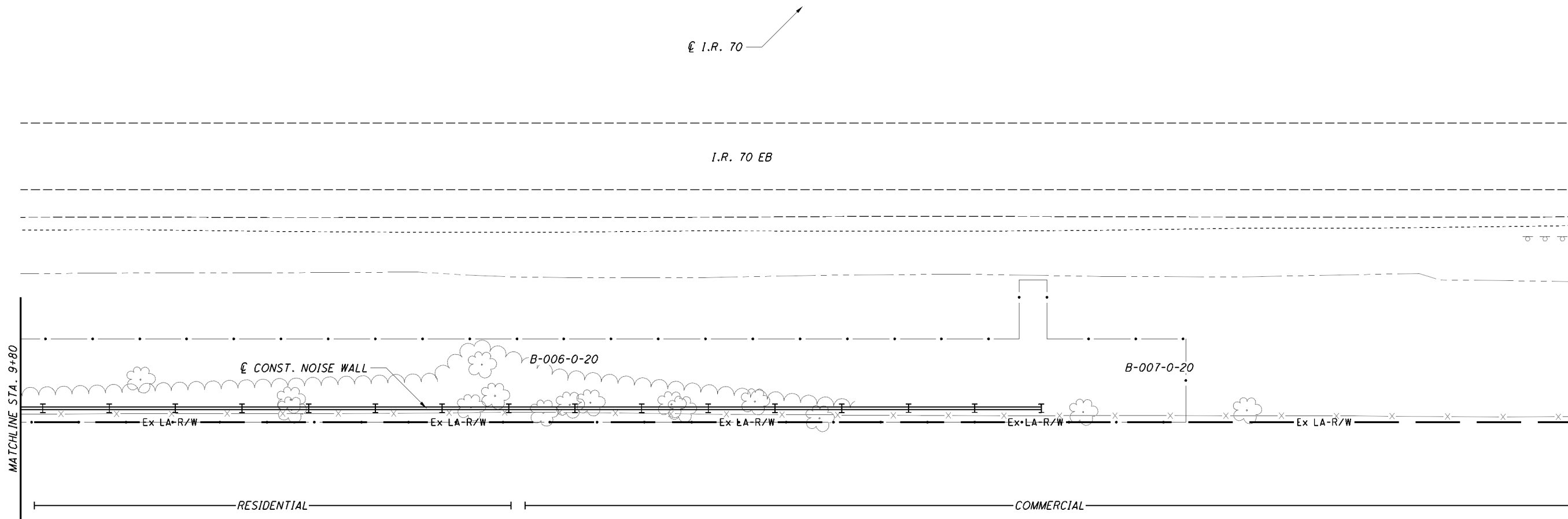
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**SOIL PROFILE - NOISE WALL
STA. 9+80 TO STA. 13+48 NOISE WALL**

LIC-70-1.90

4 / 8

26 / 30



PROJECT: LIC-70-1.90 NOISE WALL	DRILLING FIRM / OPERATOR: ODOT / CAREY SAMPLING FIRM / LOGGER: ODOT / MCLEISH	STATION / OFFSET: 332+78, 142' RT.	EXPLORATION ID B-001-0-20													
				DRILL RIG: ACKER XLS TRACK	HAMMER: ACKER AUTOMATIC											
PID: 107262 SFN: N/A	DRILLING METHOD: 2.25" HSA	ALIGNMENT: CL IR 70	ELEVATION: 1050.7 (ft) EOB: 25.0 ft.													
START: 7/16/20 END: 7/20/20	SAMPLING METHOD: SPT	LAT / LONG: 39.951187, -82.737883	PAGE 1 OF 1													
MATERIAL DESCRIPTION AND NOTES																
ELEV.	DEPTHS	SPT/ RQD	REC SAMPLE N ₆₀ (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL	
1050.1	1															
	2	4	15	22	SS-1	4.50	-	-	-	-	-	-	21	A-6b (V)		
	3	6														
	4	2	9	67	SS-2	1.50	18	5	14	33	30	31	15	16	A-6b (8)	
	5	4														
	6	4	5	17	100	SS-3	2.00	-	-	-	-	-	14	A-6b (V)		
	7	6														
	8															
	9	2	4	15	100	SS-4	2.00	-	-	-	-	-	14	A-6b (V)		
	10	6														
	11	6	7	24	100	SS-5	3.50	-	-	-	-	-	13	A-6b (V)		
	12	9														
	13															
1037.2	14	2	12	56	SS-6	0.50	26	9	14	30	21	24	14	10	A-4a (3)	
	15	6														
	16	8	20	72	11	SS-7	-	-	-	-	-	-	18	A-4a (V)		
	17	28														
1032.2	18	5	9	29	67	SS-8	-	47	20	11	15	7	21	17	4	A-1-b (0)
	19	10														
	20															
	21	6	7	24	67	SS-9	-	-	-	-	-	-	18	A-1-b (V)		
	22	9														
	23															
	24	10	12	39	67	SS-10	-	-	-	-	-	-	14	A-1-b (V)		
1025.7	25	14														

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 7/6/21 06:52 - X:\GINT\PROJECTS\2020 COMPLETE\600770.GPJ

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH 20 LB. BENTONITE CHIPS

PROJECT: LIC-70-1.90 NOISE WALL	DRILLING FIRM / OPERATOR: ODOT / CAREY SAMPLING FIRM / LOGGER: ODOT / MCLEISH	STATION / OFFSET: 334+88, 142' RT.	EXPLORATION ID B-002-0-20													
				DRILL RIG: CME 55 TRUCK	HAMMER: CME AUTOMATIC											
PID: 107262 SFN: N/A	DRILLING METHOD: 2.25" HSA	ALIGNMENT: CL IR 70	ELEVATION: 1053.8 (ft) EOB: 25.0 ft.													
START: 7/20/20 END: 7/20/20	SAMPLING METHOD: SPT	LAT / LONG: 39.951148, -82.737134	PAGE 1 OF 1													
MATERIAL DESCRIPTION AND NOTES																
ELEV.	DEPTHS	SPT/ RQD	REC SAMPLE N ₆₀ (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL	
1053.1	1															
	2	4	18	28	SS-1	4.5+	-	-	-	-	-	-	14	A-6b (V)		
	3	7														
	4	5	6	21	100	SS-2	3.00	5	8	14	32	41	35	16	19	A-6b (11)
	5	9														
	6	5	6	20	100	SS-3	4.50	-	-	-	-	-	14	A-6b (V)		
	7	8														
	8															
	9	3	7	22	100	SS-4	3.00	-	-	-	-	-	12	A-6b (V)		
	10	9														
	11	2	7	21	100	SS-5	3.00	10	9	22	40	19	14	5	13	A-4a (5)
	12	8														
	13															
	14	7	8	28	44	SS-6	4.5+	-	-	-	-	-	12	A-4a (V)		
	15	12														
	16	6	10	35	22	SS-7	2.75	-	-	-	-	-	13	A-4a (V)		
	17	15														
	18															
	19	4	8	28	89	SS-8	3.00	14	9	17	35	23	14	9	12	A-4a (5)
	20	12														
	21	5	7	24	78	SS-9	2.50	-	-	-	-	-	14	A-4a (V)		
	22	10														
1030.8	23	7														
1030.3	24	6	17	48	39	SS-10	2.50	12	11	18	34	25	15	10	15	A-4a (5)
1028.8	25	17														

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 6/29/21 12:08 - X:\GINT\PROJECTS\2020 COMPLETE\600770.GPJ

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH 20 LB. BENTONITE CHIPS

PROJECT:	LIC-70-1.90	DRILLING FIRM / OPERATOR:	ODOT / CAREY	STATION / OFFSET:	337+12, 142' RT.	EXPLORATION ID	B-003-0-20
TYPE:	NOISE WALL	SAMPLING FIRM / LOGGER:	ODOT / MCLEISH	ALIGNMENT:	CL IR 70	CL IR 70	
PID:	107262	DRILLING METHOD:	2.25" HSA	ELEVATION:	1055.9 (ft)	EOB:	25.0 ft.
START:	7/20/20	SAMPLING METHOD:	SPT	LAT / LONG:	39.951106, -82.736337	EOB:	39.951106, -82.736337
MATERIAL DESCRIPTION AND NOTES							
TOPSOIL (8")		ELEV.	1055.9	DEPTH			
VERY STIFF, BROWN SILT AND CLAY, SOME SAND, TRACE GRAVEL AND STONE FRAGMENTS, DAMP @1.5' - 3.0'; NO RECOVERY, AUGER CUTTINGS TAKEN			1055.2				
@6.0'; HARD							
@8.5'; VERY STIFF							
DENSE, BROWN AND GRAY, SANDY SILT, LITTLE CLAY, TRACE GRAVEL AND STONE FRAGMENTS, DAMP			1044.9				
HARD, GRAY, SANDY SILT, SOME CLAY, LITTLE GRAVEL AND STONE FRAGMENTS, DAMP			1042.4				
@21.0'; VERY STIFF							
@23.5'; HARD, GRAYISH BROWN, SOME STONE FRAGMENTS			1030.9				

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 6/17/21 10:52 - X:\GINT\PROJECTS\2020 COMPLETE\600770.GPJ

NOTES: HOLE DRY UPON COMPLETION. LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH 10 LB. BENTONITE CHIPS

PROJECT:	LIC-70-1.90	DRILLING FIRM / OPERATOR:	ODOT / CAREY	STATION / OFFSET:	339+36, 142' RT.	EXPLORATION ID	B-004-0-20
TYPE:	NOISE WALL	SAMPLING FIRM / LOGGER:	ODOT / MCLEISH	ALIGNMENT:	CL IR 70	CL IR 70	
PID:	107262	DRILLING METHOD:	2.25" HSA	ELEVATION:	1059.1 (ft)	EOB:	25.0 ft.
START:	7/21/20	SAMPLING METHOD:	SPT	LAT / LONG:	39.951064, -82.735540	EOB:	39.951064, -82.735540
MATERIAL DESCRIPTION AND NOTES							
TOPSOIL (8")		ELEV.	1059.1	DEPTH			
HARD, BROWN, SILTY CLAY, LITTLE SAND, TRACE GRAVEL AND STONE FRAGMENTS, MOIST @1.5' - 3.5'; TRACE ROOTS			1058.4				
@3.5'; DAMP							
@8.5'; VERY STIFF							
VERY STIFF, BROWN AND GRAY, SILT AND CLAY, SOME SAND, TRACE GRAVEL AND STONE FRAGMENTS, MOIST			1048.1				
@13.5'; HARD, GRAY, DAMP							
@16.0'; VERY STIFF							
@18.5'; HARD							
HARD, GRAY, SANDY SILT, SOME CLAY, LITTLE GRAVEL AND STONE FRAGMENTS, DAMP			1038.1				
			1034.1				

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 6/17/21 10:52 - X:\GINT\PROJECTS\2020 COMPLETE\600770.GPJ

NOTES: HOLE DRY UPON COMPLETION. LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH 15 LB. BENTONITE CHIPS

PROJECT: LIC-70-1.90 NOISE WALL	DRILLING FIRM / OPERATOR: ODOT / CAREY	STATION / OFFSET: 341+64, 140' RT.	EXPLORATION ID B-005-0-20												
				DRILL RIG: ACKER XLS TRACK	ALIGNMENT: CL IR 70										
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: ODOT / MCLEISH	ELEVATION: 1056.8 (ft)	25.0 ft.												
PID: 107262	DRILLING METHOD: 2.25" HSA	LAT / LONG: 39.951026, -82.734728	PAGE 1 OF 1												
START: 7/21/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 90													
MATERIAL DESCRIPTION AND NOTES															
ELEV.	DEPTHS	SPT/ RQD	REC SAMPLE N ₆₀ (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (G)	BACK FILL
1056.8	1														
1056.1	2	4	17	4.50	4	5	12	43	36	25	14	11	14	A-6a (8)	
1053.3	3	6													
1050.8	4	3	23	4.50	22	4	10	29	35	40	18	22	14	A-6b (11)	
	5	10													
	6	3	20	4.5+	12	8	16	34	30	28	15	13	16	A-6a (7)	
	7	6	7												
	8														
	9	3	18	4.5+	-	-	-	-	-	-	-	-	-	A-6a (V)	
	10	5	7												
	11	6	10	4.5+	-	-	-	-	-	-	-	-	-	A-6a (V)	
	12	10	14												
	13														
1043.3	14	4	20	1.00	15	10	14	34	27	24	15	9	12	A-4a (5)	
	15	6	7												
	16	1	3	1.00	-	-	-	-	-	-	-	-	-	A-4a (V)	
	17	3	12	1.00	-	-	-	-	-	-	-	-	-		
	18	5	7												
	19	2	18	2.50	-	-	-	-	-	-	-	-	-	A-4a (V)	
	20	5	7												
	21	2	5	4.5+	17	11	16	34	22	22	15	7	12	A-4a (4)	
	22	5	11												
	23														
	24	2	3	3.00	-	-	-	-	-	-	-	-	-	A-4a (V)	
1031.8	25	10	20	3.00	-	-	-	-	-	-	-	-	-	A-4a (V)	

NOTES: HOLE DRY UPON COMPLETION. LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH 25 LB. BENTONITE CHIPS

PROJECT: LIC-70-1.90 NOISE WALL	DRILLING FIRM / OPERATOR: ODOT / CAREY	STATION / OFFSET: 343+96, 136' RT.	EXPLORATION ID B-006-0-20												
				DRILL RIG: CME 55 TRUCK	ALIGNMENT: CL IR 70										
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: ODOT / MCLEISH	ELEVATION: 1056.3 (ft)	25.0 ft.												
PID: 107262	DRILLING METHOD: 2.25" HSA	LAT / LONG: 39.950995, -82.733903	PAGE 1 OF 1												
START: 7/22/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 84													
MATERIAL DESCRIPTION AND NOTES															
ELEV.	DEPTHS	SPT/ RQD	REC SAMPLE N ₆₀ (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (G)	BACK FILL
1056.3	1														
1055.7	2	3	14	4.5+	2	2	6	43	47	41	19	22	20	A-7-6 (13)	
	3	6													
	4	6	29	4.5+	-	-	-	-	-	-	-	-	-	A-7-6 (V)	
	5	12													
	6	5	29	4.5+	-	-	-	-	-	-	-	-	-	A-7-6 (V)	
	7	9	12												
	8														
1047.8	9	4	21	4.25	15	9	16	33	27	26	15	11	13	A-6a (5)	
	10	6	9												
	11	3	4	1.50	-	-	-	-	-	-	-	-	-	A-6a (V)	
	12	4	7												
	13														
	14	2	3	0.50	-	-	-	-	-	-	-	-	-	A-6a (V)	
	15	4	10												
	16	1	2	1.00	11	10	16	35	28	24	13	11	14	A-6a (6)	
	17	2	4												
	18														
	19	3	17	3.25	-	-	-	-	-	-	-	-	-	A-6a (V)	
	20	6	6												
1035.3	21	3	15	4.5+	13	12	17	37	21	22	14	8	12	A-4a (5)	
	22	5	6												
	23														
	24	9	7	4.50	-	-	-	-	-	-	-	-	-	A-4a (V)	
1031.3	25	5	17	4.50	-	-	-	-	-	-	-	-	-	A-4a (V)	

NOTES: HOLE DRY UPON COMPLETION. LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH 20 LB. BENTONITE CHIPS

PROJECT: LIC-70-1.90	DRILLING FIRM / OPERATOR: ODOT / CAREY	STATION / OFFSET: 346+10, 139' RT.	EXPLORATION ID
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: ODOT / MCLEISH	ALIGNMENT: CL IR 70	B-007-0-20
PID: 107262 SFN: N/A	DRILLING METHOD: 2.25" HSA	ELEVATION: 1054.3 (ft) EOB: 25.0 ft.	PAGE
START: 7/22/20 END: 7/23/20	SAMPLING METHOD: SPT	LAT / LONG: 39.950947, -82.733141	1 OF 1
DRILL RIG: ACKER XLS TRACK		HAMMER: ACKER AUTOMATIC	
CALIBRATION DATE: 5/1/19		ENERGY RATIO (%): 90	

DEPTH (ft)	SPT / RQD	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)										ODOT CLASS (GI)	BACK FILL	
					GR	CS	FS	SI	CL	LL	PL	PI	WC				
1																	
2	4	26	89	SS-1	4.5+	3	4	15	36	42	40	16	24	16	A-6b (14)		
3	11																
4	7	14	56	67	SS-2	4.5+	-	-	-	-	-	-	-	12	A-6b (V)		
5	23																
6	6	15	45	100	SS-3	4.5+	-	-	-	-	-	-	-	11	A-6b (V)		
7	15																
8																	
9	6	8	26	100	SS-4	4.5+	-	-	-	-	-	-	-	13	A-6b (V)		
10	9																
11	4	6	18	100	SS-5	4.50	12	8	16	37	27	15	12	14	A-6a (7)		
12	6																
13																	
14	3	4	14	17	SS-6	3.00	-	-	-	-	-	-	-	14	A-6a (V)		
15	5																
16	3	8	27	67	SS-7	4.50	-	-	-	-	-	-	-	10	A-6a (V)		
17	10																
18																	
19	1	2	9	56	SS-8	1.00	11	13	20	36	20	13	7	14	A-4a (4)		
20	4																
21	3	4	14	28	SS-9	1.25	-	-	-	-	-	-	-	16	A-4a (V)		
22	5																
23																	
24	7	10	33	67	SS-10	3.25	28	9	12	34	17	39	20	16	A-6b (6)		
25	12																

TOPSOIL (8")
 HARD, BROWN, SILTY CLAY, LITTLE SAND, TRACE GRAVEL AND STONE FRAGMENTS, MOIST
 @3.5': DAMP
 @6.0': GRAYISH BROWN
 HARD, GRAYISH BROWN, SILT AND CLAY, SOME SAND, LITTLE GRAVEL AND STONE FRAGMENTS, DAMP
 STIFF GRAY, SANDY SILT, SOME SAND, LITTLE GRAVEL AND STONE FRAGMENTS, MOIST
 VERY STIFF, GRAY AND BLACK, SILTY CLAY, SOME STONE FRAGMENTS, SOME SAND, DAMP

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS.
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH 20 LB. BENTONITE CHIPS