Office of Environmental Services Permit Determination Request District #6

To:	Tim Hill	Administrator Office of Environmental Services	Date:	1/18/2022
Attn:	Adrienne Earley	Waterway Permit Program Manager		
From:	Marci Lininger	District Environmental Coordinator	PID:	107630
Subject:	Project Submission for Waterway Permit Determination			
CRS:	MAD/PIC-71-7.30/0.00			

Please address each item below and attach additional information as necessary. See Permit Determination Request Instructions and the Waterways Permits Manual for further guidance. Failure to provide the required information may result in project delays.

Let Type:	ODOT Let	Plan File Date:	9/5/2022
Major Project (appears on major project program list):	YES	Advertisement Date (optional):	--
If Local-Let, will the sponsor be using ODOT's permitting process?	Not Applicable	Sale Date:	1/12/2023
100% State Funded:	NO	Award Date (optional):	1/23/2023

Project Description (Brief summary of the project as whole and why resources are being impacted):

Major rehabilitation of I-71 for 10.2 miles is proposed. Proposed activities include pavement replacement and widening to six lanes, bridge replacements, culvert replacements, and storm sewer replacements. Upgrades to guardrail, drainage, signing, and ramps at the SR-56 interchange are also proposed.

Bradford Creek, Deer Creek, Mud Run, and Opossum Run, along with Wetlands B, C, D, F.1, F.2, H.1, I, J, R.1, R.2, S.1, S.2, T.1, and T.2, will be impacted by bridge replacements and widening.

Childers Ditch, Galbreath Ditch, Greenbrier Creek, and Robinson Ditch along with Wetlands A, N.1, N.2, Q.1, and Y, will be impacted by culvert replacements.

Greenbrier Creek will also be impacted by grading associated with the replacement of stormwater drainage pipes and culverts that outlet into the stream.

Springwater Run will be impacted by a culvert extension.

Stream 1 may be impacted by the cleaning of debris in proximity to the culvert.

Wetland E will be impacted by grading associated with the rehabilitation of I-71.

Wetland W will be impacted by a storm sewer replacement.

PJD 1 will be impacted by RCP placement and grading associated with a culvert replacement and a storm sewer replacement.

PJD 2 will be impacted by RCP placement and grading associated with a culvert replacement.

Wetlands F.1, H.1, I, J, S.1, and S.2, along with Springwater Run, Opossum Run, Childers Ditch, Robinson Ditch, Deer Creek, Stream 1, Bradford Creek, Galbreath Ditch, and Mud Run will be impacted by maintenance of traffic activities associated with the rehabilitation of I-71.

Waterways Impacted (check all that apply):			
River/Stream/ Captured Stream	☒	Section 10 Waterway (Pool, Harbor, Slackwater)	☐

OHIO DEPARTMENT OF TRANSPORTATION

Wetland	☒	Section 9 Waterway	☐
Isolated Wetland	☒	National Wild and Scenic River	☐
Category 3 Wetland	☐	State Wild and Scenic River	☐
ODNR Water Trail	☐	Reservoir (Impounded Stream)	☐

Project Details:	
Impacts to Wetlands > 0.5 acre total:	NO
Impacts to Streams >300 linear feet per crossing:	YES
Is the project culvert maintenance only? (includes maintenance on existing wingwall and RCP)	NO
Level of ecological coordination required:	Notifying
If coordinated, date complete:	10/22/2021
Effect calls determined to be "May Affect, Likely to Adversely Affect" (MALAA)?	NO
Was a Jurisdiction Determination (JD) request sent to USACE?	NO
If "YES" date approved:	Not Applicable
Is Section 106 Coordination (or ORC 149.53) Complete?	YES
If "YES" date completed:	11/22/2021
Does the activity have the potential to cause effects to the properties listed, or eligible for listing, in the National Register of Historic Places?	NO
Does the activity have the potential to impact a Section 408 (Federal Civil Works) project?	NO
If "YES" date coordination was completed:	Not Applicable
For 100% state-funded projects, is tree clearing necessary to facilitate waterway impacts?	Not Applicable
Will in-stream work be conducted during ODNR exclusionary dates? (see ODOT MOA)	To Be Determined
Will stream relocation or channelization occur?	NO
Are plan sheets attached? (Include: waterway impact plan sheets, site plan, with delineated waters labeled, and general notes)	YES
OHWM for all impacted streams is shown on the plan sheets?	YES
Temporary construction access fill or dewatering (including cofferdams) required?	YES
Temporary Construction, Access and Dewatering Activities Checklist Included? (ODOT-let and State Forces ONLY)	YES

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Wetland, Lake, & Pond Table

Resource ID	Impact Location Station	ORAM Category	Wetland Type	Isolated Waterway	Impact Type	Impact Material	Impact Amount Acreage		
							Temporary	Permanent	Total
Wetland A	STA 758+99	Cat. 1	EM	NO	Culvert replacement (+TAF)	Earthen Fill, Concrete	0.000	0.0005	0.0005
Wetland B	STA 700+10	Cat. 1	EM	YES	Bridge Replacement	Earthen Fill	0.000	0.0002	0.0002
Wetland C	STA 698+90	Cat. 1	EM	NO	Bridge Replacement	Clean Non-erodible Fill	0.000	0.0221	0.0221
Wetland D	STA 697+70	Cat. 1	EM/FO	NO	Bridge Replacement	RCP, Earthen Fill	0.000	0.0051	0.0051
Wetland E	STA 533+00	Cat. 1	EM	YES	Grading (ramp reconfiguration, slope, embankment)	Earthen Fill	0.000	0.0270	0.0270
Wetland F.1	STA 518+70	Mod. Cat. 2	EM/SS/FO	NO	Bridge Replacement TAF - General (MOT)	Earthen Fill, Concrete, Clean Non-erodible Fill	0.000	0.0347	0.0347
Wetland F.2	STA 518+60	Mod. Cat. 2	EM/SS/FO	NO	Bridge Replacement	Earthen Fill, Concrete	0.00	0.0068	0.0068
Wetland H.1	STA 519+49	Mod. Cat. 2	EM/SS/FO	NO	Bridge Replacement TAF - General (MOT)	Earthen Fill, Concrete, Clean Non-erodible Fill	0.000	0.0547	0.0547
Wetland I	STA 409+90	Cat. 1	EM/SS	NO	Bridge Replacement TAF - General (MOT)	Earthen Fill, Concrete, Clean Non-erodible Fill	0.000	0.0609	0.0609
Wetland J	STA 410+30	Cat. 1	EM/SS	NO	Bridge Replacement TAF - General (MOT)	Earthen Fill, Concrete, Clean Non-erodible Fill	0.000	0.0155	0.0155
Wetland N.1	STA 667+00	Cat. 1	EM	NO	Culvert replacement (+RCP +TAF)	RCP, Earthen Fill, Concrete	0.000	0.0056	0.0056
Wetland N.2	STA 667+11	Cat. 1	EM	NO	Culvert replacement (+RCP +TAF)	RCP, Earthen Fill, Concrete	0.000	0.0077	0.0077
Wetland Q.1	STA 379+33	Cat. 1	EM/SS	NO	Culvert replacement (+TAF)	Earthen Fill, Concrete	0.000	0.0003	0.0003
Wetland R.1	STA 298+00	Cat. 1	EM/SS	NO	Bridge Replacement	RCP, Earthen Fill	0.000	0.0254	0.0254
Wetland R.2	STA 298+25	Cat. 1	EM/SS	NO	Bridge Replacement	Earthen Fill	0.000	0.0029	0.0029
Wetland S.1	STA 298+10	Cat. 1	EM/SS	NO	Bridge Replacement TAF - General (MOT)	Earthen Fill, Clean Non-erodible Fill	0.000	0.0319	0.0319
Wetland S.2	STA 298+25	Cat. 1	EM/SS	NO	Bridge Replacement TAF - General (MOT)	Earthen Fill, RCP, Clean Non-erodible Fill	0.000	0.0131	0.0131
Wetland T.1	STA 298+25	Cat. 1	EM/SS	NO	Bridge Replacement	RCP, Earthen Fill	0.000	0.0275	0.0275
Wetland T.2	STA 298+00	Cat. 1	EM/SS	NO	Bridge Replacement	Earthen Fill	0.000	0.0184	0.0184
Wetland W	STA 490+00	Cat. 1	EM/SS	NO	Culvert replacement (+RCP)	RCP, Earthen Fill, Concrete	0.000	0.0050	0.0050
Wetland Y	STA 574+92	Cat. 1	EM/SS	NO	Culvert replacement (+RCP +TAF)	RCP, Earthen Fill, Concrete	0.000	0.0159	0.0159

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Stream, River, Jurisdictional Ditch, & Reservoir Table

Resource ID	Impact Location Station	OEPA Aquatic Life Use Designation	Anti-Degradation Designation	Flow Regime	Drainage Area at Impact Location (SM)	401 WQC Eligibility	Impact Type	Impact Material	Impact Amount Linear Footage (Acreage)		
									Temporary	Permanent	Total
Springwater Run	STA 839+75	WWH	GHQW	I	1.5	Possibly Eligible	Culvert extension (no added capacity +TAF) TAF - General (MOT)	RCP, Earthen Fill, Concrete, Clean Non-erodible Fill	50 LF (0.010 AC)	74 LF (0.015 AC)	74 LF (0.015 AC)
Greenbrier Creek	STA 758+99	WWH	GHQW	I	0.26	Possibly Eligible	Culvert replacement (+RCP +TAF) Grading (ramp reconfiguration, slope, embankment)	RCP, Earthen Fill, Concrete, Clean Non-erodible Fill	120 LF (0.018 AC)	343 LF (0.053 AC)	343 LF (0.053 AC)
Opossum Run	STA 698+50	WWH	GHQW	P	9.9	Eligible	Bridge Replacement TAF - General (MOT)	RCP, Earthen Fill, Clean Non-erodible Fill	230 LF (0.081 AC)	205 LF (0.055 AC)	230 LF (0.081 AC)
Childers Ditch	STA 667+10	** WWH	GHQW	P	2.0	Eligible	Culvert replacement (+RCP +TAF) TAF - General (MOT)	RCP, Earthen Fill, Concrete, Clean Non-erodible Fill	50 LF (0.011 AC)	241 LF (0.053 AC)	241 LF (0.053 AC)
Robinson Ditch	STA 575+18	**Mod Small Drainage Warmwater (Class II)	GHQW	I	0.83	Ineligible	Culvert replacement (+RCP +TAF) TAF - General (MOT)	RCP, Earthen Fill, Concrete, Clean Non-erodible Fill	50 LF (0.006 AC)	259 LF (0.028 AC)	259 LF (0.028 AC)
Deer Creek	STA 519+00	WWH	GHQW	P	146.0	Ineligible	Bridge Replacement TAF - General (MOT)	Earthen Fill, Concrete, Clean Non-erodible Fill	230 LF (0.338 AC)	160 LF (0.118 AC)	230 LF (0.338 AC)
Stream 1	STA 514+50	**Mod Small Drainage Warmwater (Class II)	GHQW	I	0.07	Ineligible	TAF - General (MOT) Debris cleaning	Clean Non-erodible Fill	50 LF (0.008 AC)	--	50 LF (0.008 AC)
Bradford Creek	STA 410+00	EWH	SHQW	P	37.7	Ineligible	Bridge Replacement TAF - General (MOT)	RCP, Earthen Fill, Concrete, Clean Non-erodible Fill	230 LF (0.208 AC)	170 LF (0.128 AC)	230 LF (0.208 AC)
Galbreath Ditch	STA 379+08	** WWH	GHQW	P	2.7	Ineligible	Culvert replacement (+RCP +TAF) TAF - General (MOT)	RCP, Earthen Fill, Concrete, Clean Non-erodible Fill	50 LF (0.004 AC)	270 LF (0.022 AC)	270 LF (0.022 AC)
Mud Run	STA 298+20	WWH	GHQW	P	2.3	Possibly Eligible	Bridge Replacement TAF - General (MOT)	RCP, Earthen Fill, Concrete, Clean Non-erodible Fill	230 LF (0.186 AC)	80 LF (0.018 AC)	230 LF (0.186 AC)

PJD 1	STA 833+30 - 834+50	--	--	E	<0.05	Possibily Eligible	Culvert replacement (+RCP)	RCP, Earthen Fill	--	51 LF (0.004 AC)	51 LF (0.004 AC)
PJD 2	STA 507+00	--	--	I	<0.05	Ineligible	Culvert replacement (+RCP)	RCP, Earthen Fill	--	27 LF (0.003 AC)	27 LF (0.003 AC)

Prepared By: Nick Viau, (614) 481-8600, nviau@lawhon-assoc.com; &

Beth Hollinden, (614) 481-8600, bhollinden@lawhon-assoc.com

Attachment A
Temporary Fill Checklist

Temporary Construction, Access and Dewatering Activities

Permit Determination Checklist

The purpose of this form is to aid the Office of Environmental Services - Waterway Permits Unit (OES-WPU) in the permit determination process. This form shall be completed by the project designer and reflect the anticipated needs of the temporary fill. If the type and amount of temporary fill is unknown, assume a worst case scenario of what could be needed. A completed copy of this form and a temporary construction access plan shall be forwarded to the District Environmental Coordinator (DEC) to be included in the Permit Determination Request submitted to OES-WPU.

Co-Rte-Sec: MAD/PIC-71-7.30/0.00 PID: 107630

Description: Bridge Replacement and Widening over Bradford Creek & MOT assoc. with I-71 Widening

During the construction of this project, the following activities in the waters of the United States are anticipated: (check all that apply)

- ☒ Temporary structure for maintaining traffic
- ☒ Cofferdams
- ☒ Temporary access fill (e.g. causeways and work pads)
- ☒ Demolition and debris removal
- ☒ Dams, sumps and pumping

ODOT requires that temporary activity to accommodate a minimum flow equal to twice the highest mean monthly flow without creating a rise in backwater above the OHWM. **The minimum flow to be maintained throughout construction for this location is** **144.4** **cfs.** The means that will most likely be implemented by the Contractor to maintain this flow will be:

- ☒ Conduit(s)
- ☒ Open channel(s)\Temporary Bridge

Does the project meet flow requirements outlined in the Location &Design Manual (L&D Vol.2 Section 1012)?

X YES _____ NO

Different 404 permit types have different limitations and requirements. Please read the limitations and provide the required measurement as is applies for this project.

- ☒ The maximum length of temporary impact, as measured upstream to downstream along one bank, cannot exceed 300-ft. **Proposed temporary impact length for this project is** **230** **ft.**
- ☒ The duration of the impact to waters in the United States cannot exceed 2 Years. **Proposed temporary impact duration is** **1.7** **years.**
- ☒ The proposed temporary fill is within the flowage easement of a flood control facility*. _____ YES **X** NO

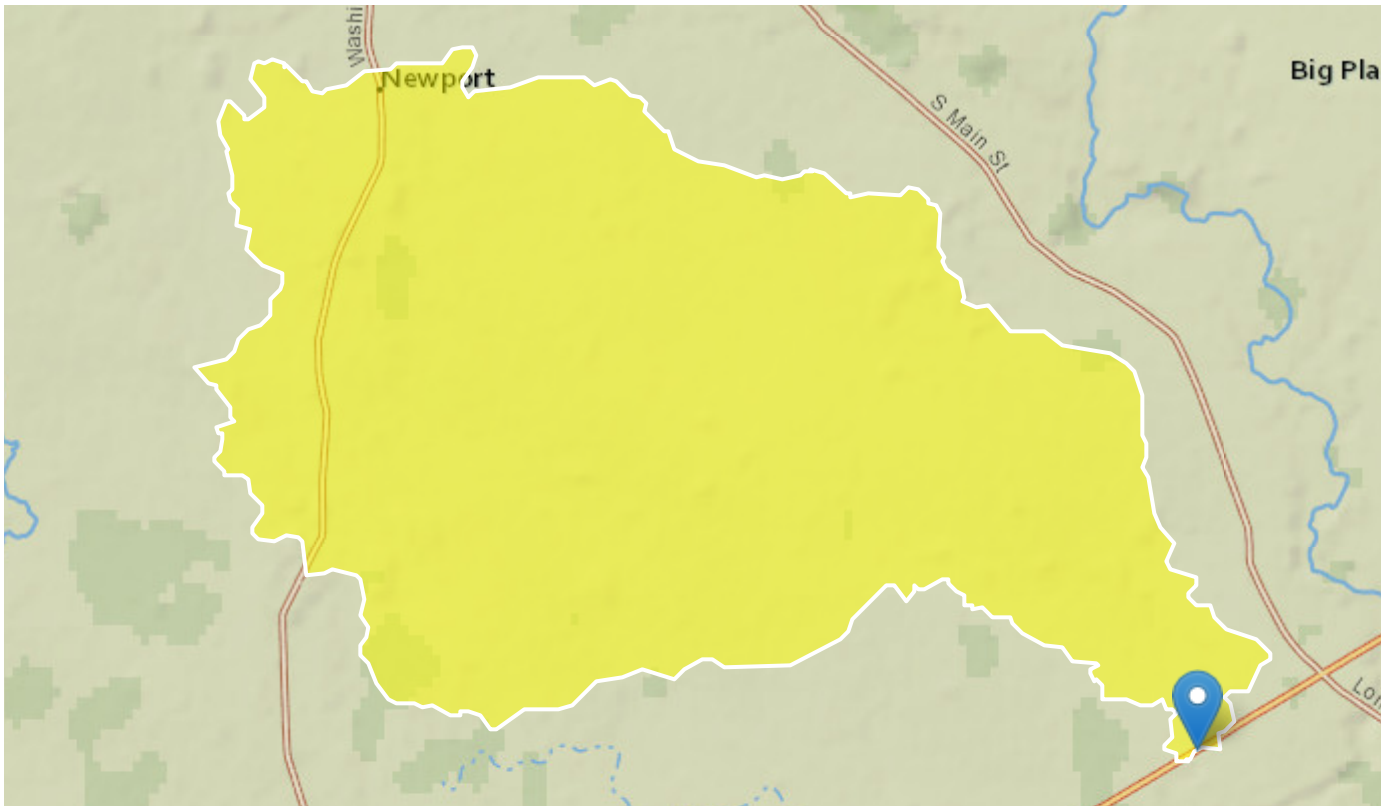
*Only applies to federal flood control facilities. Flowage easements associated with these facilities can occur several miles away from the facility. If uncertain that the project is in a flowage easement area, please consult your district's real estate office for assistance. Contact OES with further questions.

cc. District Environmental Coordinator (DEC)

A complete copy of the RGP with the OEPA conditions may be downloaded at the following website:
http://www.dot.state.oh.us/Divisions/Planning/Environment/Ecological_Resources_Permits/WATERWAY_PERMITS/Pages/default.aspx

StreamStats Report - MAD/PIC-71-7.30/0.00 - Bradford Creek

Region ID: OH
Workspace ID: OH20211229053318412000
Clicked Point (Latitude, Longitude): 39.74775, -83.32508
Time: 2021-12-29 00:33:38 -0500



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	37.6	square miles
LC92STOR	Percentage of water bodies and wetlands determined from the NLCD	0.17	percent
PRECIP	Mean Annual Precipitation	38.9	inches
FOREST	Percentage of area covered by forest	3.64	percent

Parameter Code	Parameter Description	Value	Unit
LAT_CENT	Latitude of Basin Centroid	39.793	decimal degrees
STREAM_VARG	Streamflow variability index as defined in WRIR 02-4068, computed from regional grid	0.56	dimensionless

Monthly Flow Statistics Parameters [Low Flow LatLE 41.2 wri02 4068]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	37.6	square miles	0.12	7422
LC92STOR	Percent Storage from NLCD1992	0.17	percent	0	19
PRECIP	Mean Annual Precipitation	38.9	inches	34	43.2
FOREST	Percent Forest	3.64	percent	0	99.1
LAT_CENT	Latitude of Basin Centroid	39.793	decimal degrees	38.68	41.2
STREAM_VARG	Streamflow Variability Index from Grid	0.56	dimensionless	0.25	1.13

Monthly Flow Statistics Flow Report [Low Flow LatLE 41.2 wri02 4068]

PIl: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	ASEp
January Mean Flow	55.7	ft^3/s	16.6	16.6
February Mean Flow	62.9	ft^3/s	11.9	11.9
March Mean Flow	72.2	ft^3/s	14	14
April Mean Flow	64.6	ft^3/s	11.2	11.2
May Mean Flow	43.9	ft^3/s	19.5	19.5
June Mean Flow	30.1	ft^3/s	27	27
July Mean Flow	18.4	ft^3/s	28.2	28.2
August Mean Flow	13.2	ft^3/s	36.8	36.8
September Mean Flow	7.55	ft^3/s	43.6	43.6
October Mean Flow	8.44	ft^3/s	50.8	50.8

Statistic	Value	Unit	SE	ASEp
November Mean Flow	20.6	ft^3/s	37.5	37.5
December Mean Flow	37.1	ft^3/s	21.8	21.8

Monthly Flow Statistics Citations

Koltun, G. F., and Whitehead, M. T.,2002, Techniques for Estimating Selected Streamflow Characteristics of Rural, Unregulated Streams in Ohio: U. S. Geological Survey Water-Resources Investigations Report 02-4068, 50 p (https://pubs.er.usgs.gov/publication/wri024068)

Application Version: 4.6.2
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.2

Temporary Construction, Access and Dewatering Activities

Permit Determination Checklist

The purpose of this form is to aid the Office of Environmental Services - Waterway Permits Unit (OES-WPU) in the permit determination process. This form shall be completed by the project designer and reflect the anticipated needs of the temporary fill. If the type and amount of temporary fill is unknown, assume a worst case scenario of what could be needed. A completed copy of this form and a temporary construction access plan shall be forwarded to the District Environmental Coordinator (DEC) to be included in the Permit Determination Request submitted to OES-WPU.

Co-Rte-Sec: MAD/PIC-71-7.30/0.00 PID: 107630

Description: Replacement of the Culvert carrying Childers Ditch under I-71 & MOT assoc. with I-71 Widening

During the construction of this project, the following activities in the waters of the United States are anticipated: (check all that apply)

- [x] Temporary structure for maintaining traffic
- [x] Cofferdams
- [ ] Temporary access fill (e.g. causeways and work pads)
- [x] Demolition and debris removal
- [x] Dams, sumps and pumping

ODOT requires that temporary activity to accommodate a minimum flow equal to twice the highest mean monthly flow without creating a rise in backwater above the OHWM. **The minimum flow to be maintained throughout construction for this location is** 7.48 **cfs.** The means that will most likely be implemented by the Contractor to maintain this flow will be:

- [x] Conduit(s)
- [ ] Open channel(s)\Temporary Bridge

Does the project meet flow requirements outlined in the Location &Design Manual (L&D Vol.2 Section 1012)?

X YES _____ NO

Different 404 permit types have different limitations and requirements. Please read the limitations and provide the required measurement as is applies for this project.

- [x] The maximum length of temporary impact, as measured upstream to downstream along one bank, cannot exceed 300-ft. **Proposed temporary impact length for this project is** 50 **ft.**
- [x] The duration of the impact to waters in the United States cannot exceed 2 Years. **Proposed temporary impact duration is** 1.7 **years.**
- [x] The proposed temporary fill is within the flowage easement of a flood control facility*. _____ YES X NO

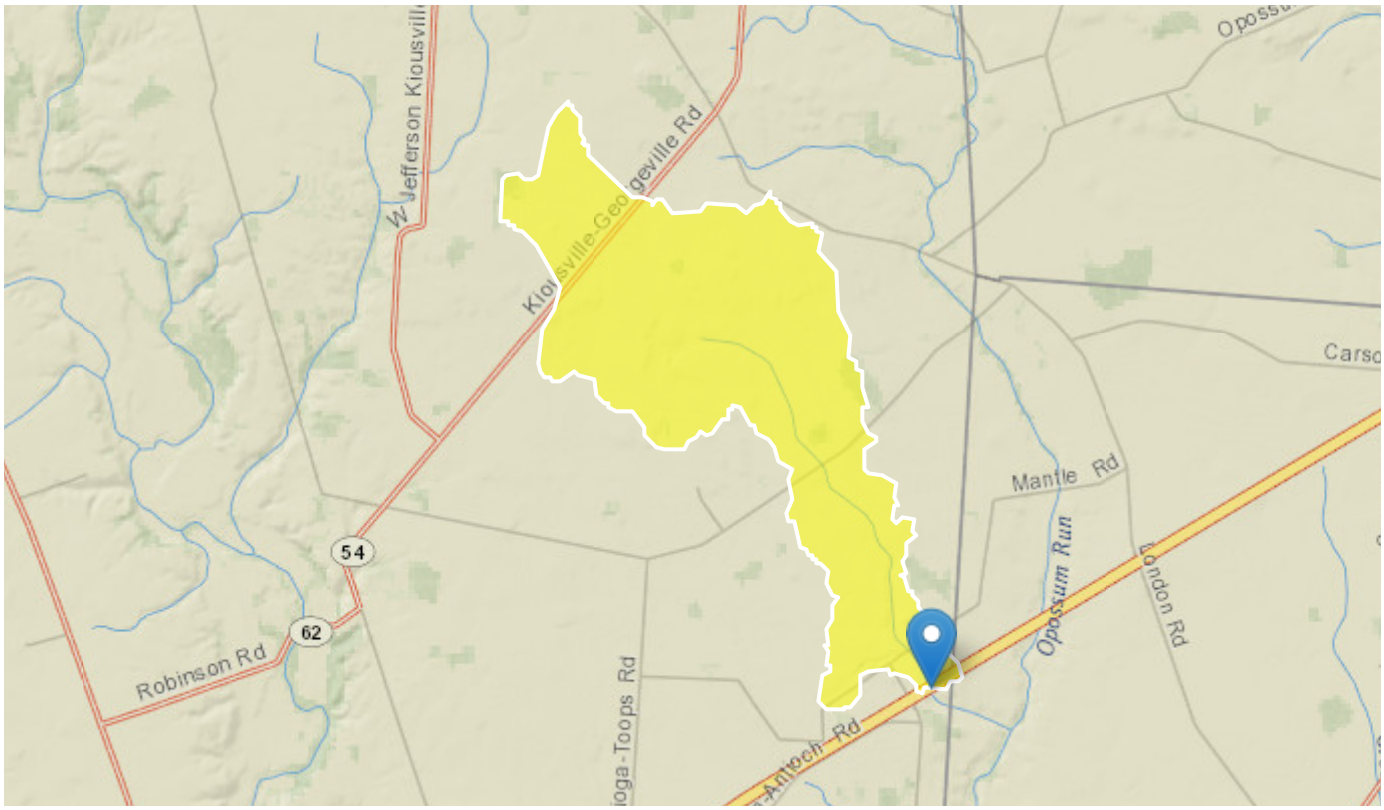
*Only applies to federal flood control facilities. Flowage easements associated with these facilities can occur several miles away from the facility. If uncertain that the project is in a flowage easement area, please consult your district's real estate office for assistance. Contact OES with further questions.

cc. District Environmental Coordinator (DEC)

A complete copy of the RGP with the OEPA conditions may be downloaded at the following website:
http://www.dot.state.oh.us/Divisions/Planning/Environment/Ecological_Resources_Permits/WATERWAY_PERMITS/Pages/default.aspx

StreamStats Report - MAD/PIC-71-7.30/0.00 - Childers Ditch

Region ID: OH
Workspace ID: OH20211229052427210000
Clicked Point (Latitude, Longitude): 39.78504, -83.24755
Time: 2021-12-29 00:24:46 -0500



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	2.01	square miles
LC92STOR	Percentage of water bodies and wetlands determined from the NLCD	0	percent
PRECIP	Mean Annual Precipitation	38.7	inches
FOREST	Percentage of area covered by forest	1.84	percent

Parameter Code	Parameter Description	Value	Unit
LAT_CENT	Latitude of Basin Centroid	39.8057	decimal degrees
STREAM_VARG	Streamflow variability index as defined in WRIR 02-4068, computed from regional grid	0.58	dimensionless

Monthly Flow Statistics Parameters [Low Flow LatLE 41.2 wri02 4068]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.01	square miles	0.12	7422
LC92STOR	Percent Storage from NLCD1992	0	percent	0	19
PRECIP	Mean Annual Precipitation	38.7	inches	34	43.2
FOREST	Percent Forest	1.84	percent	0	99.1
LAT_CENT	Latitude of Basin Centroid	39.8057	decimal degrees	38.68	41.2
STREAM_VARG	Streamflow Variability Index from Grid	0.58	dimensionless	0.25	1.13

Monthly Flow Statistics Flow Report [Low Flow LatLE 41.2 wri02 4068]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	ASEp
January Mean Flow	2.82	ft^3/s	16.6	16.6
February Mean Flow	3.46	ft^3/s	11.9	11.9
March Mean Flow	3.74	ft^3/s	14	14
April Mean Flow	3.56	ft^3/s	11.2	11.2
May Mean Flow	2.27	ft^3/s	19.5	19.5
June Mean Flow	1.54	ft^3/s	27	27
July Mean Flow	0.919	ft^3/s	28.2	28.2
August Mean Flow	0.656	ft^3/s	36.8	36.8
September Mean Flow	0.336	ft^3/s	43.6	43.6
October Mean Flow	0.39	ft^3/s	50.8	50.8

Statistic	Value	Unit	SE	ASEp
November Mean Flow	0.976	ft^3/s	37.5	37.5
December Mean Flow	1.86	ft^3/s	21.8	21.8

Monthly Flow Statistics Citations

Koltun, G. F., and Whitehead, M. T.,2002, Techniques for Estimating Selected Streamflow Characteristics of Rural, Unregulated Streams in Ohio: U. S. Geological Survey Water-Resources Investigations Report 02-4068, 50 p (https://pubs.er.usgs.gov/publication/wri024068)

Application Version: 4.6.2
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.2

Temporary Construction, Access and Dewatering Activities

Permit Determination Checklist

The purpose of this form is to aid the Office of Environmental Services - Waterway Permits Unit (OES-WPU) in the permit determination process. This form shall be completed by the project designer and reflect the anticipated needs of the temporary fill. If the type and amount of temporary fill is unknown, assume a worst case scenario of what could be needed. A completed copy of this form and a temporary construction access plan shall be forwarded to the District Environmental Coordinator (DEC) to be included in the Permit Determination Request submitted to OES-WPU.

Co-Rte-Sec: MAD/PIC-71-7.30/0.00 PID: 107630

Description: I-71 Bridge Replacement and Widening over Deer Creek & MOT assoc. with I-71 Widening

During the construction of this project, the following activities in the waters of the United States are anticipated: (check all that apply)

- ☒ Temporary structure for maintaining traffic
- ☒ Cofferdams
- ☒ Temporary access fill (e.g. causeways and work pads)
- ☒ Demolition and debris removal
- ☒ Dams, sumps and pumping

ODOT requires that temporary activity to accommodate a minimum flow equal to twice the highest mean monthly flow without creating a rise in backwater above the OHWM. **The minimum flow to be maintained throughout construction for this location is** **560** **cfs.** The means that will most likely be implemented by the Contractor to maintain this flow will be:

- ☒ Conduit(s)
- ☒ Open channel(s)\Temporary Bridge

Does the project meet flow requirements outlined in the Location &Design Manual (L&D Vol.2 Section 1012)?

X YES _____ NO

Different 404 permit types have different limitations and requirements. Please read the limitations and provide the required measurement as is applies for this project.

- ☒ The maximum length of temporary impact, as measured upstream to downstream along one bank, cannot exceed 300-ft. **Proposed temporary impact length for this project is** **230** **ft.**
- ☒ The duration of the impact to waters in the United States cannot exceed 2 Years. **Proposed temporary impact duration is** **1.7** **years.**
- ☒ The proposed temporary fill is within the flowage easement of a flood control facility*. _____ YES **X** NO

*Only applies to federal flood control facilities. Flowage easements associated with these facilities can occur several miles away from the facility. If uncertain that the project is in a flowage easement area, please consult your district's real estate office for assistance. Contact OES with further questions.

cc. District Environmental Coordinator (DEC)

StreamStats Report - MAD/PIC-71-7.30/0.00 - Deer Creek

Region ID: OH
Workspace ID: OH20211229052743291000
Clicked Point (Latitude, Longitude): 39.76301, -83.29177
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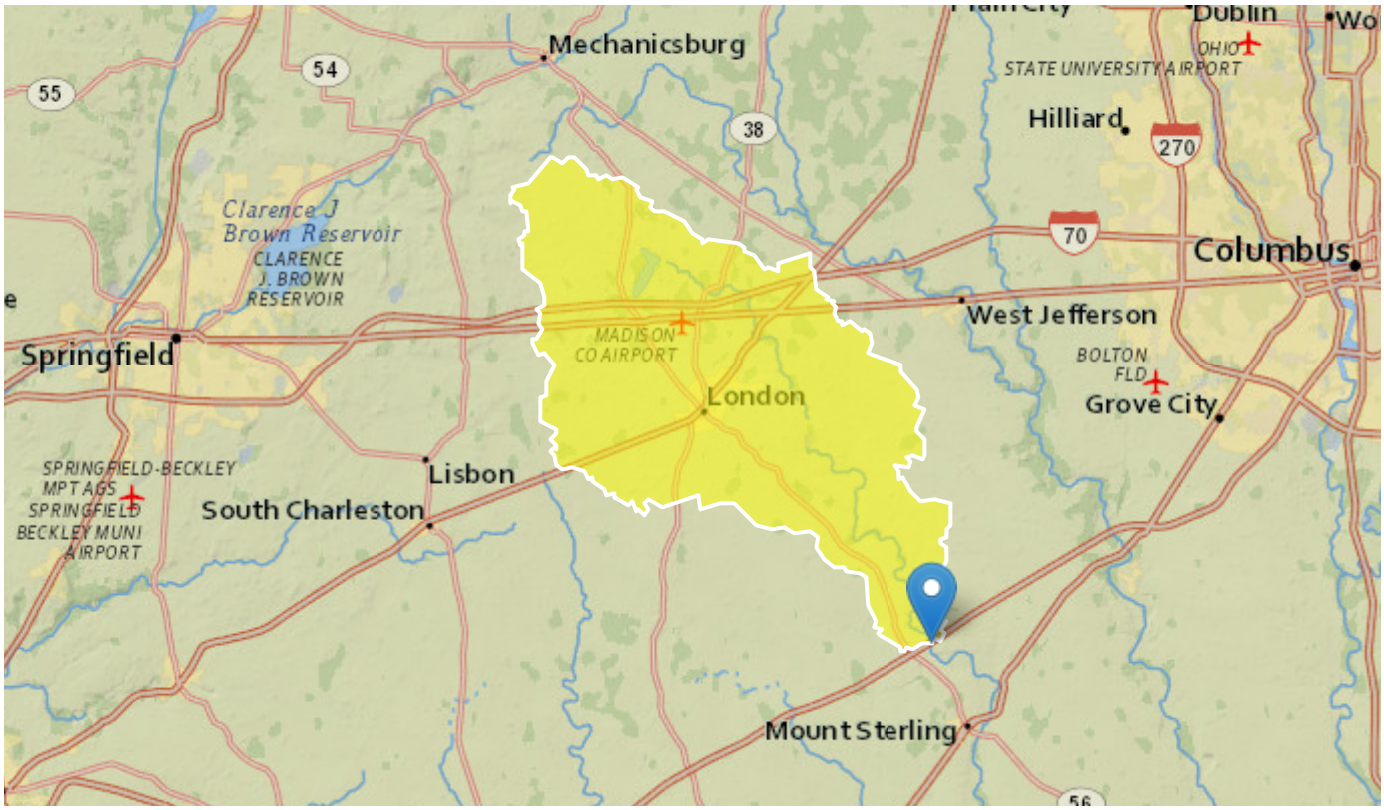


Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	146	square miles
LC92STOR	Percentage of water bodies and wetlands determined from the NLCD	0.92	percent
PRECIP	Mean Annual Precipitation	38.4	inches
FOREST	Percentage of area covered by forest	5.37	percent

Parameter Code	Parameter Description	Value	Unit
LAT_CENT	Latitude of Basin Centroid	39.8973	decimal degrees
STREAM_VARG	Streamflow variability index as defined in WRIR 02-4068, computed from regional grid	0.56	dimensionless

Monthly Flow Statistics Parameters [Low Flow LatLE 41.2 wri02 4068]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	146	square miles	0.12	7422
LC92STOR	Percent Storage from NLCD1992	0.92	percent	0	19
PRECIP	Mean Annual Precipitation	38.4	inches	34	43.2
FOREST	Percent Forest	5.37	percent	0	99.1
LAT_CENT	Latitude of Basin Centroid	39.8973	decimal degrees	38.68	41.2
STREAM_VARG	Streamflow Variability Index from Grid	0.56	dimensionless	0.25	1.13

Monthly Flow Statistics Flow Report [Low Flow LatLE 41.2 wri02 4068]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	ASEp
January Mean Flow	225	ft^3/s	16.6	16.6
February Mean Flow	235	ft^3/s	11.9	11.9
March Mean Flow	280	ft^3/s	14	14
April Mean Flow	243	ft^3/s	11.2	11.2
May Mean Flow	170	ft^3/s	19.5	19.5
June Mean Flow	117	ft^3/s	27	27
July Mean Flow	70.1	ft^3/s	28.2	28.2
August Mean Flow	50.1	ft^3/s	36.8	36.8
September Mean Flow	30.3	ft^3/s	43.6	43.6
October Mean Flow	34.6	ft^3/s	50.8	50.8

Statistic	Value	Unit	SE	ASEp
November Mean Flow	83.3	ft^3/s	37.5	37.5
December Mean Flow	146	ft^3/s	21.8	21.8

Monthly Flow Statistics Citations

Koltun, G. F., and Whitehead, M. T.,2002, Techniques for Estimating Selected Streamflow Characteristics of Rural, Unregulated Streams in Ohio: U. S. Geological Survey Water-Resources Investigations Report 02-4068, 50 p (https://pubs.er.usgs.gov/publication/wri024068)

Application Version: 4.6.2
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.2

Temporary Construction, Access and Dewatering Activities

Permit Determination Checklist

The purpose of this form is to aid the Office of Environmental Services - Waterway Permits Unit (OES-WPU) in the permit determination process. This form shall be completed by the project designer and reflect the anticipated needs of the temporary fill. If the type and amount of temporary fill is unknown, assume a worst case scenario of what could be needed. A completed copy of this form and a temporary construction access plan shall be forwarded to the District Environmental Coordinator (DEC) to be included in the Permit Determination Request submitted to OES-WPU.

Co-Rte-Sec: MAD/PIC-71-7.30/0.00 PID: 107630

Description: Replacement of Culvert carrying Galbreath Ditch under I-71 & MOT assoc. with I-71 Widening

During the construction of this project, the following activities in the waters of the United States are anticipated: (check all that apply)

- [x] Temporary structure for maintaining traffic
- [x] Cofferdams
- [ ] Temporary access fill (e.g. causeways and work pads)
- [x] Demolition and debris removal
- [x] Dams, sumps and pumping

ODOT requires that temporary activity to accommodate a minimum flow equal to twice the highest mean monthly flow without creating a rise in backwater above the OHWM. **The minimum flow to be maintained throughout construction for this location is** **9.62** **cfs.** The means that will most likely be implemented by the Contractor to maintain this flow will be:

- [x] Conduit(s)
- [ ] Open channel(s)\Temporary Bridge

Does the project meet flow requirements outlined in the Location &Design Manual (L&D Vol.2 Section 1012)?

X YES _____ NO

Different 404 permit types have different limitations and requirements. Please read the limitations and provide the required measurement as is applies for this project.

- [x] The maximum length of temporary impact, as measured upstream to downstream along one bank, cannot exceed 300-ft. **Proposed temporary impact length for this project is** **50** **ft.**
- [x] The duration of the impact to waters in the United States cannot exceed 2 Years. **Proposed temporary impact duration is** **1.7** **years.**
- [x] The proposed temporary fill is within the flowage easement of a flood control facility*. _____ YES **X** NO

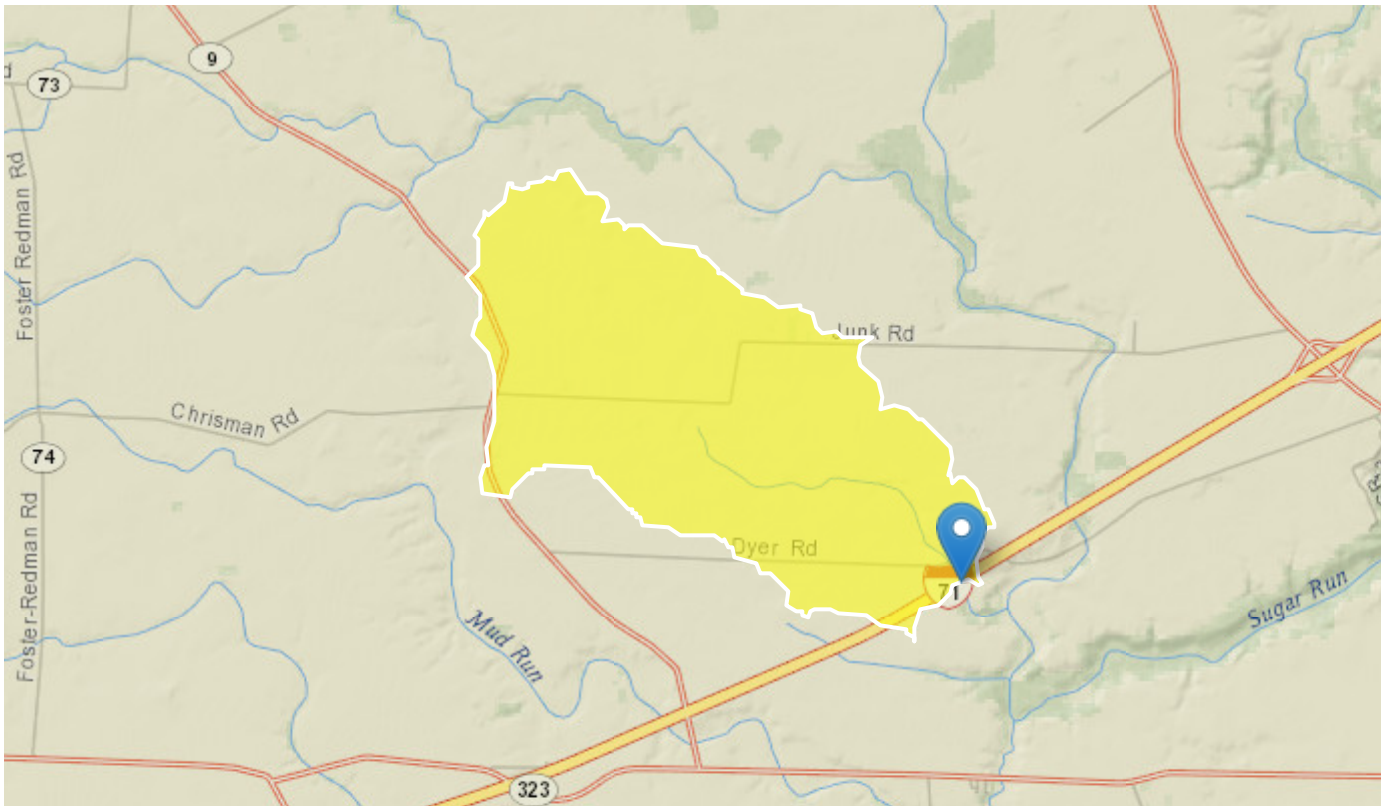
*Only applies to federal flood control facilities. Flowage easements associated with these facilities can occur several miles away from the facility. If uncertain that the project is in a flowage easement area, please consult your district's real estate office for assistance. Contact OES with further questions.

cc. District Environmental Coordinator (DEC)

A complete copy of the RGP with the OEPA conditions may be downloaded at the following website:
http://www.dot.state.oh.us/Divisions/Planning/Environment/Ecological_Resources_Permits/WATERWAY_PERMITS/Pages/default.aspx

StreamStats Report - MAD/PIC-71-7.30/0.00 - Galbreath Ditch

Region ID: OH
Workspace ID: OH20211229053502582000
Clicked Point (Latitude, Longitude): 39.74321, -83.33456
Time: 2021-12-29 00:35:21 -0500



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	2.68	square miles
LC92STOR	Percentage of water bodies and wetlands determined from the NLCD	0.0648	percent
PRECIP	Mean Annual Precipitation	39	inches
FOREST	Percentage of area covered by forest	0.12	percent

Parameter Code	Parameter Description	Value	Unit
LAT_CENT	Latitude of Basin Centroid	39.7546	decimal degrees
STREAM_VARG	Streamflow variability index as defined in WRIR 02-4068, computed from regional grid	0.57	dimensionless

Monthly Flow Statistics Parameters [Low Flow LatLE 41.2 wri02 4068]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.68	square miles	0.12	7422
LC92STOR	Percent Storage from NLCD1992	0.0648	percent	0	19
PRECIP	Mean Annual Precipitation	39	inches	34	43.2
FOREST	Percent Forest	0.12	percent	0	99.1
LAT_CENT	Latitude of Basin Centroid	39.7546	decimal degrees	38.68	41.2
STREAM_VARG	Streamflow Variability Index from Grid	0.57	dimensionless	0.25	1.13

Monthly Flow Statistics Flow Report [Low Flow LatLE 41.2 wri02 4068]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	ASEp
January Mean Flow	3.85	ft^3/s	16.6	16.6
February Mean Flow	4.48	ft^3/s	11.9	11.9
March Mean Flow	4.81	ft^3/s	14	14
April Mean Flow	4.6	ft^3/s	11.2	11.2
May Mean Flow	2.89	ft^3/s	19.5	19.5
June Mean Flow	2.08	ft^3/s	27	27
July Mean Flow	1.24	ft^3/s	28.2	28.2
August Mean Flow	0.913	ft^3/s	36.8	36.8
September Mean Flow	0.428	ft^3/s	43.6	43.6
October Mean Flow	0.533	ft^3/s	50.8	50.8

Statistic	Value	Unit	SE	ASEp
November Mean Flow	1.33	ft^3/s	37.5	37.5
December Mean Flow	2.37	ft^3/s	21.8	21.8

Monthly Flow Statistics Citations

Koltun, G. F., and Whitehead, M. T.,2002, Techniques for Estimating Selected Streamflow Characteristics of Rural, Unregulated Streams in Ohio: U. S. Geological Survey Water-Resources Investigations Report 02-4068, 50 p (https://pubs.er.usgs.gov/publication/wri024068)

Application Version: 4.6.2
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.2

Temporary Construction, Access and Dewatering Activities

Permit Determination Checklist

The purpose of this form is to aid the Office of Environmental Services - Waterway Permits Unit (OES-WPU) in the permit determination process. This form shall be completed by the project designer and reflect the anticipated needs of the temporary fill. If the type and amount of temporary fill is unknown, assume a worst case scenario of what could be needed. A completed copy of this form and a temporary construction access plan shall be forwarded to the District Environmental Coordinator (DEC) to be included in the Permit Determination Request submitted to OES-WPU.

Co-Rte-Sec: MAD/PIC-71-7.30/0.00 PID: 107630

Description: Replacements of culverts carrying Greenbrier Creek under I-71 and outletting into Greenbrier.

During the construction of this project, the following activities in the waters of the United States are anticipated: (check all that apply)

- ☐ Temporary structure for maintaining traffic
- ☒ Cofferdams
- ☐ Temporary access fill (e.g. causeways and work pads)
- ☒ Demolition and debris removal
- ☒ Dams, sumps and pumping

ODOT requires that temporary activity to accommodate a minimum flow equal to twice the highest mean monthly flow without creating a rise in backwater above the OHWM. **The minimum flow to be maintained throughout construction for this location is** **0.926** **cfs.** The means that will most likely be implemented by the Contractor to maintain this flow will be:

- ☒ Conduit(s)
- ☐ Open channel(s)\Temporary Bridge

Does the project meet flow requirements outlined in the Location &Design Manual (L&D Vol.2 Section 1012)?

X YES _____ NO

Different 404 permit types have different limitations and requirements. Please read the limitations and provide the required measurement as is applies for this project.

- ☒ The maximum length of temporary impact, as measured upstream to downstream along one bank, cannot exceed 300-ft. **Proposed temporary impact length for this project is** **120** **ft.**
- ☒ The duration of the impact to waters in the United States cannot exceed 2 Years. **Proposed temporary impact duration is** **1.7** **years.**
- ☒ The proposed temporary fill is within the flowage easement of a flood control facility*. _____ YES **X** NO

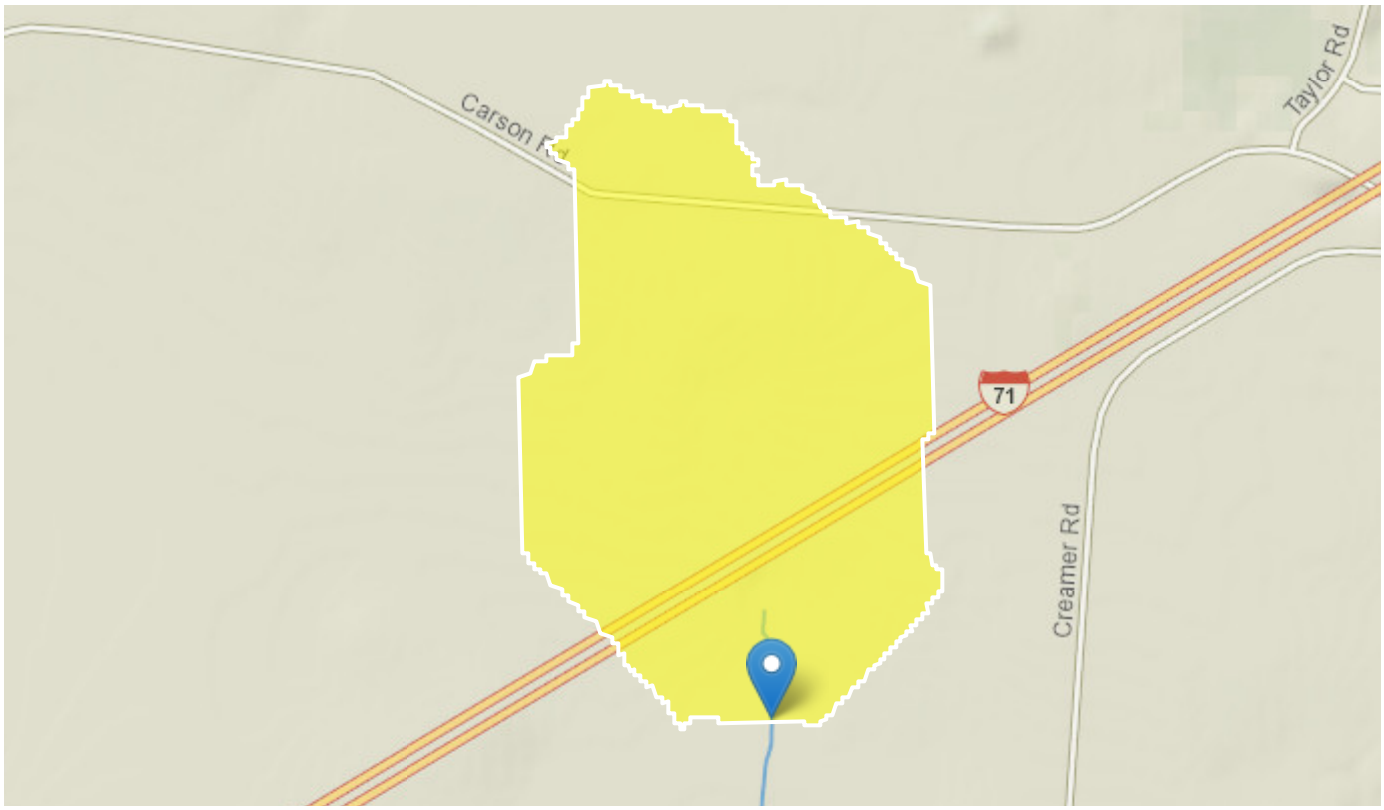
*Only applies to federal flood control facilities. Flowage easements associated with these facilities can occur several miles away from the facility. If uncertain that the project is in a flowage easement area, please consult your district's real estate office for assistance. Contact OES with further questions.

cc. District Environmental Coordinator (DEC)

A complete copy of the RGP with the OEPA conditions may be downloaded at the following website:
http://www.dot.state.oh.us/Divisions/Planning/Environment/Ecological_Resources_Permits/WATERWAY_PERMITS/Pages/default.aspx

StreamStats Report - MAD/PIC-71-7.30/0.00 - Greenbrier Creek

Region ID: OH
Workspace ID: OH20211229052033830000
Clicked Point (Latitude, Longitude): 39.79795, -83.21367
Time: 2021-12-29 00:20:53 -0500



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.26	square miles
LC92STOR	Percentage of water bodies and wetlands determined from the NLCD	0	percent
PRECIP	Mean Annual Precipitation	38.7	inches
FOREST	Percentage of area covered by forest	0.13	percent

Parameter Code	Parameter Description	Value	Unit
LAT_CENT	Latitude of Basin Centroid	39.8028	decimal degrees
STREAM_VARG	Streamflow variability index as defined in WRIR 02-4068, computed from regional grid	0.61	dimensionless

Monthly Flow Statistics Parameters [Low Flow LatLE 41.2 wri02 4068]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.26	square miles	0.12	7422
LC92STOR	Percent Storage from NLCD1992	0	percent	0	19
PRECIP	Mean Annual Precipitation	38.7	inches	34	43.2
FOREST	Percent Forest	0.13	percent	0	99.1
LAT_CENT	Latitude of Basin Centroid	39.8028	decimal degrees	38.68	41.2
STREAM_VARG	Streamflow Variability Index from Grid	0.61	dimensionless	0.25	1.13

Monthly Flow Statistics Flow Report [Low Flow LatLE 41.2 wri02 4068]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	ASEp
January Mean Flow	0.357	ft^3/s	16.6	16.6
February Mean Flow	0.45	ft^3/s	11.9	11.9
March Mean Flow	0.462	ft^3/s	14	14
April Mean Flow	0.463	ft^3/s	11.2	11.2
May Mean Flow	0.278	ft^3/s	19.5	19.5
June Mean Flow	0.191	ft^3/s	27	27
July Mean Flow	0.111	ft^3/s	28.2	28.2
August Mean Flow	0.0796	ft^3/s	36.8	36.8
September Mean Flow	0.0356	ft^3/s	43.6	43.6
October Mean Flow	0.0446	ft^3/s	50.8	50.8

Statistic	Value	Unit	SE	ASEp
November Mean Flow	0.116	ft^3/s	37.5	37.5
December Mean Flow	0.223	ft^3/s	21.8	21.8

Monthly Flow Statistics Citations

Koltun, G. F., and Whitehead, M. T.,2002, Techniques for Estimating Selected Streamflow Characteristics of Rural, Unregulated Streams in Ohio: U. S. Geological Survey Water-Resources Investigations Report 02-4068, 50 p (https://pubs.er.usgs.gov/publication/wri024068)

Application Version: 4.6.2
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.2

Temporary Construction, Access and Dewatering Activities

Permit Determination Checklist

The purpose of this form is to aid the Office of Environmental Services - Waterway Permits Unit (OES-WPU) in the permit determination process. This form shall be completed by the project designer and reflect the anticipated needs of the temporary fill. If the type and amount of temporary fill is unknown, assume a worst case scenario of what could be needed. A completed copy of this form and a temporary construction access plan shall be forwarded to the District Environmental Coordinator (DEC) to be included in the Permit Determination Request submitted to OES-WPU.

Co-Rte-Sec: MAD/PIC-71-7.30/0.00 PID: 107630

Description: I-71 Bridge Replacement and Widening over Mud Run; MOT assoc. with I-71 Widening

During the construction of this project, the following activities in the waters of the United States are anticipated: (check all that apply)

- ☒ Temporary structure for maintaining traffic
- ☒ Cofferdams
- ☒ Temporary access fill (e.g. causeways and work pads)
- ☒ Demolition and debris removal
- ☒ Dams, sumps and pumping

ODOT requires that temporary activity to accommodate a minimum flow equal to twice the highest mean monthly flow without creating a rise in backwater above the OHWM. **The minimum flow to be maintained throughout construction for this location is** **18.12** **cfs.** The means that will most likely be implemented by the Contractor to maintain this flow will be:

- ☒ Conduit(s)
- ☒ Open channel(s)\Temporary Bridge

Does the project meet flow requirements outlined in the Location &Design Manual (L&D Vol.2 Section 1012)?

X YES _____ NO

Different 404 permit types have different limitations and requirements. Please read the limitations and provide the required measurement as is applies for this project.

- ☒ The maximum length of temporary impact, as measured upstream to downstream along one bank, cannot exceed 300-ft. **Proposed temporary impact length for this project is** **230** **ft.**
- ☒ The duration of the impact to waters in the United States cannot exceed 2 Years. **Proposed temporary impact duration is** **1.7** **years.**
- ☒ The proposed temporary fill is within the flowage easement of a flood control facility*. _____ YES **X** NO

*Only applies to federal flood control facilities. Flowage easements associated with these facilities can occur several miles away from the facility. If uncertain that the project is in a flowage easement area, please consult your district's real estate office for assistance. Contact OES with further questions.

cc. District Environmental Coordinator (DEC)

A complete copy of the RGP with the OEPA conditions may be downloaded at the following website:
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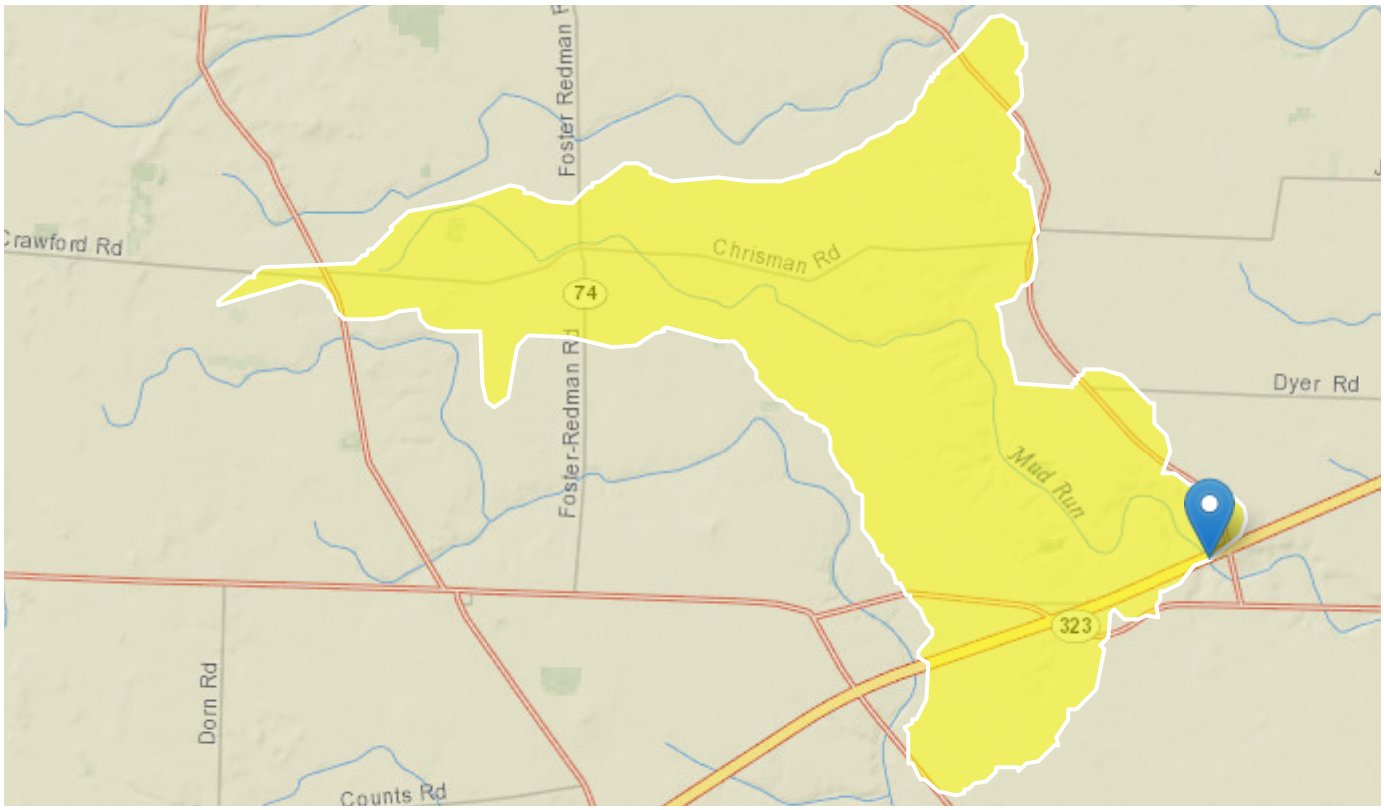
StreamStats Report - MAD/PIC-71-7.30/0.00 - Mud Run

Region ID: OH
Workspace ID: OH20211229053652818000
Clicked Point (Latitude, Longitude): 39.73389, -83.35977
Time: 2021-12-29 00:37:12 -0500



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	4.94	square miles
LC92STOR	Percentage of water bodies and wetlands determined from the NLCD	0.0563	percent
PRECIP	Mean Annual Precipitation	39	inches
FOREST	Percentage of area covered by forest	0.76	percent

Parameter Code	Parameter Description	Value	Unit
LAT_CENT	Latitude of Basin Centroid	39.7458	decimal degrees
STREAM_VARG	Streamflow variability index as defined in WRIR 02-4068, computed from regional grid	0.58	dimensionless

Monthly Flow Statistics Parameters [Low Flow LatLE 41.2 wri02 4068]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	4.94	square miles	0.12	7422
LC92STOR	Percent Storage from NLCD1992	0.0563	percent	0	19
PRECIP	Mean Annual Precipitation	39	inches	34	43.2
FOREST	Percent Forest	0.76	percent	0	99.1
LAT_CENT	Latitude of Basin Centroid	39.7458	decimal degrees	38.68	41.2
STREAM_VARG	Streamflow Variability Index from Grid	0.58	dimensionless	0.25	1.13

Monthly Flow Statistics Flow Report [Low Flow LatLE 41.2 wri02 4068]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	ASEp
January Mean Flow	7.13	ft^3/s	16.6	16.6
February Mean Flow	8.31	ft^3/s	11.9	11.9
March Mean Flow	9.06	ft^3/s	14	14
April Mean Flow	8.53	ft^3/s	11.2	11.2
May Mean Flow	5.49	ft^3/s	19.5	19.5
June Mean Flow	3.83	ft^3/s	27	27
July Mean Flow	2.29	ft^3/s	28.2	28.2
August Mean Flow	1.67	ft^3/s	36.8	36.8
September Mean Flow	0.826	ft^3/s	43.6	43.6
October Mean Flow	0.993	ft^3/s	50.8	50.8

Statistic	Value	Unit	SE	ASEp
November Mean Flow	2.51	ft^3/s	37.5	37.5
December Mean Flow	4.52	ft^3/s	21.8	21.8

Monthly Flow Statistics Citations

Koltun, G. F., and Whitehead, M. T.,2002, Techniques for Estimating Selected Streamflow Characteristics of Rural, Unregulated Streams in Ohio: U. S. Geological Survey Water-Resources Investigations Report 02-4068, 50 p (https://pubs.er.usgs.gov/publication/wri024068)

Application Version: 4.6.2
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.2

Temporary Construction, Access and Dewatering Activities

Permit Determination Checklist

The purpose of this form is to aid the Office of Environmental Services - Waterway Permits Unit (OES-WPU) in the permit determination process. This form shall be completed by the project designer and reflect the anticipated needs of the temporary fill. If the type and amount of temporary fill is unknown, assume a worst case scenario of what could be needed. A completed copy of this form and a temporary construction access plan shall be forwarded to the District Environmental Coordinator (DEC) to be included in the Permit Determination Request submitted to OES-WPU.

Co-Rte-Sec: MAD/PIC-71-7.30/0.00 PID: 107630

Description: I-71 Bridge Replacement and Widening over Opossum Run; MOT assoc. with I-71 Widening

During the construction of this project, the following activities in the waters of the United States are anticipated: (check all that apply)

- ☒ Temporary structure for maintaining traffic
- ☒ Cofferdams
- ☒ Temporary access fill (e.g. causeways and work pads)
- ☒ Demolition and debris removal
- ☒ Dams, sumps and pumping

ODOT requires that temporary activity to accommodate a minimum flow equal to twice the highest mean monthly flow without creating a rise in backwater above the OHWM. **The minimum flow to be maintained throughout construction for this location is** **37.2** **cfs.** The means that will most likely be implemented by the Contractor to maintain this flow will be:

- ☒ Conduit(s)
- ☒ Open channel(s)\Temporary Bridge

Does the project meet flow requirements outlined in the Location &Design Manual (L&D Vol.2 Section 1012)?

X YES _____ NO

Different 404 permit types have different limitations and requirements. Please read the limitations and provide the required measurement as is applies for this project.

- ☒ The maximum length of temporary impact, as measured upstream to downstream along one bank, cannot exceed 300-ft. **Proposed temporary impact length for this project is** **230** **ft.**
- ☒ The duration of the impact to waters in the United States cannot exceed 2 Years. **Proposed temporary impact duration is** **1.7** **years.**
- ☒ The proposed temporary fill is within the flowage easement of a flood control facility*. _____ YES **X** NO

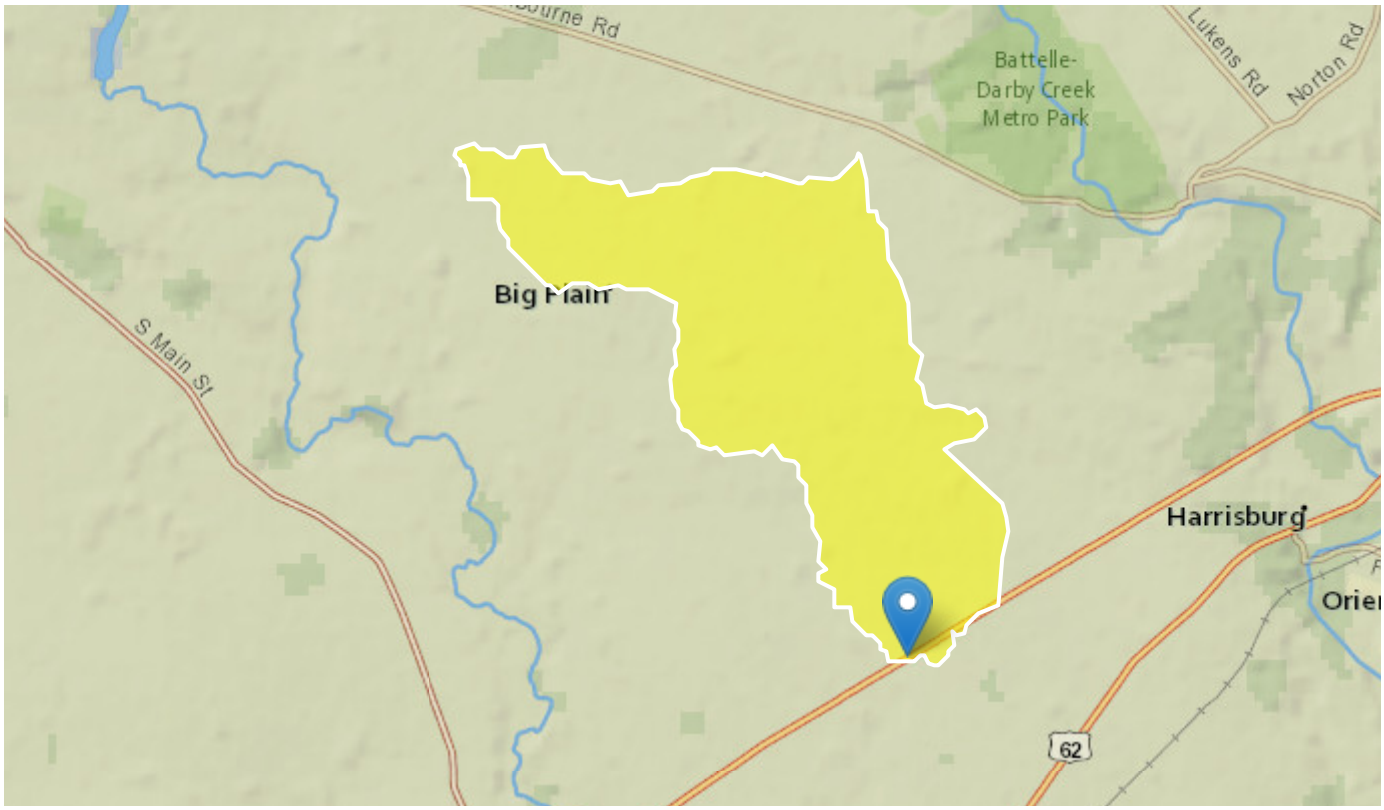
*Only applies to federal flood control facilities. Flowage easements associated with these facilities can occur several miles away from the facility. If uncertain that the project is in a flowage easement area, please consult your district's real estate office for assistance. Contact OES with further questions.

cc. District Environmental Coordinator (DEC)

A complete copy of the RGP with the OEPA conditions may be downloaded at the following website:
http://www.dot.state.oh.us/Divisions/Planning/Environment/Ecological_Resources_Permits/WATERWAY_PERMITS/Pages/default.aspx

StreamStats Report - MAD/PIC-71-7.30/0.00 - Opossum Run

Region ID: OH
Workspace ID: OH20211229052222899000
Clicked Point (Latitude, Longitude): 39.78964, -83.23814
Time: 2021-12-29 00:22:43 -0500



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	9.87	square miles
LC92STOR	Percentage of water bodies and wetlands determined from the NLCD	0.17	percent
PRECIP	Mean Annual Precipitation	38.5	inches
FOREST	Percentage of area covered by forest	3.03	percent

Parameter Code	Parameter Description	Value	Unit
LAT_CENT	Latitude of Basin Centroid	39.8281	decimal degrees
STREAM_VARG	Streamflow variability index as defined in WRIR 02-4068, computed from regional grid	0.59	dimensionless

Monthly Flow Statistics Parameters [Low Flow LatLE 41.2 wri02 4068]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	9.87	square miles	0.12	7422
LC92STOR	Percent Storage from NLCD1992	0.17	percent	0	19
PRECIP	Mean Annual Precipitation	38.5	inches	34	43.2
FOREST	Percent Forest	3.03	percent	0	99.1
LAT_CENT	Latitude of Basin Centroid	39.8281	decimal degrees	38.68	41.2
STREAM_VARG	Streamflow Variability Index from Grid	0.59	dimensionless	0.25	1.13

Monthly Flow Statistics Flow Report [Low Flow LatLE 41.2 wri02 4068]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	ASEp
January Mean Flow	14.2	ft^3/s	16.6	16.6
February Mean Flow	16.6	ft^3/s	11.9	11.9
March Mean Flow	18.6	ft^3/s	14	14
April Mean Flow	17.1	ft^3/s	11.2	11.2
May Mean Flow	11.3	ft^3/s	19.5	19.5
June Mean Flow	7.59	ft^3/s	27	27
July Mean Flow	4.55	ft^3/s	28.2	28.2
August Mean Flow	3.17	ft^3/s	36.8	36.8
September Mean Flow	1.74	ft^3/s	43.6	43.6
October Mean Flow	2.01	ft^3/s	50.8	50.8

Statistic	Value	Unit	SE	ASEp
November Mean Flow	5.07	ft^3/s	37.5	37.5
December Mean Flow	9.39	ft^3/s	21.8	21.8

Monthly Flow Statistics Citations

Koltun, G. F., and Whitehead, M. T.,2002, Techniques for Estimating Selected Streamflow Characteristics of Rural, Unregulated Streams in Ohio: U. S. Geological Survey Water-Resources Investigations Report 02-4068, 50 p (https://pubs.er.usgs.gov/publication/wri024068)

Application Version: 4.6.2
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.2

Temporary Construction, Access and Dewatering Activities

Permit Determination Checklist

The purpose of this form is to aid the Office of Environmental Services - Waterway Permits Unit (OES-WPU) in the permit determination process. This form shall be completed by the project designer and reflect the anticipated needs of the temporary fill. If the type and amount of temporary fill is unknown, assume a worst case scenario of what could be needed. A completed copy of this form and a temporary construction access plan shall be forwarded to the District Environmental Coordinator (DEC) to be included in the Permit Determination Request submitted to OES-WPU.

Co-Rte-Sec: MAD/PIC-71-7.30/0.00 PID: 107630

Description: Replacement of Culvert Carrying Robinson Ditch under I-71; MOT assoc. with I-71 Widening

During the construction of this project, the following activities in the waters of the United States are anticipated: (check all that apply)

- [x] Temporary structure for maintaining traffic
- [x] Cofferdams
- [ ] Temporary access fill (e.g. causeways and work pads)
- [x] Demolition and debris removal
- [x] Dams, sumps and pumping

ODOT requires that temporary activity to accommodate a minimum flow equal to twice the highest mean monthly flow without creating a rise in backwater above the OHWM. **The minimum flow to be maintained throughout construction for this location is** **2.92** **cfs.** The means that will most likely be implemented by the Contractor to maintain this flow will be:

- [x] Conduit(s)
- [ ] Open channel(s)\Temporary Bridge

Does the project meet flow requirements outlined in the Location &Design Manual (L&D Vol.2 Section 1012)?

X YES _____ NO

Different 404 permit types have different limitations and requirements. Please read the limitations and provide the required measurement as is applies for this project.

- [x] The maximum length of temporary impact, as measured upstream to downstream along one bank, cannot exceed 300-ft. **Proposed temporary impact length for this project is** **50** **ft.**
- [x] The duration of the impact to waters in the United States cannot exceed 2 Years. **Proposed temporary impact duration is** **1.7** **years.**
- [x] The proposed temporary fill is within the flowage easement of a flood control facility*. _____ YES **X** NO

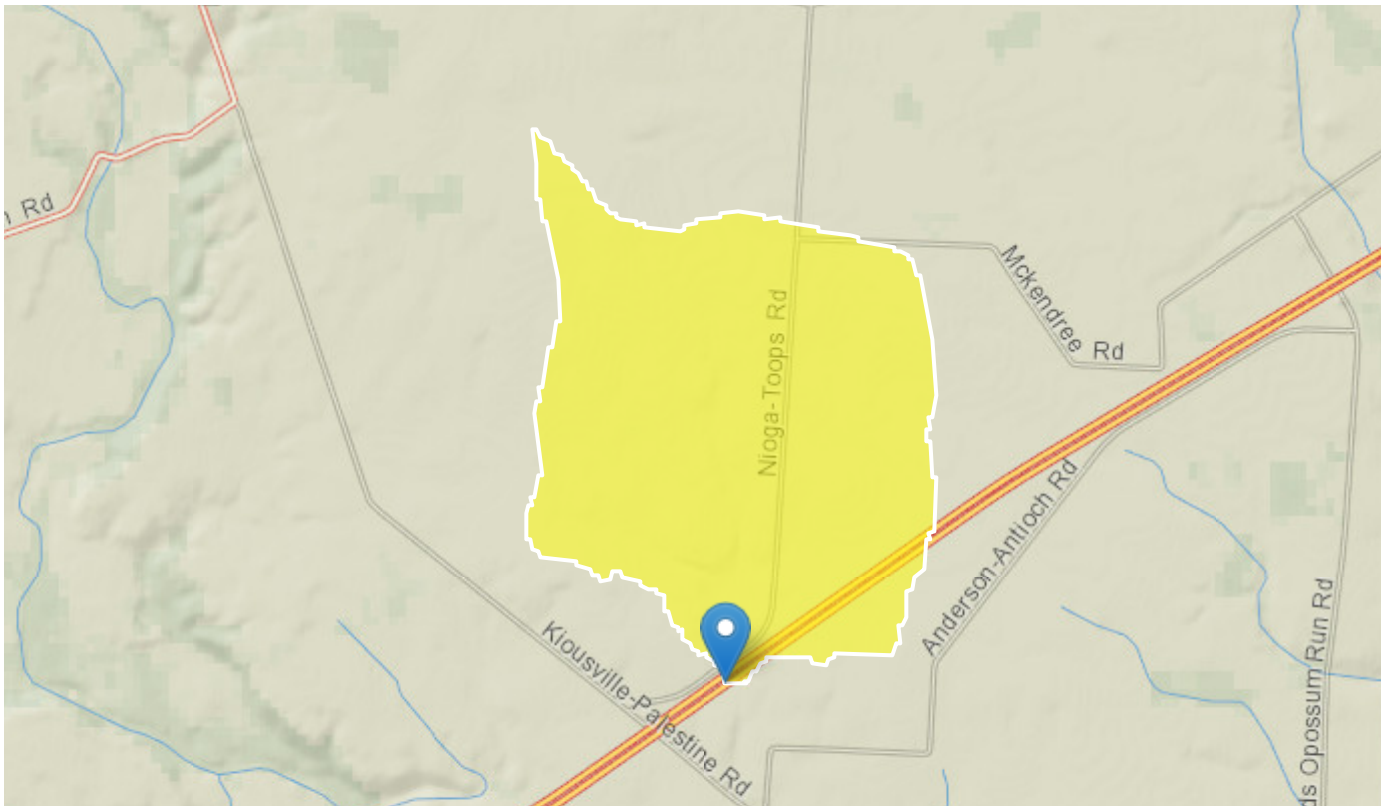
*Only applies to federal flood control facilities. Flowage easements associated with these facilities can occur several miles away from the facility. If uncertain that the project is in a flowage easement area, please consult your district's real estate office for assistance. Contact OES with further questions.

cc. District Environmental Coordinator (DEC)

A complete copy of the RGP with the OEPA conditions may be downloaded at the following website:
http://www.dot.state.oh.us/Divisions/Planning/Environment/Ecological_Resources_Permits/WATERWAY_PERMITS/Pages/default.aspx

StreamStats Report - MAD/PIC-71-7.30/0.00 - Robinson Ditch

Region ID: OH
Workspace ID: OH20211229052614508000
Clicked Point (Latitude, Longitude): 39.77127, -83.27549
Time: 2021-12-29 00:26:34 -0500



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.82	square miles
LC92STOR	Percentage of water bodies and wetlands determined from the NLCD	0	percent
PRECIP	Mean Annual Precipitation	38.9	inches
FOREST	Percentage of area covered by forest	0	percent

Parameter Code	Parameter Description	Value	Unit
LAT_CENT	Latitude of Basin Centroid	39.7798	decimal degrees
STREAM_VARG	Streamflow variability index as defined in WRIR 02-4068, computed from regional grid	0.57	dimensionless

Monthly Flow Statistics Parameters [Low Flow LatLE 41.2 wri02 4068]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.82	square miles	0.12	7422
LC92STOR	Percent Storage from NLCD1992	0	percent	0	19
PRECIP	Mean Annual Precipitation	38.9	inches	34	43.2
FOREST	Percent Forest	0	percent	0	99.1
LAT_CENT	Latitude of Basin Centroid	39.7798	decimal degrees	38.68	41.2
STREAM_VARG	Streamflow Variability Index from Grid	0.57	dimensionless	0.25	1.13

Monthly Flow Statistics Flow Report [Low Flow LatLE 41.2 wri02 4068]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	ASEp
January Mean Flow	1.15	ft^3/s	16.6	16.6
February Mean Flow	1.39	ft^3/s	11.9	11.9
March Mean Flow	1.46	ft^3/s	14	14
April Mean Flow	1.43	ft^3/s	11.2	11.2
May Mean Flow	0.875	ft^3/s	19.5	19.5
June Mean Flow	0.628	ft^3/s	27	27
July Mean Flow	0.372	ft^3/s	28.2	28.2
August Mean Flow	0.274	ft^3/s	36.8	36.8
September Mean Flow	0.124	ft^3/s	43.6	43.6
October Mean Flow	0.156	ft^3/s	50.8	50.8

Statistic	Value	Unit	SE	ASEp
November Mean Flow	0.386	ft^3/s	37.5	37.5
December Mean Flow	0.709	ft^3/s	21.8	21.8

Monthly Flow Statistics Citations

Koltun, G. F., and Whitehead, M. T.,2002, Techniques for Estimating Selected Streamflow Characteristics of Rural, Unregulated Streams in Ohio: U. S. Geological Survey Water-Resources Investigations Report 02-4068, 50 p (https://pubs.er.usgs.gov/publication/wri024068)

Application Version: 4.6.2
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.2

Temporary Construction, Access and Dewatering Activities

Permit Determination Checklist

The purpose of this form is to aid the Office of Environmental Services - Waterway Permits Unit (OES-WPU) in the permit determination process. This form shall be completed by the project designer and reflect the anticipated needs of the temporary fill. If the type and amount of temporary fill is unknown, assume a worst case scenario of what could be needed. A completed copy of this form and a temporary construction access plan shall be forwarded to the District Environmental Coordinator (DEC) to be included in the Permit Determination Request submitted to OES-WPU.

Co-Rte-Sec: MAD/PIC-71-7.30/0.00 PID: 107630

Description: Extension of Culvert Carrying Springwater Run under I-71; MOT assoc. with I-71 Widening

During the construction of this project, the following activities in the waters of the United States are anticipated: (check all that apply)

- [x] Temporary structure for maintaining traffic
- [x] Cofferdams
- [ ] Temporary access fill (e.g. causeways and work pads)
- [x] Demolition and debris removal
- [x] Dams, sumps and pumping

ODOT requires that temporary activity to accommodate a minimum flow equal to twice the highest mean monthly flow without creating a rise in backwater above the OHWM. **The minimum flow to be maintained throughout construction for this location is** **5.98** **cfs.** The means that will most likely be implemented by the Contractor to maintain this flow will be:

- [x] Conduit(s)
- [ ] Open channel(s)\Temporary Bridge

Does the project meet flow requirements outlined in the Location &Design Manual (L&D Vol.2 Section 1012)?

X YES _____ NO

Different 404 permit types have different limitations and requirements. Please read the limitations and provide the required measurement as is applies for this project.

- [x] The maximum length of temporary impact, as measured upstream to downstream along one bank, cannot exceed 300-ft. **Proposed temporary impact length for this project is** **50** **ft.**
- [x] The duration of the impact to waters in the United States cannot exceed 2 Years. **Proposed temporary impact duration is** **1.7** **years.**
- [x] The proposed temporary fill is within the flowage easement of a flood control facility*. _____ YES **X** NO

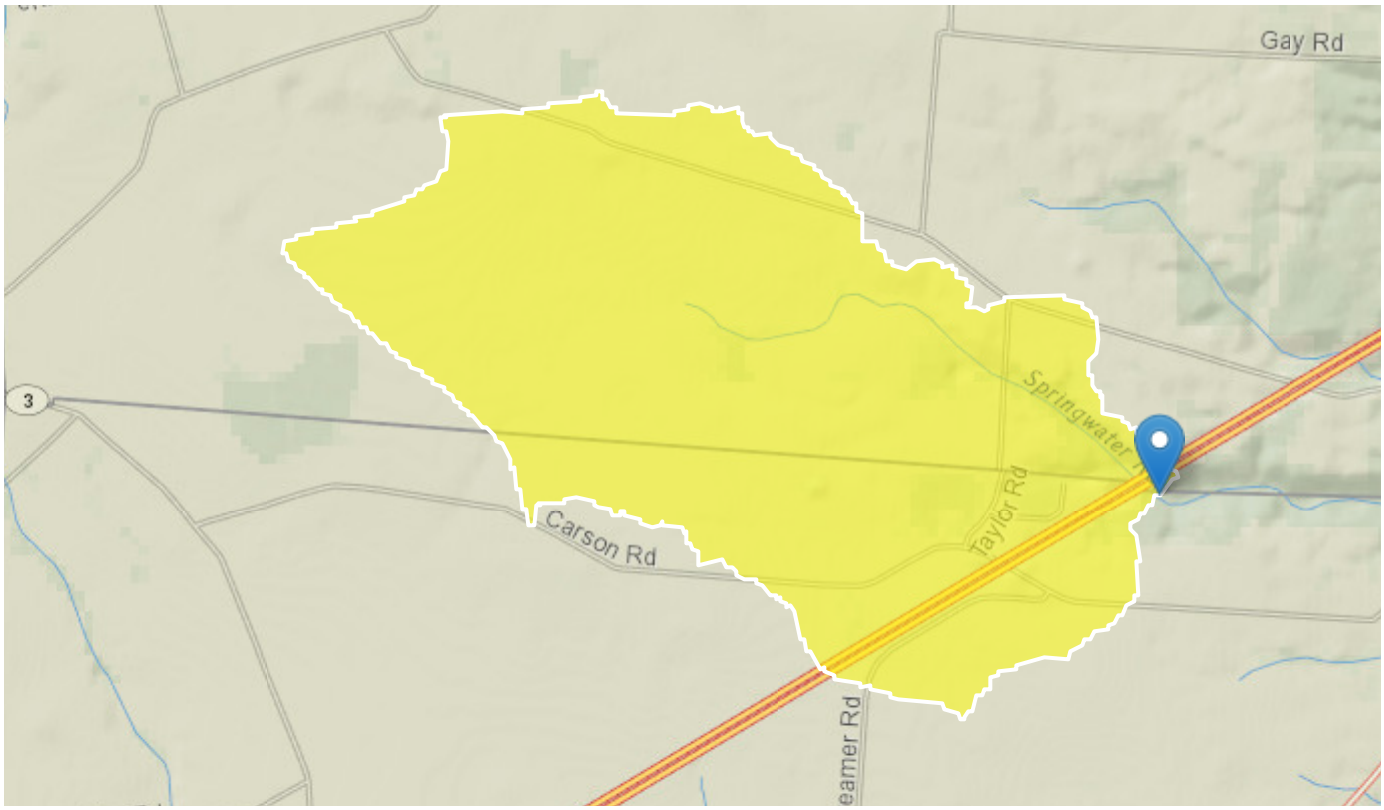
*Only applies to federal flood control facilities. Flowage easements associated with these facilities can occur several miles away from the facility. If uncertain that the project is in a flowage easement area, please consult your district's real estate office for assistance. Contact OES with further questions.

cc. District Environmental Coordinator (DEC)

A complete copy of the RGP with the OEPA conditions may be downloaded at the following website:
http://www.dot.state.oh.us/Divisions/Planning/Environment/Ecological_Resources_Permits/WATERWAY_PERMITS/Pages/default.aspx

StreamStats Report- MAD-71-7.30/0.00 - Springwater Run

Region ID: OH
Workspace ID: OH20211229051242415000
Clicked Point (Latitude, Longitude): 39.80910, -83.19416
Time: 2021-12-29 00:13:02 -0500



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	1.53	square miles
LC92STOR	Percentage of water bodies and wetlands determined from the NLCD	0	percent
PRECIP	Mean Annual Precipitation	38.6	inches
FOREST	Percentage of area covered by forest	7.21	percent

Parameter Code	Parameter Description	Value	Unit
LAT_CENT	Latitude of Basin Centroid	39.8127	decimal degrees
STREAM_VARG	Streamflow variability index as defined in WRIR 02-4068, computed from regional grid	0.61	dimensionless

Monthly Flow Statistics Parameters [Low Flow LatLE 41.2 wri02 4068]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.53	square miles	0.12	7422
LC92STOR	Percent Storage from NLCD1992	0	percent	0	19
PRECIP	Mean Annual Precipitation	38.6	inches	34	43.2
FOREST	Percent Forest	7.21	percent	0	99.1
LAT_CENT	Latitude of Basin Centroid	39.8127	decimal degrees	38.68	41.2
STREAM_VARG	Streamflow Variability Index from Grid	0.61	dimensionless	0.25	1.13

Monthly Flow Statistics Flow Report [Low Flow LatLE 41.2 wri02 4068]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	ASEp
January Mean Flow	2.13	ft^3/s	16.6	16.6
February Mean Flow	2.75	ft^3/s	11.9	11.9
March Mean Flow	2.99	ft^3/s	14	14
April Mean Flow	2.83	ft^3/s	11.2	11.2
May Mean Flow	1.84	ft^3/s	19.5	19.5
June Mean Flow	1.14	ft^3/s	27	27
July Mean Flow	0.674	ft^3/s	28.2	28.2
August Mean Flow	0.473	ft^3/s	36.8	36.8
September Mean Flow	0.267	ft^3/s	43.6	43.6
October Mean Flow	0.281	ft^3/s	50.8	50.8

Statistic	Value	Unit	SE	ASEp
November Mean Flow	0.732	ft^3/s	37.5	37.5
December Mean Flow	1.5	ft^3/s	21.8	21.8

Monthly Flow Statistics Citations

Koltun, G. F., and Whitehead, M. T.,2002, Techniques for Estimating Selected Streamflow Characteristics of Rural, Unregulated Streams in Ohio: U. S. Geological Survey Water-Resources Investigations Report 02-4068, 50 p (https://pubs.er.usgs.gov/publication/wri024068)

Application Version: 4.6.2
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.2

Temporary Construction, Access and Dewatering Activities

Permit Determination Checklist

The purpose of this form is to aid the Office of Environmental Services - Waterway Permits Unit (OES-WPU) in the permit determination process. This form shall be completed by the project designer and reflect the anticipated needs of the temporary fill. If the type and amount of temporary fill is unknown, assume a worst case scenario of what could be needed. A completed copy of this form and a temporary construction access plan shall be forwarded to the District Environmental Coordinator (DEC) to be included in the Permit Determination Request submitted to OES-WPU.

Co-Rte-Sec: MAD/PIC-71-7.30/0.00 PID: 107630

Description: MOT activities associated with the Widening of I-71 will impact Stream 1, clearing of debris

During the construction of this project, the following activities in the waters of the United States are anticipated: (check all that apply)

- [x] Temporary structure for maintaining traffic
- [ ] Cofferdams
- [ ] Temporary access fill (e.g. causeways and work pads)
- [ ] Demolition and debris removal
- [ ] Dams, sumps and pumping

ODOT requires that temporary activity to accommodate a minimum flow equal to twice the highest mean monthly flow without creating a rise in backwater above the OHWM. **The minimum flow to be maintained throughout construction for this location is** **0.266** **cfs.** The means that will most likely be implemented by the Contractor to maintain this flow will be:

- [x] Conduit(s)
- [ ] Open channel(s)\Temporary Bridge

Does the project meet flow requirements outlined in the Location &Design Manual (L&D Vol.2 Section 1012)?

X YES _____ NO

Different 404 permit types have different limitations and requirements. Please read the limitations and provide the required measurement as is applies for this project.

- [x] The maximum length of temporary impact, as measured upstream to downstream along one bank, cannot exceed 300-ft. **Proposed temporary impact length for this project is** **50** **ft.**
- [x] The duration of the impact to waters in the United States cannot exceed 2 Years. **Proposed temporary impact duration is** **1.7** **years.**
- [x] The proposed temporary fill is within the flowage easement of a flood control facility*. _____ YES **X** NO

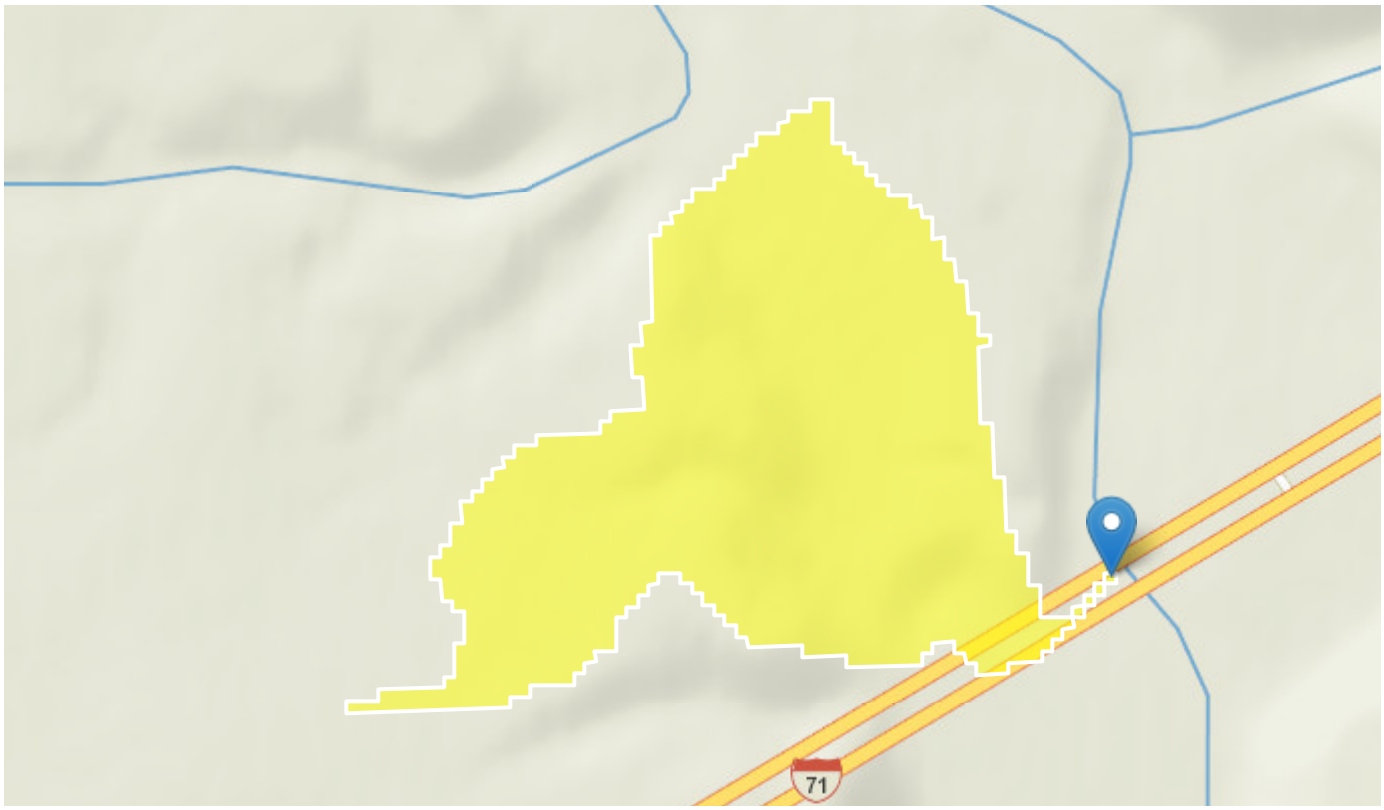
*Only applies to federal flood control facilities. Flowage easements associated with these facilities can occur several miles away from the facility. If uncertain that the project is in a flowage easement area, please consult your district's real estate office for assistance. Contact OES with further questions.

cc. District Environmental Coordinator (DEC)

A complete copy of the RGP with the OEPA conditions may be downloaded at the following website:
http://www.dot.state.oh.us/Divisions/Planning/Environment/Ecological_Resources_Permits/WATERWAY_PERMITS/Pages/default.aspx

StreamStats Report - MAD/PIC-71-7.30/0.00 - Stream 1

Region ID: OH
Workspace ID: OH20211229053011773000
Clicked Point (Latitude, Longitude): 39.76311, -83.29214
Time: 2021-12-29 00:30:31 -0500



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.0683	square miles
LC92STOR	Percentage of water bodies and wetlands determined from the NLCD	4.59	percent
PRECIP	Mean Annual Precipitation	39	inches
FOREST	Percentage of area covered by forest	3.23	percent

Parameter Code	Parameter Description	Value	Unit
LAT_CENT	Latitude of Basin Centroid	39.7642	decimal degrees
STREAM_VARG	Streamflow variability index as defined in WRIR 02-4068, computed from regional grid	0.56	dimensionless

Monthly Flow Statistics Parameters [Low Flow LatLE 41.2 wri02 4068]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.0683	square miles	0.12	7422
LC92STOR	Percent Storage from NLCD1992	4.59	percent	0	19
PRECIP	Mean Annual Precipitation	39	inches	34	43.2
FOREST	Percent Forest	3.23	percent	0	99.1
LAT_CENT	Latitude of Basin Centroid	39.7642	decimal degrees	38.68	41.2
STREAM_VARG	Streamflow Variability Index from Grid	0.56	dimensionless	0.25	1.13

Monthly Flow Statistics Disclaimers [Low Flow LatLE 41.2 wri02 4068]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Monthly Flow Statistics Flow Report [Low Flow LatLE 41.2 wri02 4068]

Statistic	Value	Unit
January Mean Flow	0.112	ft^3/s
February Mean Flow	0.13	ft^3/s
March Mean Flow	0.131	ft^3/s
April Mean Flow	0.133	ft^3/s
May Mean Flow	0.0797	ft^3/s
June Mean Flow	0.0515	ft^3/s
July Mean Flow	0.0256	ft^3/s
August Mean Flow	0.0228	ft^3/s

Statistic	Value	Unit
September Mean Flow	0.0113	ft^3/s
October Mean Flow	0.0119	ft^3/s
November Mean Flow	0.0292	ft^3/s
December Mean Flow	0.0631	ft^3/s

Monthly Flow Statistics Citations

Koltun, G. F., and Whitehead, M. T.,2002, Techniques for Estimating Selected Streamflow Characteristics of Rural, Unregulated Streams in Ohio: U. S. Geological Survey Water-Resources Investigations Report 02-4068, 50 p (https://pubs.er.usgs.gov/publication/wri024068)

Application Version: 4.6.2
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.2

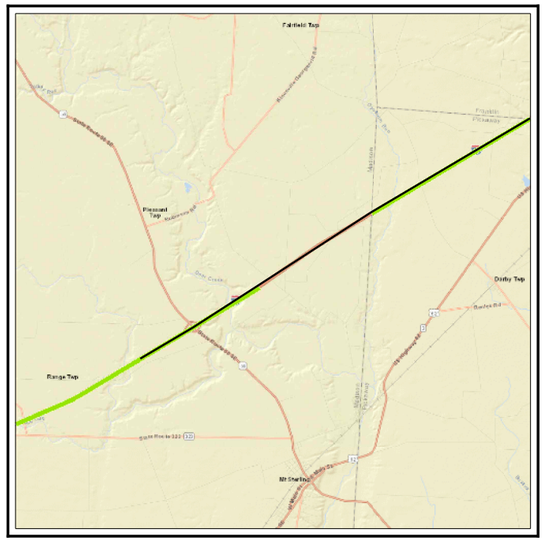
Attachment B
Plan Sheets

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

MAD/PIC-71-7.30/0.00 (PROJECT 1)

PLEASANT TOWNSHIP, DARBY TOWNSHIP

MADISON COUNTY, PICKAWAY COUNTY



LOCATION MAP

LATITUDE: 39 °46'40" LONGITUDE: 83 °15'48"

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

DESIGN DESIGNATION

CURRENT ADT (2024)	55,000
DESIGN YEAR ADT (2044)	84,500
DESIGN HOURLY VOLUME (2044)	8,400
DIRECTIONAL DISTRIBUTION	53%
TRUCKS (24 HOUR B&C)	20%
DESIGN SPEED	75 MPH
LEGAL SPEED	70 MPH

DESIGN FUNCTIONAL CLASSIFICATION:
RURAL INTERSTATE
NHS PROJECT — YES

DESIGN EXCEPTIONS

STRUCTURAL CAPACITY, LANE WIDTH - SHEETS 146-149; 677-789

ADA DESIGN WAIVERS

NONE

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:

E.L. ROBINSON ENGINEERING
950 Goodale Blvd, Suite 180 • Grandview Heights, Ohio 43212
www.elrobinsonengineering.com

ENGINEER'S SEAL:

SIGNED: _____
DATE: _____

ENGINEER'S SEAL:

SIGNED: _____
DATE: _____

INDEX OF SHEETS:

STANDARD CONSTRUCTION DRAWINGS					SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS

FEDERAL PROJECT NUMBER

E 190542

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

MAJOR REHABILITATION OF 7.5 MI OF IR-71 INCLUDING PAVEMENT REPLACEMENT AND WIDENING TO SIX LANES, I-71 STRUCTURE REPLACEMENT, AND OVERHEAD BRIDGE REHAB. PROJECT INCLUDES UPGRADES TO GUARDRAIL, DRAINAGE, SIGNING, AND RAMPS AT THE SR-56 INTERCHANGE.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	ACRES

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 EXCEPT FOR THE SIDE ROADS AS DESCRIBED ON SHEETS P.17-P.20 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

SHEET TITLE

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER: MLL
REVIEWER: MJC 06/25/21
PROJECT ID: 107630
SHEET: P.1 TOTAL: 882

MAD/PIC-71-7.30/0.00

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 6/29/2021 TIME: 6:16:17 PM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\Roadway\Sheets\107630_GT001.dgn

SCHEMATIC PLAN

HORIZONTAL SCALE IN FEET
0 200 400 800

BEGIN WORK STA. 275+50.00
PC 265+86.11
PT 277+12.53
STRUCTURE NO. MAD-71-0456 L&R
STRUCTURE NO. MAD-71-0470
MUD RUN
WETLAND R.1
WETLAND R.2
WETLAND S.1
WETLAND S.2
WETLAND T.1
WETLAND T.2
E190 (542)
BEGIN PROJECT 2 STA. 293+93.00 S.L.M. = 4.50
CR 9 (YANKEETOWN-CHENOWETH RD)
N67°09'12"E
EX GAS TRANSMISSION
℄ CONST IR 71
PI 331+89.28
PC 346+34.69
PT 362+30.86
CP #1
CP #2
N67°07'32"E
WETLAND U
MATCH LINE STA. 375+00 SEE BELOW LEFT
MATCH LINE STA. 375+00 SEE ABOVE RIGHT
TR 66 (DYER RD)
WETLAND Q.2
WETLAND Q.1
STRUCTURE NO. MAD-71-0631 L&R
STRUCTURE NO. MAD-71-0668 L&R
WETLAND L.3
WETLAND L.4
STREAM 3
WETLAND L.2
WETLAND K
WETLAND L.1
WETLAND I
WETLAND J
STREAM 2
BRADFORD CREEK
WETLAND P.1
WETLAND P.2
WETLAND P.4
WETLAND P.3
PR. 97"X151" CONDUIT, TYPE A
EX. 8'-5"X13'-5" CMP ARCH
PR. 36" CONDUIT, TYPE A
EX. 36" CMP
WETLAND V.3
WETLAND V.1
WETLAND V.2
GALLBREATH DITCH
END PROJECT 2 STA. 444+85.00 S.L.M. = 7.36
BEGIN PROJECT 1 STA. 441+85.00 S.L.M. = 7.30
CP #3
EX. 19"X30" ELLIPTICAL RCP
N59°40'36"E
STRUCTURE NO. MAD-56-2001
SEE SHEET P.3 FOR SR 56 INTERCHANGE SCHEMATIC
STREAM 4
MATCH LINE STA. 490+00 SEE BELOW LEFT
MATCH LINE STA. 490+00 SEE ABOVE RIGHT
WETLAND G.2
WETLAND G.1
DEER CREEK
STRUCTURE NO. MAD-71-0874 L&R
WETLAND M
POTENTIAL JURISDICTIONAL DITCH 2
WETLAND O
WETLAND F.1
WETLAND H.1
℄ CONST IR 71
CP #4
PC 541+98.70
PT 552+53.73
CP #5
CR 54 (KIOUSVILLE-PALESTINE RD)
STRUCTURE NO. MAD-71-0959
ROBINSON DITCH
N55°27'24"E
PR. 63"X98" CONDUIT, TYPE A
EX. 58"X91" ELLIPTICAL RCP
WETLAND Y
CP #11
EX ELECTRIC TRANSMISSION
WETLAND C
EX. 42" RCP
STREAM 1
WETLAND X
WETLAND F.2
WETLAND H.2
WETLAND F.3
WETLAND W
STREAM 5
STREAM 4
STRUCTURE NO. MAD-71-1145
STRUCTURE NO. PIC-71-0046 L&R
STA. 673+36.05
CHILDERS DITCH
MADISON COUNTY
PICKAWAY COUNTY
CP #8
CP #12
WETLAND N.2
PR. 106"X166" CONDUIT, TYPE A
EX. 10'-1"X16'-7" CMP ARCH
WETLAND N.1
WETLAND B
WETLAND D
OPOSSUM RUN
N59°34'49"E
CP #6
CP #7
PC 610+62.38
PT 620+93.32
EX. 54" RCP
CR 56 (WOODS OPOSSUM RUN RD)
PI 790+47.12
STRUCTURE NO. PIC-71-0278
TR 160 (CARSON RD)
STRUCTURE NO. PIC-71-0099
℄ CONST IR 71
EX. 42" RCP
WETLAND A
GREENBRIAR CREEK
PR. 54" CONDUIT, TYPE A
EX. 38"X60" ELLIPTICAL RCP
CP #9
CP #13
CR 3 (LONDON RD)
POTENTIAL JURISDICTIONAL DITCH 1
PR. 54" CONDUIT, TYPE A
EX. 42" RCP
FRANKLIN COUNTY
PICKAWAY COUNTY
END PROJECT 1 STA. 841+80.00 S.L.M. = 0.03
E190 (542)
CP #10
N59°36'50"E
PR. 96" COND., TYPE A
EX. 96" CMP
END WORK STA. 841+80.00

(1) CURVE DATA
P.I. = Sta. 271+49.61
Δ = 04°30'20" LT
Dc = 00°24'00"
R = 14,323.94'
T = 563.50'
L = 1,126.42'
E = 11.08'
eMAX = EX.

(2) CURVE DATA
P.I. = Sta. 354+33.90
Δ = 07°26'56" LT
Dc = 00°28'00"
R = 12,277.67'
T = 799.21'
L = 1,596.17'
E = 25.98'
eMAX = 0.021

(3) CURVE DATA
P.I. = Sta. 547+26.45
Δ = 04°13'12" LT
Dc = 00°24'00"
R = 14,323.94'
T = 527.75'
L = 1,055.03'
E = 9.72'
eMAX = 0.021

(4) CURVE DATA
P.I. = Sta. 615+78.07
Δ = 04°07'26" RT
Dc = 00°24'00"
R = 14,323.94'
T = 515.69'
L = 1,030.94'
E = 9.28'
eMAX = 0.021

NOTE: FOR CP POINT INFORMATION, SEE SHEET P.3

MAD/PIC-71-7.30/0.00

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 6/30/2021 TIME: 9:13:47 AM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\Roadway\Sheets\107630_GB001.dgn

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER	SMB
REVIEWER	MJC 06/25/21
PROJECT ID	107630
SHEET	P.2
TOTAL	882

SCHEMATIC PLAN - SR 56 INTERCHANGE

HORIZONTAL SCALE IN FEET
0 50 100 200

POINT NAME	STATION	OFFSET	DIRECTION	ELEVATION	NORTHING (GRID)	EASTING (GRID)	NORTHING (GROUND)	EASTING (GROUND)
CP #1	346+35.57	99.58	LT	943.45	634640.6905	1730916.9012	634640.6905	1730916.9012
CP #2	362+29.90	99.96	LT	948.24	635348.5773	1732329.7506	635348.5773	1732329.7506
CP #3	440+00.92	100.11	LT	941.57	639272.1281	1739037.5302	639272.1281	1739037.5302
CP #4	541+97.57	100.03	LT	907.44	644420.1307	1747839.2165	644420.1307	1747839.2165
CP #5	552+52.74	99.82	LT	910.67	644981.7295	1748723.5432	644981.7295	1748723.5432
CP #6	610+63.14	99.93	RT	925.75	648111.8654	1753622.8106	648111.8654	1753622.8106
CP #7	620+93.88	99.88	RT	926.59	648661.4291	1754486.0470	648661.4291	1754486.0470
CP #8	673+36.83	100.13	RT	917.19	651315.8758	1759007.3798	651315.8758	1759007.3798
CP #9	790+46.47	100.04	LT	929.79	657417.4308	1769003.7247	657417.4308	1769003.7247
CP #10	843+41.52	97.41	LT	898.94	660093.5530	1773572.8024	660093.5530	1773572.8024
CP #11	562+00.87	100.44	LT	914.86	645519.8540	1749504.1563	645519.8540	1749504.1563
CP #12	662+00.70	99.89	RT	917.43	650740.8201	1758027.5305	650740.8201	1758027.5305
CP #13	796+01.30	99.82	LT	931.31	657697.9224	1769482.4956	657697.9224	1769482.4956

(5)
CURVE DATA
P.I. = Sta. 474+01.56
Δ = 23°43'09" LT
Dc = 03°00'00"
R = 1,909.86'
Ls1 = 300.00'
Ls2 = 0.00'
θs1 = 04°30'00"
LT1 = 200.06'
ST1 = 100.06'
x1 = 299.81'
y1 = 7.85'
k1 = 45.71'
p1 = 0.60'
Lc = 640.64'
Ts = 546.56'
Es = 42.67'
Emax = 0.060

(6)
CURVE DATA
P.I. = Sta. 482+08.89
Δ = 25°30'01" RT
Dc = 17°00'00"
R = 337.03'
T = 76.26'
L = 150'
E = 8.52'
Emax = 0.060

(7)
CURVE DATA
P.I. = Sta. 486+86.55
Δ = 23°32'04" LT
Dc = 06°00'00"
R = 954.93'
T = 198.92'
L = 392.24'
E = 20.50'
Emax = 0.080

(8)
CURVE DATA
P.I. = Sta. 491+55.63
Δ = 06°42'10" LT
Dc = 01°13'00"
R = 4,709.24'
T = 275.77'
L = 550.91'
E = 8.07'
Emax = 0.039

(9)
CURVE DATA
P.I. = Sta. 471+17.62
Δ = 07°01'49" RT
Dc = 01°13'00"
R = 4,709.24'
T = 289.28'
L = 577.83'
E = 8.88'
Emax = 0.039

(10)
CURVE DATA
P.I. = Sta. 476+02.25
Δ = 23°12'23" RT
Dc = 06°00'00"
R = 954.93'
T = 196.08'
L = 386.77'
E = 19.92'
Emax = 0.080

(11)
CURVE DATA
P.I. = Sta. 480+74.21
Δ = 25°30'00" LT
Dc = 17°00'00"
R = 337.03'
T = 76.26'
L = 150.00'
E = 8.52'
Emax = 0.060

(12)
CURVE DATA
P.I. = Sta. 488+90.54
Δ = 23°55'19" RT
Dc = 03°00'00"
R = 1,909.86'
Ls1 = 0.00'
Ls2 = 300.00'
θs2 = 04°30'00"
LT2 = 200.06'
ST2 = 100.06'
x2 = 299.51'
y2 = 15.70'
k2 = 91.29'
p2 = 4.78'
Lc = 647.39'
Ts = 409.43'
Es = 43.39'
Emax = 0.060

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DESIGNER SMB
REVIEWER MJC 06/25/21
PROJECT ID 107630
SHEET P.3 TOTAL 882

MAD/PIC-71-7.30/0.00

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ROUNDING

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

UTILITIES

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

COLUMBIA GAS OF OHIO
(DISTRIBUTION)
3550 JOHNNY APPLESEED COURT
COLUMBUS, OH 43231
(614) 818-2107
ATTN: ROB CALDWELL
rcaldwell@nisource.com

COLUMBIA PIPELINE GROUP
(COLUMBIA GAS TRANSMISSION)
SUGAR GROVE OH, 43155
301 MAPLE ST PO BOX 330
(330) 721-4163
ATTN: JIM SCOTT
James.scott@transcanada.com

AMERICAN ELECTRIC POWER
700 MORRISON RD
GAHANNA, OH 43230
(614) 522-1893
ATTN: MIKE CARR
TI_PublicProjects@aep.com

DAYTON POWER & LIGHT
DISTRIBUTION
1900 DRYDEN RD
DAYTON, OH 45439
(937) 331-4497
ATTN: BILL WARD
William.ward@dplinc.com

SOUTH CENTRAL POWER
2780 COONPATH RD
LANCASTER, OH 43130
ATTN: MIKE CHALFAN
(740) 689-6119
chalfan@southcentralpower.com

CENTURYLINK
441 WEST BROAD ST
PATASKALA, OH 43062
(740) 927-8282
ATTN: DEE REED
delores.a.reed@centurylink.com

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

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 3 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: ODOT STATIC
MONUMENT TYPE: TYPE A

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 18 (ADJUSTED TO PRIOR ODOT CONTROL)

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83 (2011)
ELLIPSOID: GRS-80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO STATE PLANE SOUTH ZONE
COMBINED SCALE FACTOR: 1.0000000000
ORIGIN OF COORDINATE
SYSTEM: 0,0,0

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.

GENERAL NOTES

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DESIGNER
MLL
REVIEWER
MJC 06/25/21
PROJECT ID
107630

ITEM 614 - MAINTAINING TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS AND RAMPS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS, AND TEH FOLLOWING:

1. A MINIMUM OF TWO ELEVEN FOOT LANES OF TRAFFIC IN EACH DIRECTION ON I-71 SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC.

2. A MINIMUM OF ONE ELEVEN FOOT LANE OF TRAFFIC IN EACH DIRECTION ON SR-56 SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT & THE COMPLETED PAVEMENT EXCEPT ON THE STRUCTURE NO. MAD-56-2001. ONE TEN FOOT BIDIRECTIONAL LANE OF TRAFFIC SHALL BE MAINTAINED ON STRUCTURE NO. MAD-56-2001.

3. A MINIMUM OF ONE ELEVEN FOOT LANE OF TRAFFIC IN EACH DIRECTION ON ALL SIDE ROADS OVER I-71 SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 60 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEETS P.17-P.20. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF $_____ PER DAY FOR EACH CALENDAR DAY THE ROADWAY REMAIN CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

4. ALL EXISTING LANES, INCLUDING RAMPS, SHALL BE OPEN AND AVAILABLE TO TRAFFIC IN THE ORIGINAL OR PROPOSED FINAL ALIGNMENT BETWEEN OCTOBER 15 AND APRIL 1. SHOULD THE CONTRACTOR FAIL TO MEET THESE REQUIREMENTS, A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF $_____ PER CALENDAR DAY.

5. 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

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	TIMES ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00 NOON FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00 NOON FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00 NOON MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00 NOON TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00 NOON WEDNESDAY THROUGH 6:00 AM FRIDAY
THANKSGIVING	5:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00 NOON THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00 NOON FRIDAY THROUGH 6:00 AM 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).

6. NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW. [AT THE APPROVAL OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS MAY BE USED IN LIEU OF THE STANDARD FLATSHEET SIGN FOR CLOSURE DURATIONS OF LESS THAN 1 WEEK.]

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS

NOTIFICATION TIME FRAME TABLE			
ITEM	DURATION OF CLOSURE	SIGN DISPLAY TO PUBLIC	NOTIFICATION DUE TO DISTRICT 6 COMMUNICATIONS OFFICE
RAMP & ROAD CLOSURES	>=2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE	21 CALENDAR DAYS PRIOR TO CLOSURE
	>12 HOURS & <2 WEEKS	7 CALENDAR DAYS PRIOR TO CLOSURE	14 CALENDAR DAYS PRIOR TO CLOSURE
	<12 HOURS	2 BUSINESS DAYS PRIOR TO CLOSURE	4 BUSINESS DAYS PRIOR TO CLOSURE

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.

7. 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.

PHASES 1, 2 & 3						
LANE VALUE CONTRACT						
MAD-71						
SECTION	EXISTING NUMBER OF LANES PER DIRECTION	LANE CLOSURES ARE NOT PERMITTED:				DISINCENTIVE AMOUNTS PER MINUTE PER LANE
		LANE REDUCTION	MON TO THUR	FRI TO SAT	SUN	
FAYETTE COUNTY LINE (0.00) TO PICKAWAY COUNTY LINE (11.68) NORTHBOUND	2	2 TO 1	7AM-7PM	7AM-7PM	9AM-10PM	$75
FAYETTE COUNTY LINE (0.00) TO PICKAWAY COUNTY LINE (11.68) SOUTHBOUND	2	2 TO 1	7AM-7PM	7AM-10PM	9AM-7PM	$75
PIC-71						
SECTION (SLM)	EXISTING NUMBER OF LANES PER DIRECTION	LANE CLOSURES ARE NOT PERMITTED:				DISINCENTIVE AMOUNTS PER MINUTE PER LANE
		LANE REDUCTION	MON TO THUR	FRI TO SAT	SUN	
MADISON COUNTY LINE (0.00) TO FRANKLIN COUNTY LINE (3.16) NORTHBOUND	2	2 TO 1	7AM-7PM	7AM-8PM	9AM-8PM	$210
MADISON COUNTY LINE (0.00) TO FRANKLIN COUNTY LINE (3.16) SOUTHBOUND	2	2 TO 1	7AM-7PM	7AM-8PM	9AM-7PM	$210
SHORT TERM SHOULDER CLOSURES ARE NOT PERMITTED 7AM-9AM AND 3PM-6PM MONDAY-FRIDAY						

MAINTENANCE OF TRAFFIC GENERAL NOTES

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DESIGNER TDP
REVIEWER MJC 06/25/21
PROJECT ID 107630
SHEET P.9 TOTAL 882

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

DRUM REQUIREMENTS

IN ADDITION TO THE REQUIREMENTS OF THE PLANS, SPECIFICATION AND PROPOSAL, DRUMS FURNISHED BY THE CONTRACTOR SHALL BE NEW AND UNUSED AT THE TIME OF ARRIVAL ON THE PROJECT. ANY DRUMS BROUGHT ON THE PROJECT, WHICH HAVE PREVIOUSLY BEEN USED ELSEWHERE, WILL NOT BE ACCEPTED.

PAYMENT FOR DRUMS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR MAINTAINING TRAFFIC UNLESS SEPARATELY ITEMIZED.

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 _____ M. GAL.

FLOODLIGHTING

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.

WORK ZONE INCREASED PENALTIES SIGN (R11-H5A)

R11-H5A-48 SIGNS SHALL BE FURNISHED, ERECTED, AND MAINTAINED IN GOOD CONDITION AND/OR REPLACED AS NECESSARY AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. SIGNS SHALL BE MOUNTED AT THE APPROPRIATE OFFSETS AND ELEVATIONS AS PRESCRIBED BY THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THEY SHALL BE MAINTAINED ON SUPPORTS MEETING CURRENT SAFETY CRITERIA.

THE SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN FOUR HOURS FOLLOWING RESTORATION OF ALL LANES TO TRAFFIC WITH NO RESTRICTIONS, OR SOONER AS DIRECTED BY THE ENGINEER. TEMPORARY SIGN COVERING AND UNCOVERING DUE TO TEMPORARY LANE RESTORATIONS SHALL BE GUIDED BY THE FOUR-HOUR LIMITATIONS STATED ABOVE. SUCH LANE RESTORATIONS SHOULD BE EXPECTED TO REMAIN IN EFFECT FOR 30 OR MORE CONSECUTIVE CALENDAR DAYS, SUCH AS DURING WINTER SHUT-DOWNS.

THE R11-H5A-48 SIGNS SHALL BE MOUNTED ON 2 NO. 3 POSTS WHEN LOCATED WITHIN CLEAR ZONES.

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED, BUT GOOD, CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE RETROREFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF C&MS 730.19.

WORK ZONE INCREASED PENALTIES SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGN AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION AS DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE, IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVAL OF THE SIGN AND SUPPORT.

ITEM 614, WORK ZONE INCREASED PENALTIES SIGN _____ EACH

WORK ZONE INCREASED PENALTIES SIGNS WILL BE PLACED AT THE LOCATIONS SHOWN IN THE PLANS.

WORK ZONE SPEED ZONES (WZSZS)

THE FOLLOWING WORK ZONE SPEED ZONE (WZSZ) SPEED LIMIT REVISION(S) HAVE BEEN APPROVED FOR USE ON THIS PROJECT WHEN WORK ZONE CONDITIONS AND FACTORS ARE MET AS DESCRIBED BELOW:

WZSZ REVISION NUMBER(S) COUNTY-ROUTE-SECTION(S) DIRECTION(S)
WZ-
WZ-
WZ-

POTENTIAL WZSZ LOCATIONS SHALL HAVE AN ORIGINAL (PRE-CONSTRUCTION) POSTED SPEED LIMIT OF 55 MPH OR GREATER, A QUALIFYING WORK ZONE CONDITION OF AT LEAST 0.5 MILE IN LENGTH, AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS, AND A WORK ZONE CONDITION IN PLACE THAT REDUCES THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS (I.E., LANE CLOSURE, LANE SHIFT, CROSSOVER, CONTRAFLOW AND/OR SHOULDER CLOSURE). THE LENGTH OF THE WORK ZONE CONDITION IS MEASURED FROM THE BEGINNING OF THE TAPER FOR THE SUBJECT WORK ZONE CONDITION IMPACTING THE TRAVEL LANES AND/OR SHOULDER TO THE END OF THE DOWNSTREAM TAPER, WHERE DRIVERS ARE RETURNED TO TYPICAL ALIGNMENT. AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS IS REQUIRED TO BALANCE THE ADDITIONAL EXPOSURE CREATED BY INSTALLING AND REMOVING WZSZ SIGNING WITH THE TIME NEEDED TO COMPLETE THE WORK.

IF THE WORK ZONE MEETS THESE MINIMUM CRITERIA, IT SHALL BE ANALYZED FURTHER USING TABLE 1 BELOW TO DETERMINE IF AND WHEN IT QUALIFIES FOR A SPEED LIMIT REDUCTION. DEPENDING ON THE ORIGINAL POSTED SPEED LIMIT, THE TYPE OF TEMPORARY TRAFFIC CONTROL USED, AND WHETHER OR NOT WORKERS ARE PRESENT, A WARRANTED WZSZ WILL VARY IN THE APPROVED SPEED LIMIT TO BE POSTED OVER TIME.

C&MS ITEM 614, PARAGRAPH 614.02(B), INDICATES THAT TWO DIRECTIONS OF A DIVIDED HIGHWAY ARE CONSIDERED SEPARATE HIGHWAY SECTIONS. THEREFORE, IF THE WORK ON A MULTI-LANE DIVIDED HIGHWAY IS LIMITED TO ONLY ONE DIRECTION, A SPEED LIMIT REDUCTION IN THE DIRECTION OF THE WORK DOES NOT AUTOMATICALLY CONSTITUTE A SPEED LIMIT REDUCTION IN THE OPPOSITE DIRECTION. EACH DIRECTION SHALL BE ANALYZED INDEPENDENTLY FROM EACH OTHER.

ALL WZSZS FLUCTUATE BETWEEN TWO APPROVED REDUCED SPEED LIMITS OR BETWEEN AN APPROVED REDUCED SPEED LIMIT AND THE ORIGINAL POSTED SPEED LIMIT. ONLY ONE OF TWO SIGNING STRATEGIES SHALL BE USED TO IMPLEMENT A WZSZ.

WZSZS USING DSL SIGN ASSEMBLIES SHALL BE IN ACCORDANCE WITH THIS NOTE, APPROVED LIST, SUPPLEMENTAL SPECIFICATIONS (SS) 808 AND 908, AND TRAFFIC SCD MT-104.10.

ONLY ONE WARRANTED SPEED LIMIT APPLIES AT ANY ONE TIME; SPEED LIMIT REDUCTIONS ARE NOT CUMULATIVE. WZSZS SHALL NOT BE USED FOR MOVING/MOBILE ACTIVITIES, AS DEFINED IN OMUTCD PART 6.

WHEN LOOKING UP THE WARRANTED WORK ZONE SPEED LIMITS, ALWAYS USE THE ORIGINAL, PRECONSTRUCTION, POSTED SPEED LIMIT. DO NOT USE A PRIOR OR CURRENT WORK ZONE SPEED LIMIT AS A LOOK UP VALUE IN THE TABLE. POSITIVE PROTECTION IS GENERALLY REGARDED AS PORTABLE BARRIER OR OTHER RIGID BARRIER IN USE ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WITHOUT POSITIVE PROTECTION IS GENERALLY REGARDED AS USING DRUMS, CONES, SHADOW VEHICLE, ETC., ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WORKERS ARE CONSIDERED AS BEING PRESENT WHEN ON-SITE, WORKING WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WHEN THE WORK ZONE CONDITION REDUCING THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS IS REMOVED, THE SPEED LIMIT DISPLAYED SHALL RETURN TO THE ORIGINAL POSTED SPEED LIMIT.

TABLE 1: WARRANTED WORK ZONE SPEED LIMITS (MPH) FOR WORK ZONES ON HIGH-SPEED (55 MPH OR GREATER) MULTI-LANE HIGHWAYS

ORIGINAL POSTED SPEED LIMIT	WITH POSITIVE PROTECTION		WITHOUT POSITIVE PROTECTION	
	WORKERS PRESENT	WORKERS NOT PRESENT	WORKERS PRESENT	WORKERS NOT PRESENT
70	60	65	55	65
65	55	60	50	60
60	55	60	50	60
55	50	55	45	55

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, WORK ZONE SPEED LIMIT SIGN
_____ EACH
ITEM 808, DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY
_____ SIGN MNTH
ASSUMING _____ DSL SIGN ASSEMBLY(IES) FOR
_____ MONTH(S)

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 614, WORK ZONE CROSSOVER LIGHTING SYSTEM

THIS WORK SHALL CONSIST OF FURNISHING, ERECTING, OPERATING, MAINTAINING AND REMOVING A WORK ZONE LIGHTING SYSTEM FOR A SINGLE CROSSOVER, OR OVERLAPPING A PAIR OF CROSSOVERS. THE SYSTEM SHALL BE AS SHOWN ON TRAFFIC SCD MT-100.00. THE CONTRACTOR SHALL ARRANGE FOR AND PAY FOR POWER. ALL MATERIALS AND CONSTRUCTION SHALL COMPLY WITH APPLICABLE PORTIONS OF 625 AND 725 EXCEPT: THE PERFORMANCE TEST OF 625.19F, AND CERTIFIED DRAWING REQUIREMENT OF 625.04, ARE WAIVED AND USED MATERIALS IN GOOD CONDITION ARE ACCEPTABLE.

POLES WHICH ARE NOT PROTECTED BY GUARDRAIL OR PORTABLE BARRIER SHALL BE LOCATED OUTSIDE THE CLEAR ZONE, AND SHOULD BE LOCATED AT LEAST 30 FEET (PREFERABLY 40 FEET) FROM THE EDGE OF PAVEMENT WHEN POSSIBLE. ADDITIONAL POLE LINES, CABLES AND APPURTENANCES NECESSARY TO FURNISH POWER TO THE LIGHTING SYSTEM SHALL BE INCLUDED IN THIS ITEM. SERVICE POLES SHALL BE POSITIONED WITH THE SAME CONSTRAINTS AS THE LIGHTING POLES AS A MINIMUM.

PAYMENT WILL BE MADE AT THE UNIT PRICE PER EACH FOR ITEM 614, WORK ZONE CROSSOVER LIGHTING SYSTEM THROUGHOUT ALL PHASES OF WORK WHEN THE CROSSOVER ROADWAYS ARE

MAINTENANCE OF TRAFFIC GENERAL NOTES

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ITEM 614, REPLACEMENT SIGN

FLATSHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT SIGNS SHALL BE NEW. OTHER MATERIALS MAY BE IN USED, BUT GOOD, CONDITION SUBJECT TO APPROVAL BY THE ENGINEER.

PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT SIGN, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED SIGNS, HARDWARE AND SUPPORTS, AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC.

AN ESTIMATED QUANTITY OF _____ EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM 614, REPLACEMENT DRUM

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT DRUM, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF _____ EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON SHEET(S) _____ OF THE PLAN. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN _____ HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT. THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN _____ SIGN MONTH ASSUMING _____ PCMS SIGN(S) FOR _____ MONTH(S)

ITEM 614, WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN

WORK ZONE RAISED PAVEMENT MARKERS, AS PER PLAN, AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614 OR C&MS 621 AS SPECIFIED HEREIN.

RAISED PAVEMENT MARKERS IN USE DURING THE SNOW-PLOWING SEASON SHALL CONFORM TO 621.

RAISED PAVEMENT MARKERS IN USE DURING THE NON-SNOW-PLOW SEASON SHALL CONFORM TO EITHER 614 OR TO 621.

THE SNOW-PLOWING SEASON SHALL RUN FROM _____ THROUGH _____.

IF PROJECT DELAYS, NOT THE FAULT OF ODOT, CAUSE THE WORK TO EXTEND INTO THE SNOW-PLOWING SEASON, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING WORK ZONE RAISED PAVEMENT MARKERS (WZRPMS) CONFORMING TO C&MS 614, WITH RAISED PAVEMENT MARKERS CONFORMING TO 621, AS DETERMINED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

THIS ITEM SHALL INCLUDE PURCHASE, INSTALLATION AND REMOVAL OF ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN, INCLUDING FILLING OF ANY DEPRESSIONS CREATED IN THE PAVEMENT AS PER C&MS 621.08.

RESURFACING OF THE TRANSITION AREAS SHALL BE PERFORMED AT THE TIME THAT THE SURFACE COURSE IS BEING APPLIED TO THE ENTIRE PROJECT. PRIOR TO APPLICATION OF THE SURFACE COURSE ON THE PROJECT, THE EXISTING PAVEMENT WITHIN THE TRANSITION AREA SHALL BE REMOVED TO A DEPTH NECESSARY TO REACH THE LEVEL OF THE INTERMEDIATE COURSE OF THE PAVEMENT, AS DETERMINED BY THE ENGINEER.

THE FOLLOWING BID ITEMS SHOULD BE INCLUDED IN THE PLANS:

ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE _____ SQUARE YARDS

ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN _____ EACH

PAYMENT FOR RESURFACING WITHIN THE TRANSITION AREA SHALL BE PAID FOR UNDER THE APPROPRIATE BID ITEMS FOR THE WORK REQUIRED, AS PROVIDED FOR IN THE PLANS.

DELINEATION OF TEMPORARY AND PERMANENT GUARDRAIL

BARRIER REFLECTORS SHALL BE INSTALLED ON ALL TEMPORARY GUARDRAIL USED FOR TRAFFIC CONTROL; AND, ON ALL PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. BARRIER REFLECTORS SHALL CONFORM TO C&MS 626 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET.

[OBJECT MARKERS SHALL BE INSTALLED ON ALL TEMPORARY AND PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. GUARDRAIL-MOUNTING OF OBJECT MARKERS SHALL BE MADE BY INSTALLING THE OBJECT MARKERS ON THE EXTENSION BLOCKS RATHER THAN DIRECTLY ONTO THE GUARDRAIL ITSELF. OBJECT MARKERS SHALL CONFORM TO C&MS 614.03 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET WITH A 25 FOOT OFFSET FROM THE BARRIER REFLECTORS.]

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE (2, 3, 4, OR 5) (ONE-WAY OR BIDIRECTIONAL) _____ EACH

ITEM 614, OBJECT MARKER, _____-WAY _____ EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING THE ABOVE ITEM(S).

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 FRAME TABLE

ITEM	DURATION OF CLOSURE	NOTIFICATION DUE TO DISTRICT 6 COMMUNICATIONS OFFICE
RAMP & ROAD CLOSURES	>=2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	>12 HOURS & <2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	<12 HOURS	4 BUSINESS 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 IMPEMENTAION

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

MAINTENANCE OF TRAFFIC GENERAL NOTES

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DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL; AND, ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND PERMANENT CONCRETE BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE UNDER EITHER OF THE FOLLOWING CONDITIONS: ALONG TAPERS AND TRANSITION AREAS; OR ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES.

THE INCREASED BARRIER DELINEATION SHALL CONSIST OF EITHER DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.

DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6 INCHES WIDE AND SHALL BE "CRIMPED." PANELS SHALL BE INSTALLED AND SPACED PER TRAFFIC SCD MT-101.70.

TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 1 (ONE-WAY OR BI-DIRECTIONAL) _____ EACH

ITEM 614, OBJECT MARKER, _____-WAY _____ EACH

ITEM 614, INCREASED BARRIER BELINEATION _____FEET

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

ALONG RUNS OF INCREASED BARRIER DELINEATION WHERE THIS ITEM IS PROVIDED, THE QUANTITY SHALL BE MEASURED AS THE ENTIRE LENGTH OF THE RUN OF INCREASED BARRIER DELINEATION, INCLUDING THE SPACES BETWEEN THE INDIVIDUAL DELINEATION PANELS OR STACKS OF BARRIER REFLECTORS.

WORKSITE TRAFFIC SUPERVISOR

SUBJECT TO APPROVAL OF THE ENGINEER, THE CONTRACTOR SHALL EMPLOY AND IDENTIFY (SOMEONE OTHER THAN THE SUPERINTENDENT) A PREQUALIFIED WORKSITE TRAFFIC SUPERVISOR (WTS) BEFORE STARTING WORK IN THE FIELD. THE WTS SHALL BE TRAINED IN ACCORDANCE WITH CMS 614.03, SHALL HAVE SUCCESSFULLY COMPLETED ODOT ADMINISTERED WTS TESTING (AND RE-TESTING WHEN APPLICABLE) AND BE LISTED ON THE ODOT PREQUALIFIED WTS ROSTER. PREQUALIFICATION EXPIRES EVERY 5 YEARS. RE-TESTING SHALL BE SUCCESSFULLY REPEATED EVERY 5 YEARS TO REMAIN PREQUALIFIED.

THE NAME OF THE PREQUALIFIED WTS AND RELATED 24-HOUR CONTACT INFORMATION SHALL BE PROVIDED TO THE ENGINEER AT THE PRECONSTRUCTION CONFERENCE. IF THE DESIGNATED WTS WILL NOT BE AVAILABLE FULL TIME (24/7), THE CONTRACTOR MAY DESIGNATE AN ALTERNATE (SECONDARY) WTS TO BE AVAILABLE WHEN THE PRIMARY IS OFF DUTY; HOWEVER THE PRIMARY WTS SHALL REMAIN THE POINT OF CONTACT AT ALL TIMES. ANY ALTERNATE (SECONDARY) WTS IS SUBJECT TO THE SAME TRAINING, PREQUALIFICATION AND OTHER REQUIREMENTS OUTLINED WITHIN THIS PLAN NOTE. AT ALL TIMES THE ENGINEER, OR ENGINEER'S REPRESENTATIVES, MUST BE INFORMED OF WHO THE PRIMARY WTS (AND SECONDARY WTS, IF APPLICABLE) IS AT THE CURRENT TIME.

THE WTS POSITION HAS THE PRIMARY RESPONSIBILITY OF IMPLEMENTING THE TRAFFIC MANAGEMENT PLAN (TMP), MONITORING THE SAFETY AND MOBILITY OF THE ENTIRE WORK ZONE, AND CORRECTING TEMPORARY TRAFFIC CONTROL (TTC) DEFICIENCIES FOR THE ENTIRE WORK ZONE. THE WTS, AND ALTERNATE WTS WHEN ON DUTY, SHALL HAVE SUFFICIENT AUTHORITY TO EFFECTIVELY CARRY OUT THE IDENTIFIED WTS RESPONSIBILITIES AND DUTIES. THE DUTIES OF THE WTS ARE AS FOLLOWS:

1. BE AVAILABLE ON A 24-HOUR PER DAY BASIS.

2. BE ON SITE FOR ALL EMERGENCY TTC NEEDS WITHIN ONE HOUR OF NOTIFICATION BY POLICE OR PROJECT STAFF, AND EFFECT CORRECTIVE MEASURES IMMEDIATELY ON EXISTING WORK ZONE TTC DEVICES.

3. ATTEND PRECONSTRUCTION MEETING AND ALL PROJECT MEETINGS WHERE TTC MANAGEMENT IS DISCUSSED.

4. BE AVAILABLE ON SITE FOR OTHER MEETINGS OR DISCUSSIONS WITH THE ENGINEER UPON REQUEST.

5. BE AWARE OF ALL EXISTING AND PROPOSED TTC OPERATIONS OF THE CONTRACTOR, SUBCONTRACTORS AND SUPPLIERS, AND ENSURE COORDINATION OCCURS BETWEEN THEM TO ELIMINATE CONFLICTING TEMPORARY AND/OR PERMANENT TRAFFIC CONTROL.

6. COORDINATE PROJECT ACTIVITIES WITH ALL LAW ENFORCEMENT OFFICERS (LEOS). THE WTS SHALL ALSO BE THE MAIN CONTACT PERSON WITH THE LEOS WHILE LEOS ARE ON THE PROJECT.

7. COORDINATE AND FACILITATE MEETINGS WITH ODOT PERSONNEL, LEOS AND OTHER APPLICABLE ENTITIES BEFORE EACH PLAN PHASE SWITCH TO DISCUSS THE WORK ZONE TTC FOR IMPLEMENTING THE PHASE SWITCH. SUBMIT A WRITTEN DETAIL OF MOT OPERATIONS AND SCHEDULE OF EVENTS TO IMPLEMENT THE SWITCH BETWEEN PHASE PLANS TO THE ENGINEER 5 CALENDAR DAYS PRIOR TO THIS MEETING.

8. BE PRESENT, ON SITE FOR, AND INVOLVED WITH, EACH TTC SET UP/TAKE DOWN AND EACH PHASE CHANGE IN ACCORDANCE WITH CMS 614.03.

9. ON A CONTINUAL BASIS ENSURE THAT THE TTC ZONE AND ALL RELATED DEVICES ARE INSTALLED, MAINTAINED AND REMOVED IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.

10. ON A CONTINUAL BASIS FACILITATE CORRECTIVE ACTION(S) NECESSARY TO BRING DEFICIENT TTC ZONES AND ALL RELATED DEVICES INTO COMPLIANCE WITH CONTRACT DOCUMENTS IN THE TIMEFRAME DETERMINED BY THE ENGINEER.

11. INSPECT, EVALUATE, PROPOSE NECESSARY MODIFICATIONS TO, AND DOCUMENT THE EFFECTIVENESS OF, THE TTC DEVICES AND TRAFFIC OPERATIONS ON A DAILY BASIS (7 DAYS A WEEK). IN ADDITION, PERFORM ONE WEEKLY NIGHT INSPECTION OF THE WORK ZONE SETUP FOR DAYTIME WORK OPERATIONS; AND ONE DAYTIME INSPECTION PER WEEK FOR NIGHTTIME PROJECTS. THIS SHALL INCLUDE (BUT NOT BE LIMITED TO) DOCUMENTATION ON THE FOLLOWING PROJECT EVENTS:

   A. INITIAL TTC SETUP (DAY AND NIGHT REVIEW).

   B. DAILY TTC SETUP AND REMOVAL.

   C. WHEN CONSTRUCTION STAGING CAUSES A CHANGE IN THE TTC SETUP.

   D. CRASH OCCURRENCES WITHIN THE CONSTRUCTION AREA AND WITHIN THE INFLUENCE AREA(S) APPROACHING THE WORK ZONE.

   E. REMOVAL OF TTC DEVICES AT THE END OF A PHASE OR PROJECT.

   F. ALL OTHER EMERGENCY TTC NEEDS.

12. COMPLETE THE DEPARTMENT APPROVED LONG TERM INSPECTION FORM (CA-D-8) AFTER EACH INSPECTION AS REQUIRED IN # 11 AND SUBMIT IT TO THE ENGINEER THE FOLLOWING WORKDAY. THESE REPORTS SHALL INCLUDE A CHECKLIST OF ALL TTC MAINTENANCE ITEMS TO BE REVIEWED. A COPY OF THE FORM WILL BE PROVIDED AT THE PRE-CONSTRUCTION MEETING. ANY DEFICIENCIES OBSERVED SHALL BE NOTED, ALONG WITH RECOMMENDED OR COMPLETED CORRECTIVE ACTIONS AND THE DATES BY WHICH SUCH CORRECTIONS WERE, OR WILL BE, COMPLETED. A COPY OF THE CURRENT CA-D-8 DOCUMENT CAN BE FOUND ON THE OFFICE OF CONSTRUCTION ADMINISTRATION'S INSPECTION FORMS WEBSITE.

13. HAVE COPIES OF THE ODOT TEMPORARY TRAFFIC CONTROL MANUAL AND CONTRACT DOCUMENTS AVAILABLE AT ALL TIMES ON THE PROJECT.

THE DEPARTMENT WILL DEDUCT:

A. THE PRORATED DAILY AMOUNT OF ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY IN WHICH THE WTS FAILS TO PERFORM THE DUTIES SET FORTH ABOVE. THE PRORATED DAILY AMOUNT WILL BE EQUAL TO THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC DIVIDED BY THE DIFFERENCE BETWEEN THE ORIGINAL COMPLETION DATE AND THE FIRST DAY OF WORK, IN CALENDAR DAYS.

B. 1% OF THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY THAT A TTC ISSUE IS IDENTIFIED IN THE FIELD AND IS NOT CORRECTED IN THE GIVEN TIMEFRAME PER THE ENGINEER. DEDUCTION B SHALL NOT APPLY TO SITUATIONS COVERED BY DEDUCTION C.

C. 1% OF THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY THAT A LANE OR RAMP IS BLOCKED (FULLY OR PARTIALLY) WITHOUT TTC, AS DETERMINED BY THE ENGINEER. THIS DEDUCTION SHALL BE IN ADDITION TO ANY OTHER DISINCENTIVES ESTABLISHED FOR UNAUTHORIZED LANE USE.

FOR DAYS IN WHICH MORE THAN ONE DEDUCTION LISTED ABOVE OCCUR, THE HIGHEST DEDUCTION AMOUNT WILL APPLY.

IF THREE OR MORE TOTAL DAYS RESULT IN TTC ISSUES DESCRIBED IN DEDUCTION B OR C ABOVE, THE PRIMARY WTS SHALL BE IMMEDIATELY REMOVED FROM THE WORK IN ACCORDANCE WITH C&MS 108.05. UPON REMOVAL THE ENGINEER SHALL NOTIFY ODOT CENTRAL OFFICE (WTSPREQUALIFICATION@DOT.OHIO.GOV) TO REGISTER A REMOVAL AGAINST THE STATEWIDE PREQUALIFICATION FOR THE PRIMARY WTS. THREE REMOVALS SHALL CAUSE STATEWIDE DISQUALIFICATION FOR ANY PREVIOUSLY PREQUALIFIED WTS.

PAYMENT FOR THE ABOVE REQUIREMENTS, RESPONSIBILITIES AND DUTIES SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

MAINTENANCE OF TRAFFIC GENERAL NOTES

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TRAFFIC INCIDENT MANAGEMENT (TIM) DURING MOT

OHIO TIM IS OHIO'S TRAFFIC INCIDENT MANAGEMENT PROGRAM WHICH IS COMMITTED TO MAINTAINING THE SAFE AND EFFECTIVE FLOW OF TRAFFIC DURING EMERGENCIES AS TO PREVENT FURTHER DAMAGE, INJURY OR UNDUE DELAY OF THE MOTORING PUBLIC. IN ADDITION TO COMPLYING WITH THE PROVISION OF OMUTCD CHAPTER 6I, CONTROL OF TRAFFIC THROUGH TRAFFIC INCIDENT MANAGEMENT AREAS, THE CONTRACTOR SHALL ACTIVELY PARTICIPATE IN TIM PLANNING AND IMPLEMENTATION AS OUTLINED BELOW.

1. SUPERINTENDENT SHALL IDENTIFY THE INDIVIDUAL PERSONS ON THE PROJECT WHO WILL, OR MAY NEED TO, PERFORM THE DUTIES HEREIN. AT A MINIMUM, INCLUDE THE SUPERINTENDENT, FOREMEN AND SUPERVISORS (OR EQUIVALENT) AS WELL AS THE WORKSITE TRAFFIC SUPERVISOR (WTS; IF APPLICABLE TO THE PROJECT). THESE INDIVIDUALLY IDENTIFIED PERSONS SHALL COLLECTIVELY BE KNOWN AS CONTRACTOR TRAFFIC INCIDENT MANAGEMENT (TIM) CONTACTS. NOTIFY THE PROJECT ENGINEER OF THE CONTRACTOR TIM CONTACTS (ALONG WITH CONTACT INFORMATION FOR EACH) AT OR BEFORE THE PRECONSTRUCTION MEETING.

2. SUPERINTENDENT SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY CONTRACTOR TIM CONTACT IS ADDED, REMOVED OR THE CONTACT INFORMATION CHANGES OVER THE COURSE OF THE PROJECT.

3. PRIOR THE FIRST DAY OF WORK IN THE FIELD, EACH CONTRACTOR TIM CONTACT ON THE PROJECT SHALL HAVE ATTENDED AND SUCCESSFULLY COMPLETED OHIO TIM TRAINING PROVIDED BY THE DEPARTMENT OR DESIGNEE. TRAINING INFORMATION CAN BE FOUND AT WWW.OHIOTIM.COM.

4. SUPERINTENDENT, AT A MINIMUM, SHALL ATTEND AND ACTIVELY PARTICIPATE IN A DEPARTMENT SCHEDULED TIM MEETING BEFORE CONSTRUCTION WORK BEGINS AND BEFORE EACH PHASE CHANGE. THESE MEETINGS WILL RESULT IN A DEPARTMENT ISSUED PROJECT SPECIFIC TRAFFIC INCIDENT MANAGEMENT PLAN (TIMP). AT THE TIM MEETINGS THE ATTENDING CONTRACTOR TIM CONTACTS SHALL:

   A. COLLABORATE WITH ODOT AND SAFETY FORCES;

   B. SHARE PROJECT SPECIFIC DETAILS THAT IMPACT TIM RESPONDERS; AND

   C. RECOMMEND WAYS TO INCORPORATE NECESSARY EMERGENCY ACCESS AND OTHER TIM ELEMENTS FOR TIM RESPONDERS GIVEN PROJECT SPECIFIC WORK BEING COMPLETED AND PROJECT SPECIFIC PHASING.

5. CONTRACTOR TIM CONTACTS SHALL IMPLEMENT COMPONENTS OF THE RESULTING TIMP (SUCH AS APPROVED EMERGENCY INGRESS/EGRESS POINTS, ETC), AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.

6. CONTRACTOR TIM CONTACTS SHALL PERFORM, AT A MINIMUM, THE FOLLOWING FUNCTIONS WHEN AN INCIDENT/CRASH OCCURS:

   A. IF OBSERVED OR PRESENT WHEN OCCURS, CALL 911 AND THEN NOTIFY THE TRAFFIC MANAGEMENT CENTER (TMC) TO PROVIDE THE FOLLOWING:

      I. LOCATION, INCLUDING MILEPOST NUMBER AND DIRECTION OF TRAVEL

      II. NUMBER AND TYPE OF VEHICLES INVOLVED, IF KNOWN

      III. ESTIMATED EXTENT OF DAMAGE OR INJURY, IF KNOWN

      IV. ESTIMATED NUMBER OF PATIENTS INVOLVED, IF KNOWN

      V. ANY POTENTIAL HAZARDOUS CONDITIONS, IF KNOWN

      VI. THE PLACARD NUMBER ON ANY HAZARDOUS MATERIALS PLACARD FROM A SAFE DISTANCE, IF APPLICABLE AND VISIBLE

   B. FOLLOWING AN INCIDENT/CRASH:

      I. INITIATE TRAFFIC MANAGEMENT/PROVIDE TEMPORARY TRAFFIC CONTROL AS INDICATED IN THE TIMP, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.

      II. RECOMMEND ROADWAY REPAIR NEEDS.

      III. PROVIDE REPAIR RESOURCES AND INITIATE REPAIRS, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.

      IV. ATTEND AND PARTICIPATE IN AN AFTER ACTION REVIEW (AAR).

ALL COSTS, UNLESS OTHERWISE SPECIFIED, RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 614, MAINTAINING TRAFFIC. FAILURE TO PERFORM THE REQUIREMENTS OF THIS PLAN NOTE WILL RESULT IN A DAILY FINE OF 2% OF ITEM 614, MAINTAINING TRAFFIC AND MAY RESULT IN ONE OR MORE CONTRACTOR TIM CONTACTS BEING REMOVED FROM THE LIST OF OHIO TIM TRAINED INDIVIDUALS (AT THE SOLE DISCRETION OF THE OHIO TIM EXECUTIVE COMMITTEE). IN THE EVENT AN INDIVIDUAL IS REMOVED FROM THE OHIO TIM TRAINED LIST, THE INDIVIDUAL WILL BE REMOVED FROM CONTRACTOR TIM CONTACT RESPONSIBILITIES ON ALL PROJECTS.

OVERHEAD-MOUNTED WORK ZONE SIGNALS

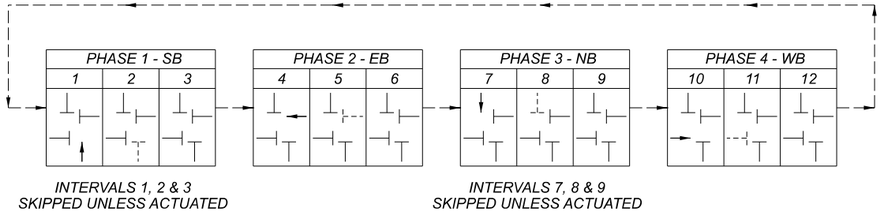
SIGNALS SHALL BE OVERHEAD MOUNTED IN ACCORDANCE WITH THE DETAILS SHOWN ON TRAFFIC SCD MT-96.20.

FULLY-ACTUATED OPERATION OF WORK ZONE TRAFFIC SIGNAL

THE WORK ZONE SIGNAL CONTROL REQUIRED FOR THIS PROJECT AND SHOWN ON SHEETS P.98-P.107 AND TRAFFIC SCDS MT-96.11, 96.20 AND 96.26 SHALL BE FULLY TRAFFIC-ACTUATED AND OPERATE IN A MANNER SIMILAR TO THAT DESCRIBED IN SECTION 733.02 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

THE CONTRACTOR SHALL ALSO DESIGN, FURNISH, INSTALL AND MAINTAIN A TRAFFIC DETECTOR ON EACH TRAFFIC APPROACH WHICH WILL RELIABLY DETECT ALL LEGAL TRAFFIC APPROACHING (BUT NOT LEAVING) THE SIGNAL AS IT PASSES OR WAITS IN THE DESIGNATED DETECTOR ZONE SHOWN IN THE PLANS. DETECTOR DESIGNS WHICH DO NOT PROVIDE RELIABLE DETECTION, FREE FROM FALSE CALLS, SHALL BE IMMEDIATELY REPLACED BY THE CONTRACTOR.

THE INITIAL CONTROLLER TIMING SHALL BE AS FOLLOWS:



INTERSECTION: SR 56 AND WORKZONE										
MAINTAINING AGENCY: ODOT										
START UP			DUAL ENTRY: NO		PHASES: -					
			REST IN RED:		RING 1 -			RING 2 -		
START IN: ALL RED			OVERLAP				A	B	C	D
TIME FOR FLASH OR ALL RED: 10 SEC										
FIRST PHASE(S): 2			PHASES				-	-	-	-
COLOR DISPLAYED: GREEN										
INTERVAL OR FEATURE			CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)			1	2	3	4	5	6	7	8
DIRECTION			SB	EB	NB	WB	-	-	-	-
MINIMUM GREEN (INITIAL)		(SEC.)	10	10	10	10	-	-	-	-
ADDED INITIAL		*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL		(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)		(SEC.)	3	3	3	3	-	-	-	-
TIME BEFORE REDUCTION		*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP		*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE		*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I		(SEC.)	15	13	10	22	-	-	-	-
MAXIMUM GREEN II		(SEC.)	-	-	-	-	-	-	-	-
YELLOW CHANGE		(SEC.)	3	4	3	4	-	-	-	-
ALL RED CLEARANCE		(SEC.)	1	17	1	17	-	-	-	-
WALK		(SEC.)	-	-	-	-	-	-	-	-
PEDESTRIAN CLEARANCE		(SEC.)	-	-	-	-	-	-	-	-
RECALL	MAXIMUM	(ON/OFF)	OFF	OFF	OFF	OFF	-	-	-	-
	MINIMUM	(ON/OFF)	OFF	ON	OFF	ON	-	-	-	-
	PEDESTRIAN	(ON/OFF)	OFF	OFF	OFF	OFF	-	-	-	-
MEMORY		(ON/OFF)	OFF	OFF	OFF	OFF	-	-	-	-

* VOLUME DENSITY CONTROLS

MAINTENANCE OF TRAFFIC GENERAL NOTES

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER TDP
REVIEWER MJC 06/25/21
PROJECT ID 107630
SHEET P.13 TOTAL 882

MAD/PIC-71-7.30/0.00
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SEQUENCE OF CONSTRUCTION

PRE-PHASE:

PRIOR TO THE START OF PHASE 1, THE SOUTHBOUND OUTSIDE SHOULDER AND PORTIONS OF THE NORTHBOUND AND SOUTHBOUND INSIDE SHOULDERS MUST BE RECONSTRUCTED IN ORDER TO CARRY SHIFTED PHASE 1 TRAFFIC.

ALL CROSSOVERS THAT TIE INTO EXISTING PAVEMENT AND TEMPORARY PAVEMENT FOR RAMPS B & D WIDENING SHALL BE CONSTRUCTED IN CONJUNCTION WITH THE SHOULDER REPLACEMENT. ANY PRE-PHASE 1 WORK THAT IMPACTS TRAVEL LANES SHALL BE COMPLETED BY UTILIZING NIGHTTIME LANE CLOSURES PER ODOT SCD MT-95.30. THE LANE CLOSURES MAY ONLY BE IMPLEMENTED DURING HOURS ALLOWED AS LISTED IN THIS PLAN.

PHASE 1:

CLOSE THE INSIDE LANE OF THE THREE LANE SECTION OF I-71 SOUTHBOUND. LANE CLOSURE CONFIGURATION SHALL REMAIN FOR THE DURATION OF PHASE 1 AND PHASES 2A AND 2B. SHIFT SOUTHBOUND LANES ONTO OUTSIDE SHOULDER AND OUTSIDE LANE.

I-71 NORTHBOUND SHALL REMAIN IN EXISTING CONFIGURATION.

CONSTRUCT PROPOSED AREA OF SOUTHBOUND I-71 AS SHOWN IN THE PLANS.

PHASE 2A:

CROSSOVER I-71 SOUTHBOUND LANES ONTO COMPLETED INSIDE LANE AND SHOULDER OF SOUTHBOUND I-71 CONSTRUCTED DURING PHASE 1.

CLOSE INSIDE PORTION OF EXIT RAMP B. SHIFT TRAFFIC ONTO OUTSIDE PORTION OF RAMP B AND TEMPORARY RAMP PAVEMNT.

CLOSE INSIDE PORTION OF ENTRANCE RAMP A. SHIFT TRAFFIC ONTO OUTSIDE PORTION OF RAMP A.

I-71 NORTHBOUND SHALL REMAIN IN EXISTING CONFIGURATION.

CONSTRUCT PROPOSED AREA OF I-71 SOUTHBOUND, RAMP A AND RAMP B AS SHOWN IN THE PLANS.

CONSTRUCT TEMPORARY PAVEMENT FOR RAMP A WIDENING.

PHASE 2B:

I-71 SOUTHBOUND LANES, SHIFTS AND CROSSOVES SHALL REMAIN IN PHASE 2A CONFIGURATION.

CLOSE OUTSIDE PORTION OF EXIT RAMP B. SHIFT TRAFFIC ONTO INSIDE PORTION OF RAMP B CONSTRUCTED IN PREVIOUS PHASE.

CLOSE OUTSIDE PORTION OF ENTRANCE RAMP A. SHIFT TRAFFIC ONTO INSIDE PORTION OF RAMP A CONSTRUCTED IN PREVIOUS PHASE AND TEMPORARY PAVEMENT.

I-71 NORTHBOUND SHALL REMAIN IN EXISTING CONFIGURATION.

CONSTRUCT REMAINING PROPOSED AREA OF I-71 SOUTHBOUND, RAMP A AND RAMP B AS SHOWN IN THE PLANS.

WINTER PHASE:

AT THE CONCLUSION OF PHASE 2B, THE PROJECT SHALL ENTER A WINTERIZATION PHASE. NORTHBOUND TRAFFIC SHALL REMAIN IN EXISTING CONFIGURATION. SOUTHBOUND TRAFFIC SHALL BE RECONFIGURED TO EXISTING TWO LANE CONFIGURATION. NORTHBOUND RAMPS SHALL REMAIN IN EXISTING CONFIGURATION. SOUTHBOUND RAMPS SHALL BE OPENED IN FINAL CONFIGURATION. THE WINTERIZATION CONFIGURATION SHALL BE IN PLACE BY 10/13/2023.

PHASE 3A:

CLOSE INSIDE LANE OF I-71 SOUTHBOUND. SHIFT SOUTHBOUND LANES ONTO OUTSIDE SHOULDER AND OUTSIDE LANE.

CROSSOVER EXISTING I-71 NORTHBOUND LANES ONTO CONSTRUCTED I-71 SOUTHBOUND INSIDE SHOULDER AND LANES.

USE SOUTHERN PORTION OF EXIT RAMP C CROSSOVER TO MAINTAIN RAMP TRAFFIC. CLOSE INSIDE PORTION OF RAMP C. SHIFT TRAFFIC ONTO OUTSIDE PORTION OF RAMP C.

CLOSE INSIDE PORTION OF RAMP D. SHIFT TRAFFIC ONTO OUTSIDFE PORTION OF RAMP D. USE NORTHERN PORTION OF ENTRANCE RAMP D CROSSOVER TO MAINTAIN RAMP TRAFFIC.

CONSTRUCT PROPOSED AREAS OF I-71 NORTHBOUND, INSIDE AREA OF RAMP A, AND INSIDE AREA OF RAMP D.

CONSTRUCT TEMPORARY PAVEMENT FOR RAMP D WIDENING.

PHASE 3B:

I-71 NORTHBOUND AND SOUTHBOUND LANES, SHIFTS AND CROSSOVES SHALL REMAIN IN PHASE 3A CONFIGURATION.

USE NORTHERN PORTION OF EXIT RAMP C CROSSOVER TO MAINTAIN RAMP TRAFFIC. CLOSE OUTSIDE PORTION OF RAMP C. SHIFT TRAFFIC ONTO INSIDE PORTION OF RAMP C.

CLOSE OUTSIDE PORTION OF RAMP D. SHIFT TRAFFIC ONTO INSIDFE PORTION OF RAMP D AND TEMPORARY PAVEMENT. USE SOUTHERN PORTION OF ENTRANCE RAMP D CROSSOVER TO MAINTAIN RAMP TRAFFIC.

COMPLETE CONSTRUCTION OF PROPOSED AREAS OF I-71 NORTHBOUND, OUTSIDE AREA OF RAMP A, AND OUTSIDE AREA OF RAMP D.

PHASE 4:

AT THE CONCLUSION OF PHASE 3B TRAFFIC SHALL BE MAINTAINED IN THE FINAL CONDITION ON INTERMEDIATE COURSE FOR THE WINTER OF 2024-2025. PAVEMENT MARKINGS SHALL BE PLACED IN THEIR FINAL LOCATIONS PER THE TRAFFIC CONTROL PLAN.

AT THE CONCLUSION OF THE 2024-2025 WINTER, THE REMAINING EXISTING I-71 PAVEMENT THAT IS TO BE RESURFACED (OUTSIDE THE FULL DEPTH LIMITS) SHALL BE MILLED TO THE DEPTH SPECIFIED IN THE PLANS. THE FINAL WEARING COURSE OF BOTH NEWLY CONSTRUCTED AND EXISTING MILLED PAVEMENTS SHALL THEN BE INSTALLED UNLESS PREVIOUSLY CONSTRUCTED. ONCE COMPLETED, FINAL PAVEMENT MARKINGS SHALL BE APPLIED PER THE TRAFFIC CONTROL PLANS. THIS WORK SHALL BE COMPLETED BY UTILIZING ODOT SCD MT-97.11. IN ADDITION TO THIS WORK, THE MEDIAN CABLE BARRIER SHALL BE INSTALLED PER THE ROADWAY PLANS AND TEMPORARY PAVEMENT SHALL BE REMOVED BY UTILIZING ODOT SCD 95.45 EXCEPT DRUMS MAY BE USED IN THE PLACE OF PCB AS LONG AS DROP-OFF REQUIREMENTS ARE MET (PER ODOT SCD MT-101.90).

OVERHEAD STRUCTURE CONSTRUCTION:

OVERHEAD BRIDGE CONSTRUCTION SHALL OCCUR AT ANY TIME DURING THE PROJECT. SIDE ROADS SHALL BE CLOSED AND DETOURED AS SHOWN IN THE PLANS. THE CONTRACTOR SHALL COORDINATE MAINTENANCE OF TRAFFIC NEEDS ALONG I-71 WITH THE RESPECTIVE PHASE OF I-71 MAINTENANCE OF TRAFFIC.

SR-56 SHALL REMAIN OPEN AT ALL TIMES UTILIZING THE EXISTING LANE CONFIGURATION OR SIGNALIZED BIDIRECTIONAL TRAFFIC AS SHOWN IN THE PLANS. CONSTRUCTION OF THE SR-56 STRUCTURE MAY OCCUR AT ANY TIME DURING THE PROJECT. THE CONTRACTOR SHALL COORDINATE MAINTENANCE OF TRAFFIC NEEDS ALONG SR-56 WITH NECESSARY RAMP WORK AT THE INTERCHANGE.

MAINTENANCE OF TRAFFIC GENERAL NOTES

MAD/PIC-71-7.30/0.00
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DESIGN AGENCY
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950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER
TDP

REVIEWER
MJC 06/25/21

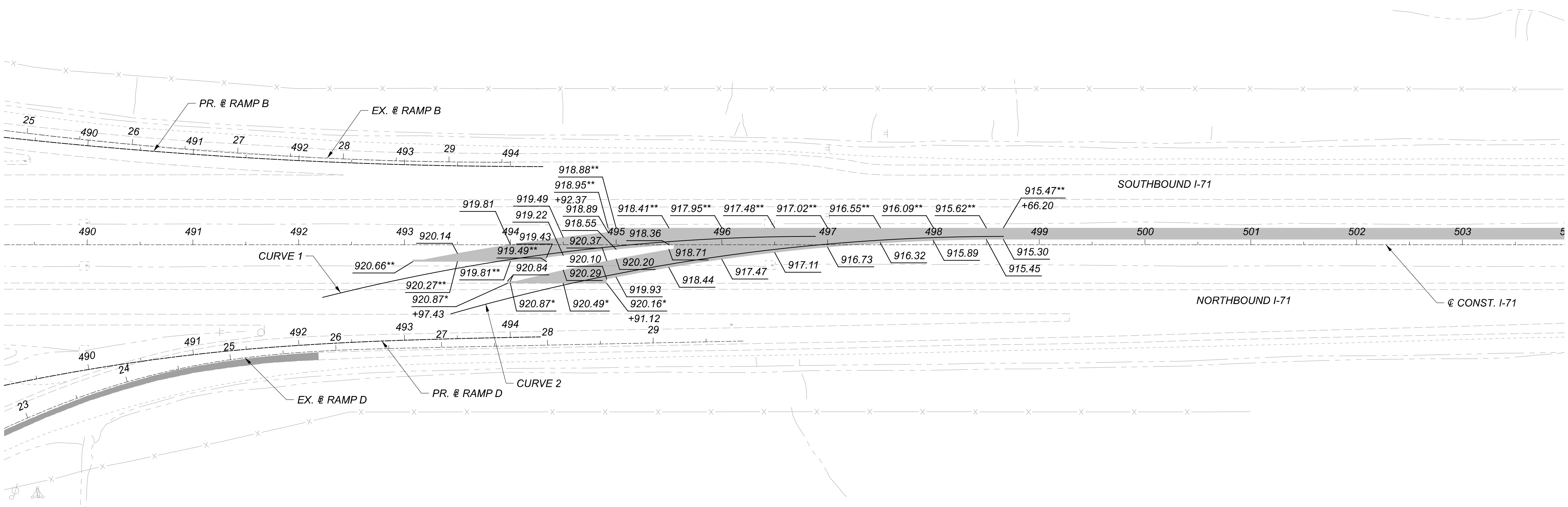
PROJECT ID
107630

SHEET P.14 | TOTAL 882

CURVE 1
R = 1,909.86'
P.C. STA. 492+22.59, 49.64' RT
P.T. STA. 496+88.27, 8.00' LT

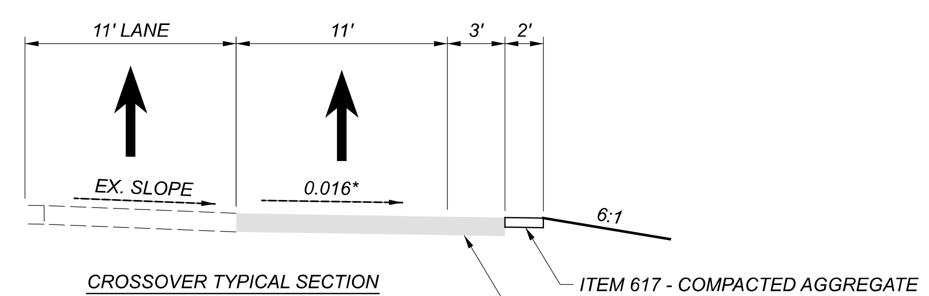
CURVE 2
R = 1,909.86'
P.C. STA. 493+43.92, 65.24' RT
P.T. STA. 498+66.20, 8.00' LT

HORIZONTAL SCALE IN FEET
0 25 50 100



NOTES:

1. ELEVATIONS ARE AT 50' INTERVALS BASED ON THE ℄ OF CONSTRUCTION OF I-71 UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL VERIFY ALL EXISTING ELEVATIONS PRIOR TO THE CONSTRUCTION OF THE CROSSOVER.
* DEONTES EXISTING ELEVATION
** DENOTES CONSTRUCTED ELEVATION



CROSSOVER TYPICAL SECTION

* SLOPE TOWARDS INSIDE OF CURVE

MAINTENANCE OF TRAFFIC
CROSSOVER DETAIL

DESIGN AGENCY
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DESIGNER TDP
REVIEWER MJC 06/25/21
PROJECT ID 107630
SHEET P.25 TOTAL 882

MAD/PIC-71-7.30/0.00

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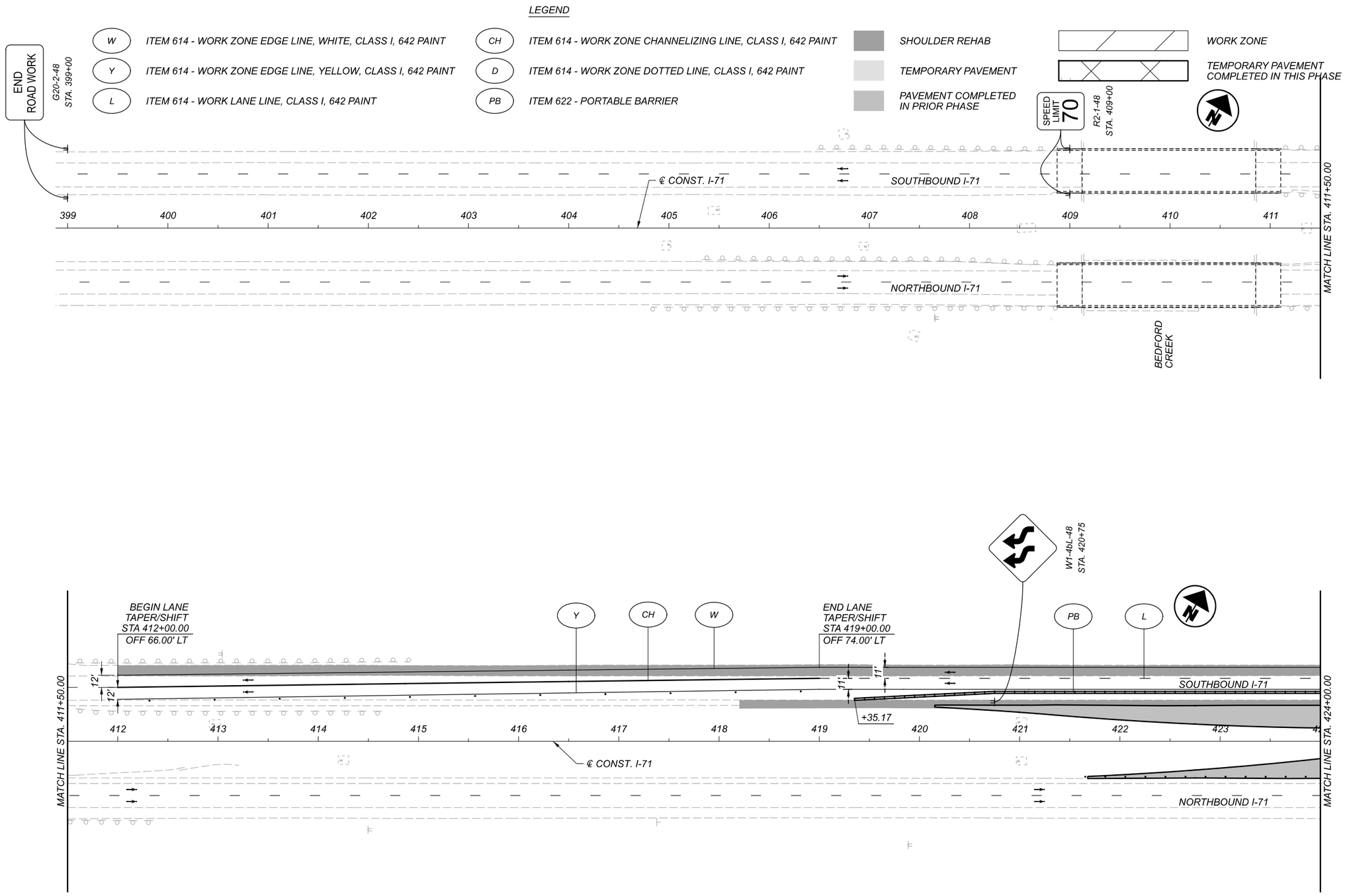

HORIZONTAL SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 1
STA. 399+00 TO STA. 424+00

MAD/PIC-71-7.30/0.00

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DESIGNER
TDP

REVIEWER
MJC 06/25/21

PROJECT ID
107630

SHEET P.27 | TOTAL 882

MODEL: 107630_MPI08 PAPERSIZE: 17x11(in.) DATE: 6/30/2021 TIME: 10:26:03 AM USER: mcornett
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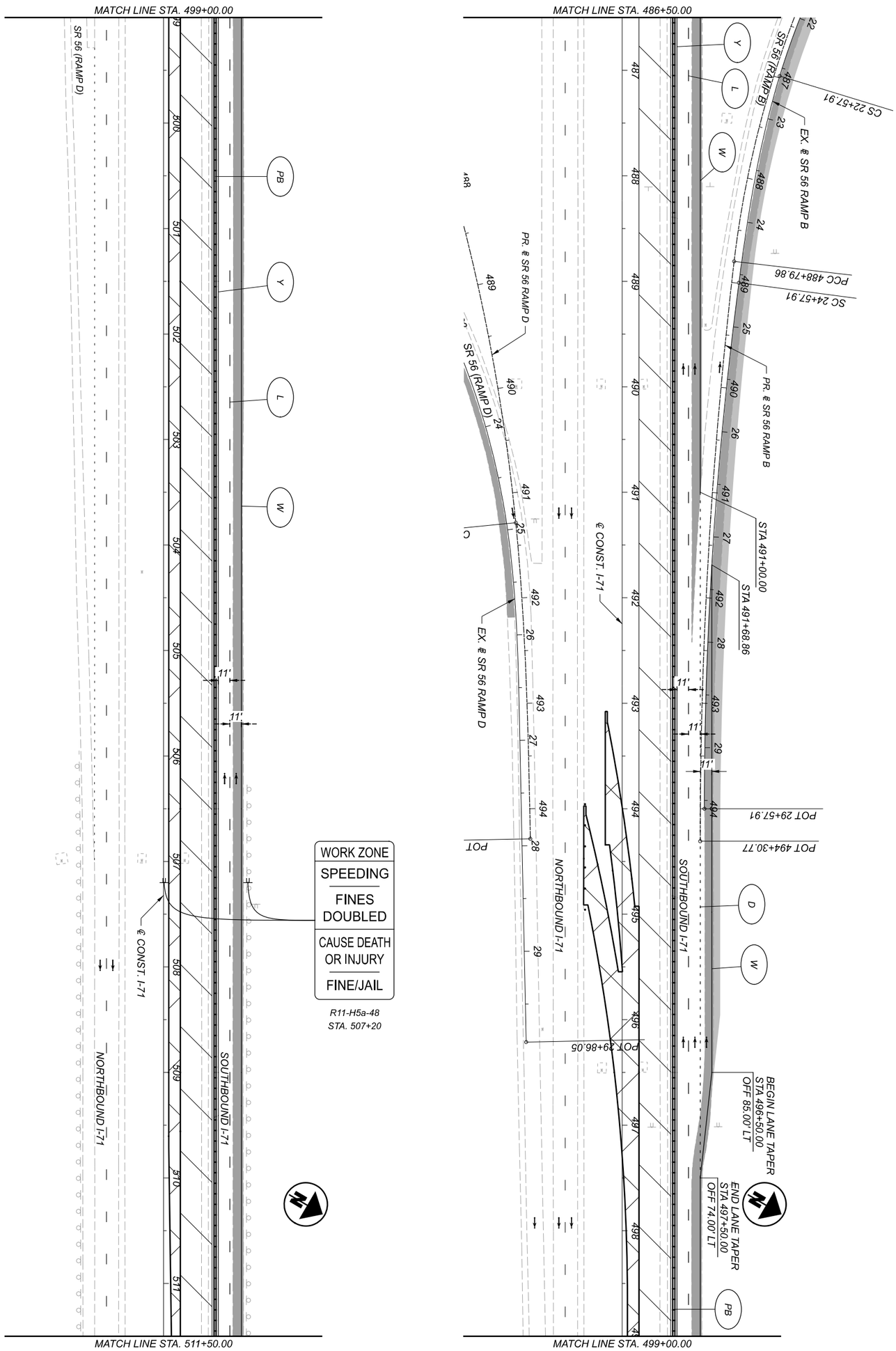

MAINTENANCE OF TRAFFIC - PHASE 1
STA. 486+50 TO STA. 511+50

HORIZONTAL SCALE IN FEET
0 50
25 100

DESIGN AGENCY
E.L. ROBINSON
1468 West 9th St. Suite 800
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959 Goodale Blvd. Suite 150
Columbus, Ohio 43212

DESIGNER TDP
REVIEWER MJC 06/25/21
PROJECT ID 107630
SHEET P.31 TOTAL 882

MODEL: I07630_MPII0 PAPERSIZE: I7xII (In.) DATE: 6/30/2021 TIME: I0:26:I4 AM USER: mcornett
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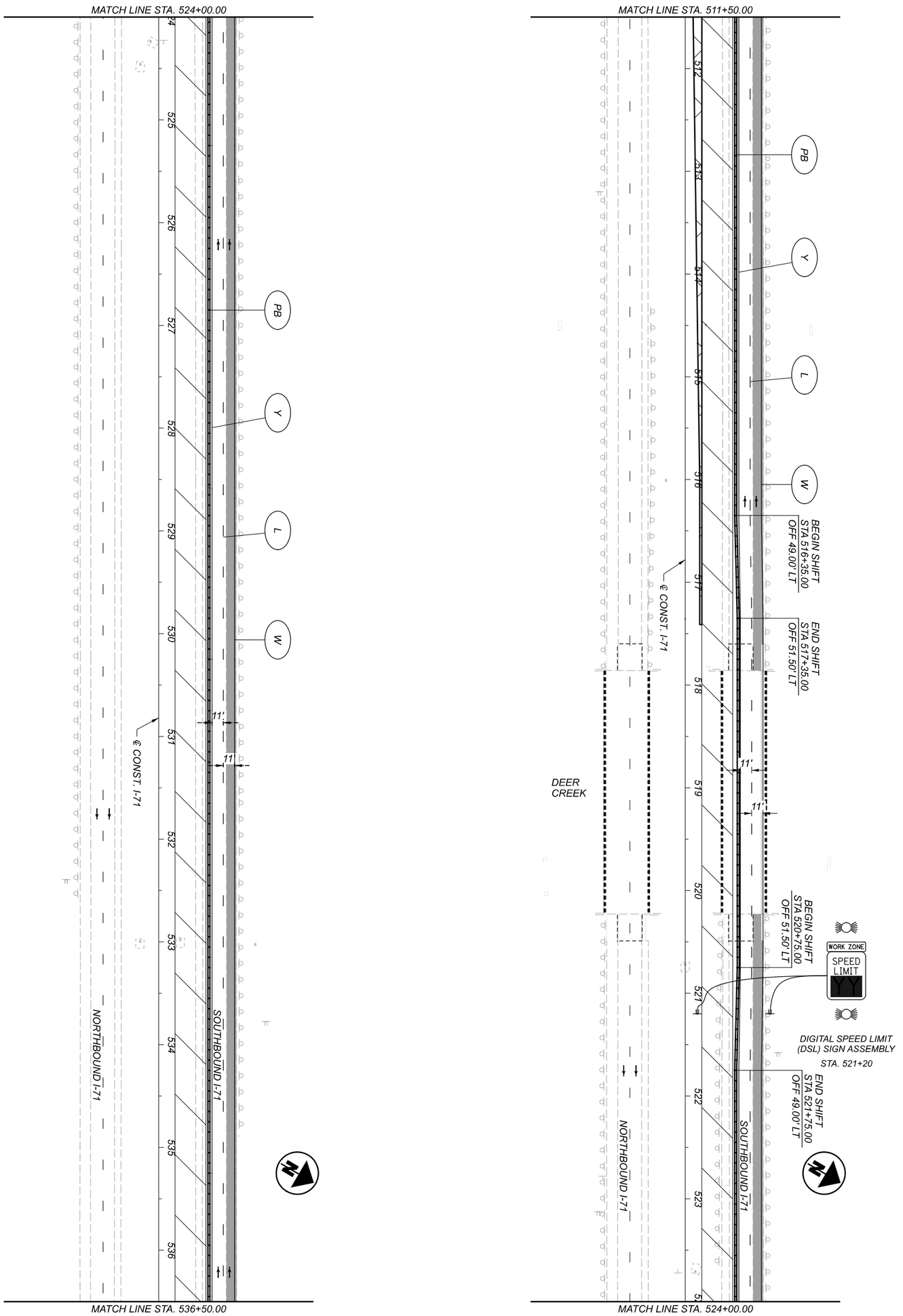

DESIGN AGENCY
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Cleveland, Ohio 44113
959 Goodale Blvd, Suite 150
Columbus, Ohio 43212

MAINTENANCE OF TRAFFIC - PHASE 1
STA. 511+50 TO STA. 536+50

HORIZONTAL
SCALE IN FEET
0 50
25 100

DESIGNER TDP
REVIEWER MJC 06/25/21
PROJECT ID 107630
SHEET P.32 TOTAL 882

MODEL: I07630_MPII4 PAPERSIZE: I7xII(In.) DATE: 6/30/2021 TIME: 10:26:35 AM USER: mcornett
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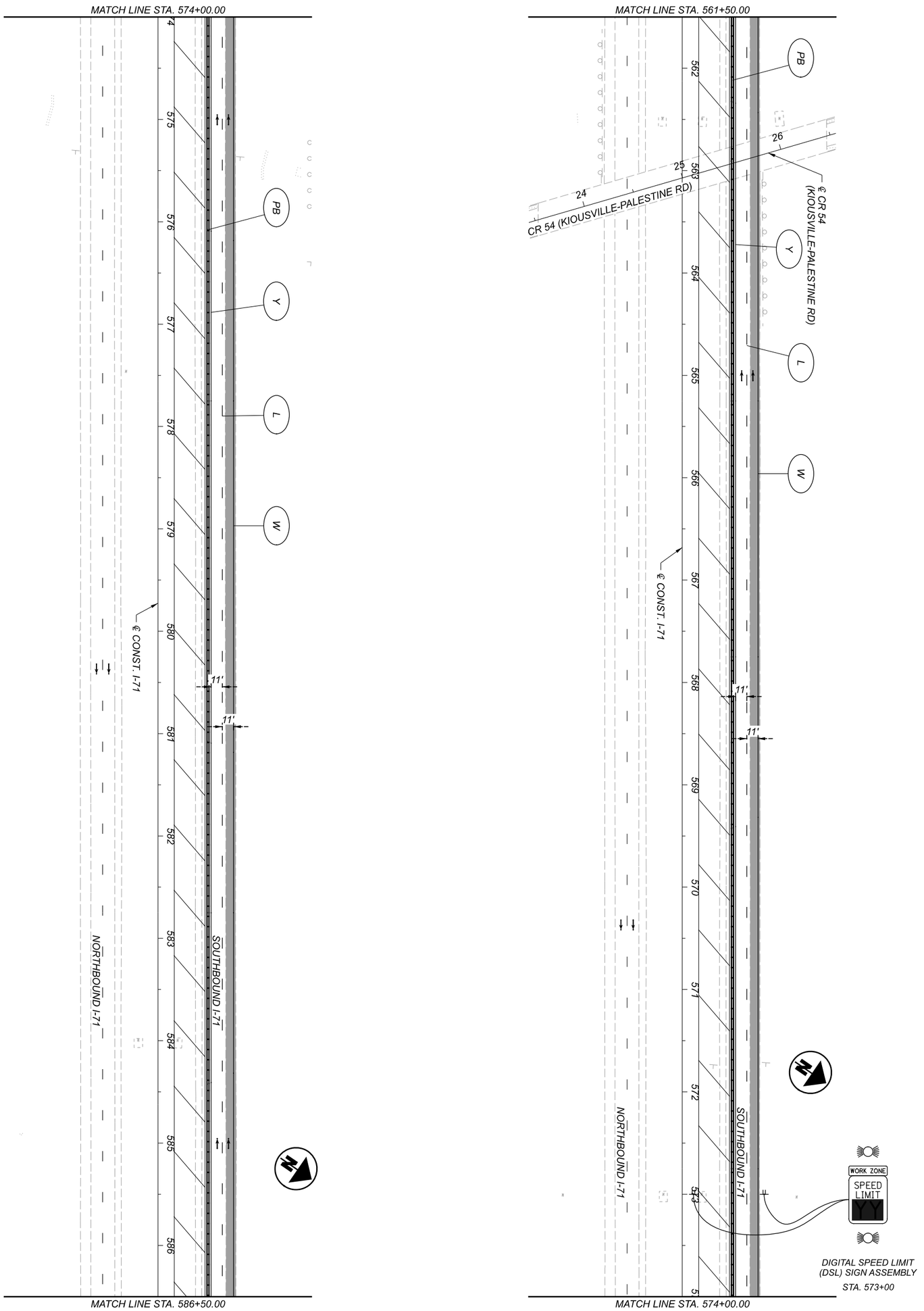


SHEET	TOTAL
P 34	882

PROJECT ID: 107630

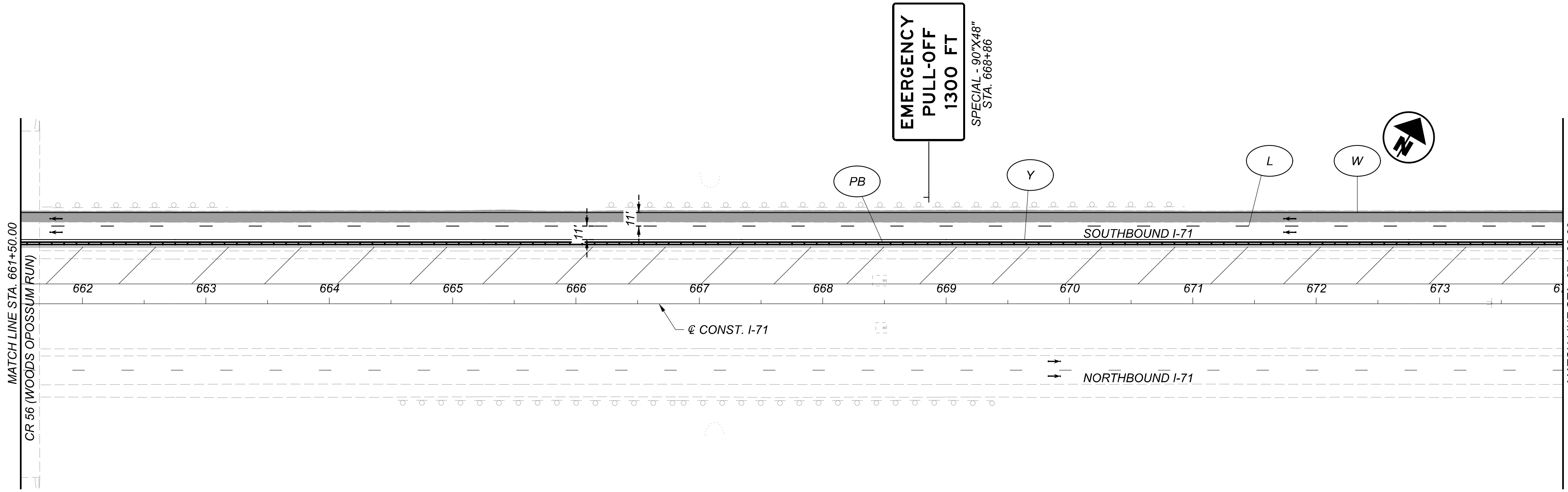
REVIEWER: MJC 06/25/21

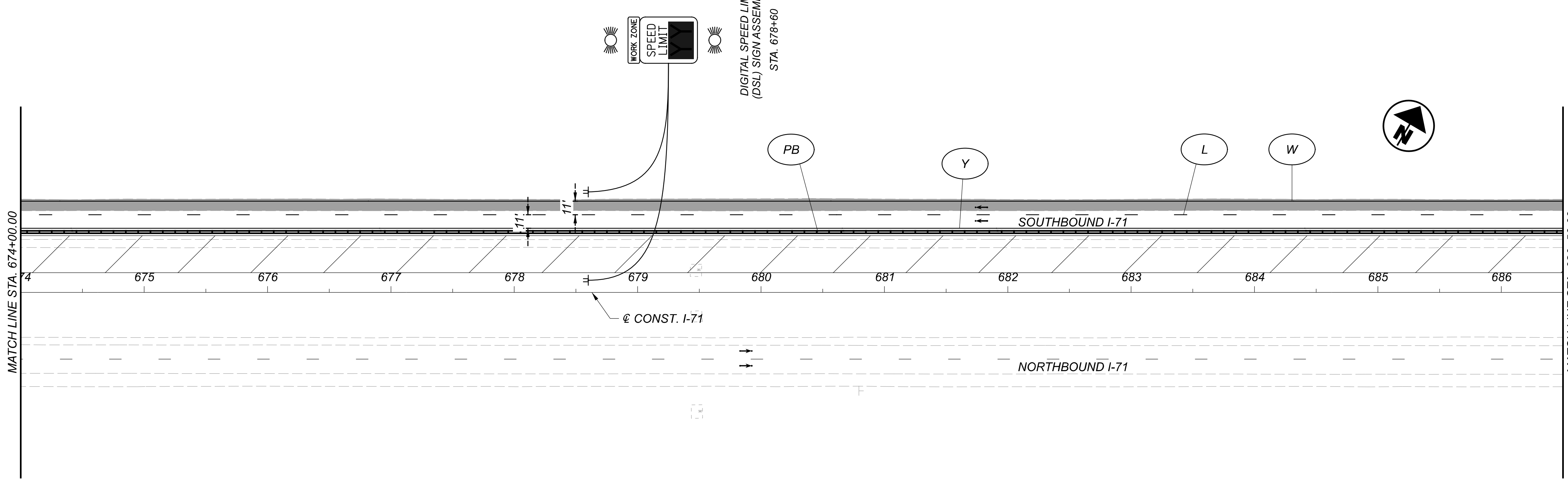
DESIGNER: TDP

DESIGN AGENCY: E.L. ROBINSON ENGINEERING OF OHIO, LTD. 1468 West 9th St., Suite 800 Cleveland, Ohio 44113 959 Goodale Blvd., Suite 150 Columbus, Ohio 43212

MAINTENANCE OF TRAFFIC - PHASE 1
STA. 561+50 TO STA. 586+50

HORIZONTAL SCALE IN FEET
0 50
25 100





HORIZONTAL
SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 1
STA. 661+50 TO STA. 686+50

DESIGN AGENCY
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Grandview Heights, Ohio

DESIGNER
TDP

REVIEWER
MJC 06/25/21

PROJECT ID
107630

SHEET P.38 | TOTAL 882

MAD/PIC-71-7.30/0.00

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HORIZONTAL
SCALE IN FEET
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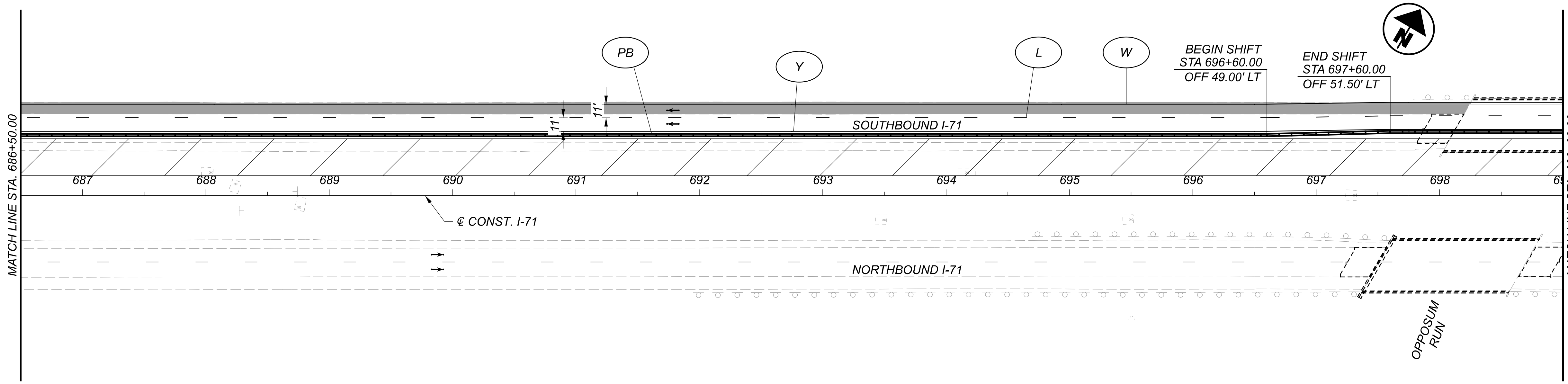

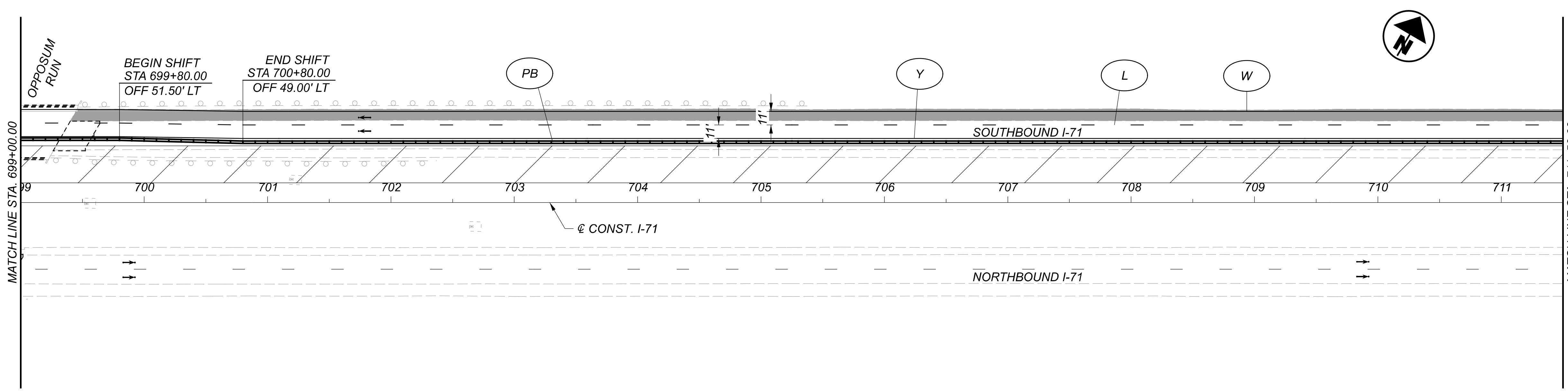

MAINTENANCE OF TRAFFIC - PHASE 1
STA. 686+50 TO STA. 711+50

DESIGN AGENCY

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1468 West 9th St, Suite 800
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DESIGNER
TDP

REVIEWER
MJC 06/25/21

PROJECT ID
107630

SHEET P.39 TOTAL 882

MAD/PIC-71-7.30/0.00

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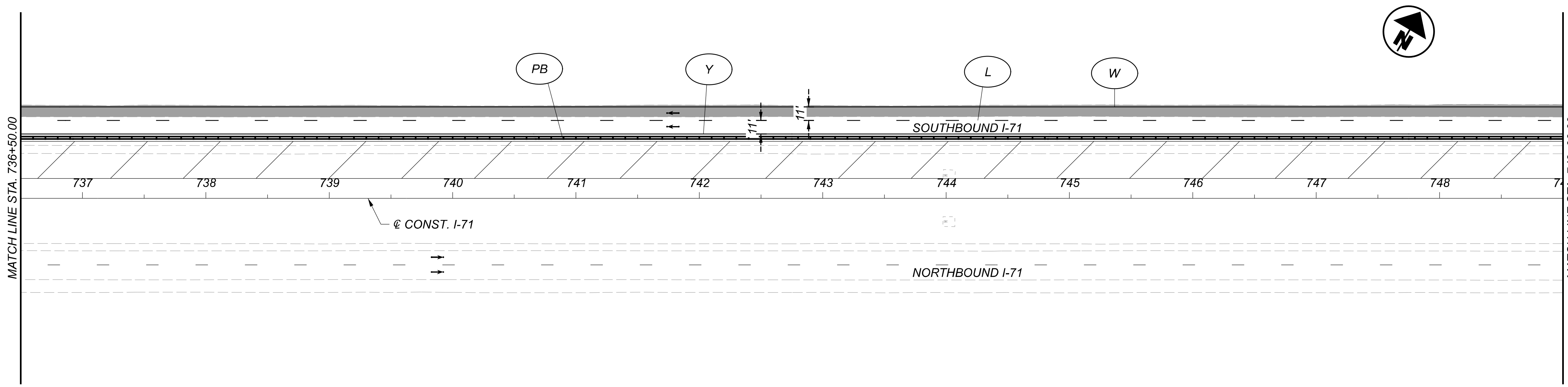

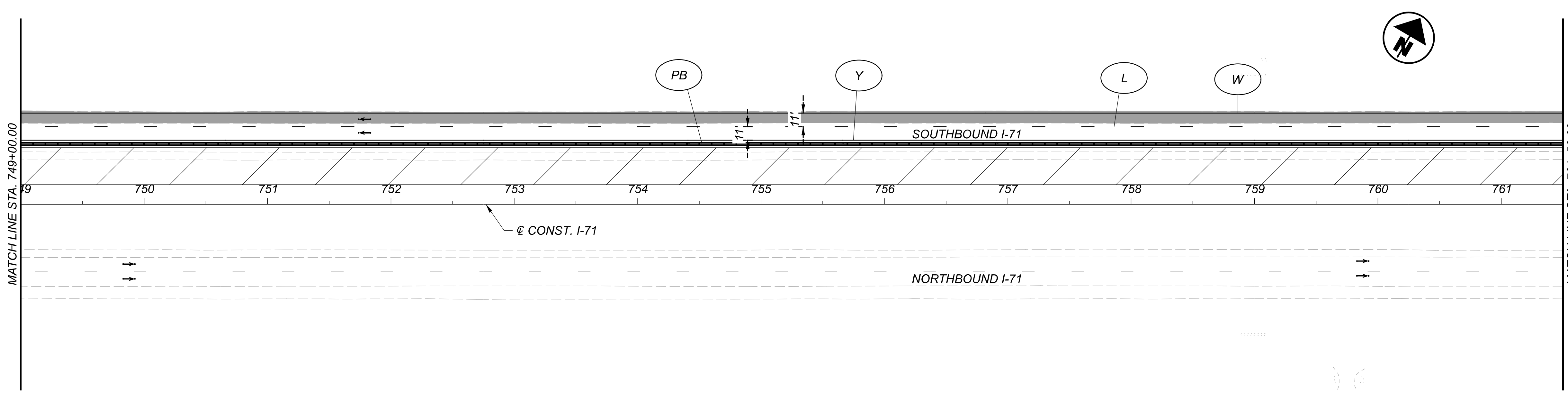

HORIZONTAL SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 1
STA. 736+50 TO STA. 761+50

DESIGN AGENCY
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950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER TDP
REVIEWER MJC 06/25/21
PROJECT ID 107630
SHEET P.41 TOTAL 882

MAD/PIC-71-7.30/0.00

MODEL: 107630_MP128 PAPERSIZE: 17x11 (in.) DATE: 6/30/2021 TIME: 10:27:49 AM USER: mcornett
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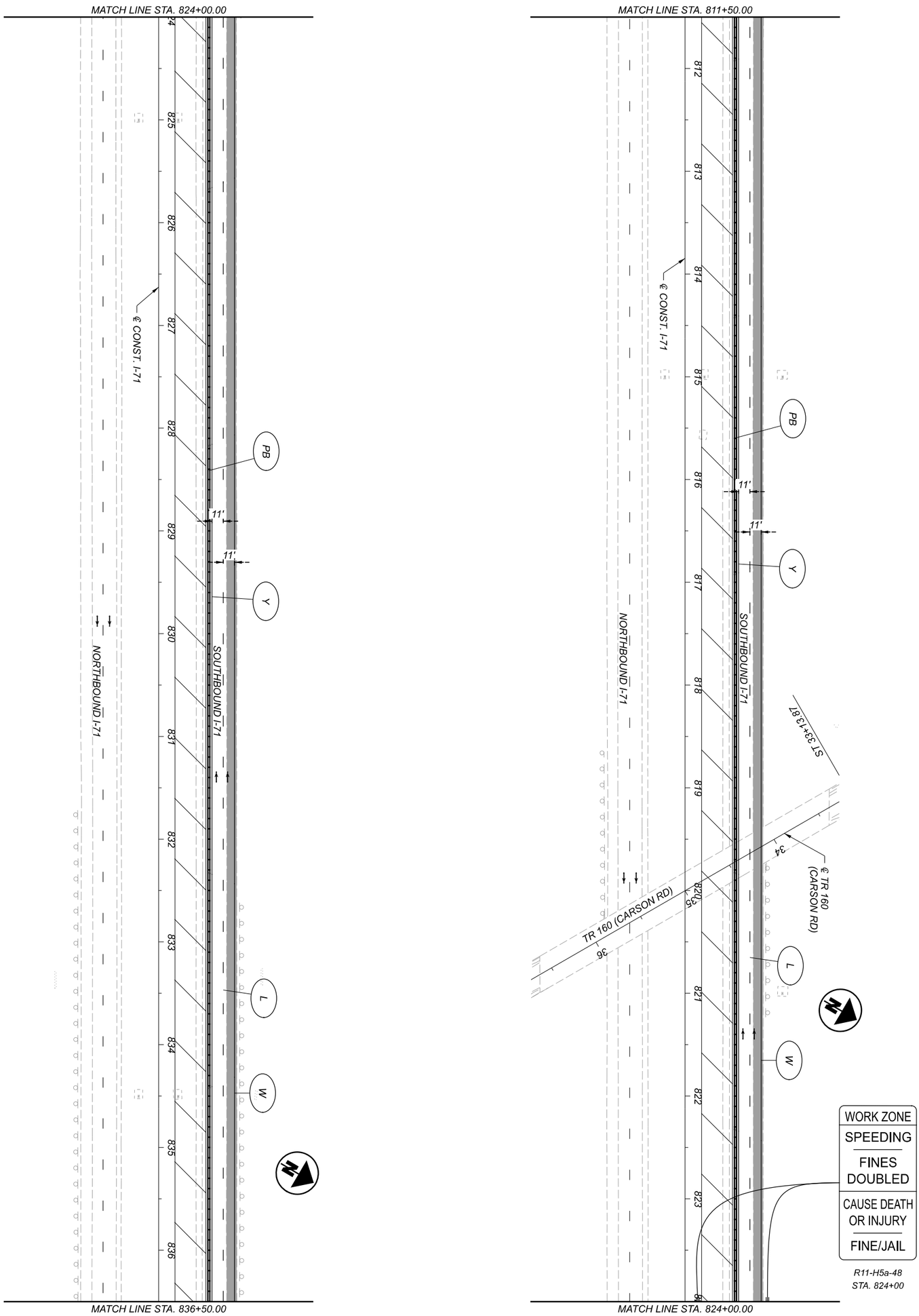
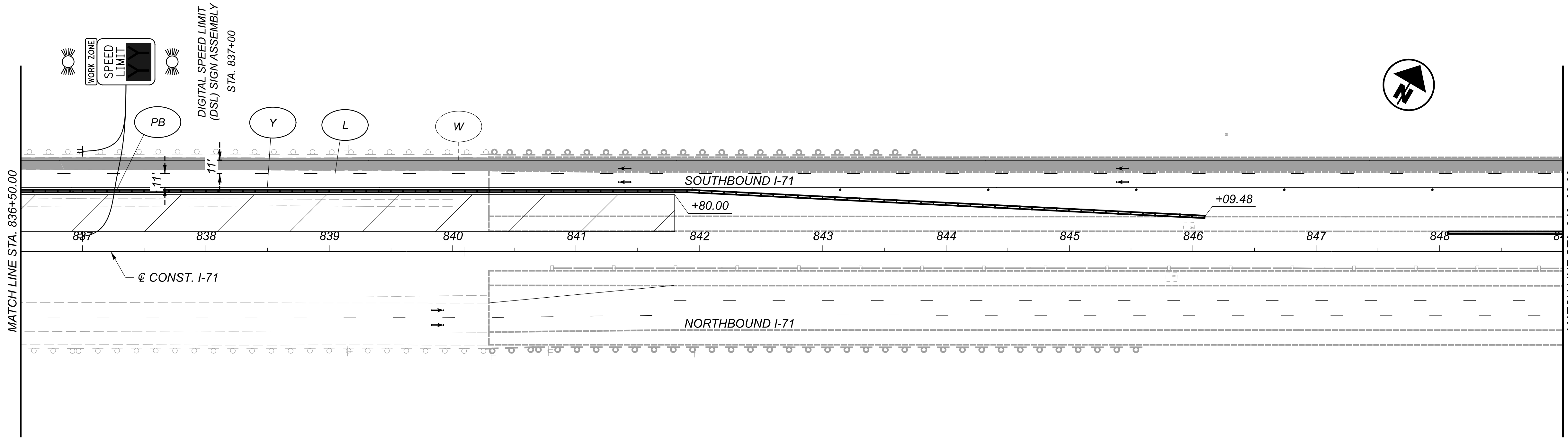


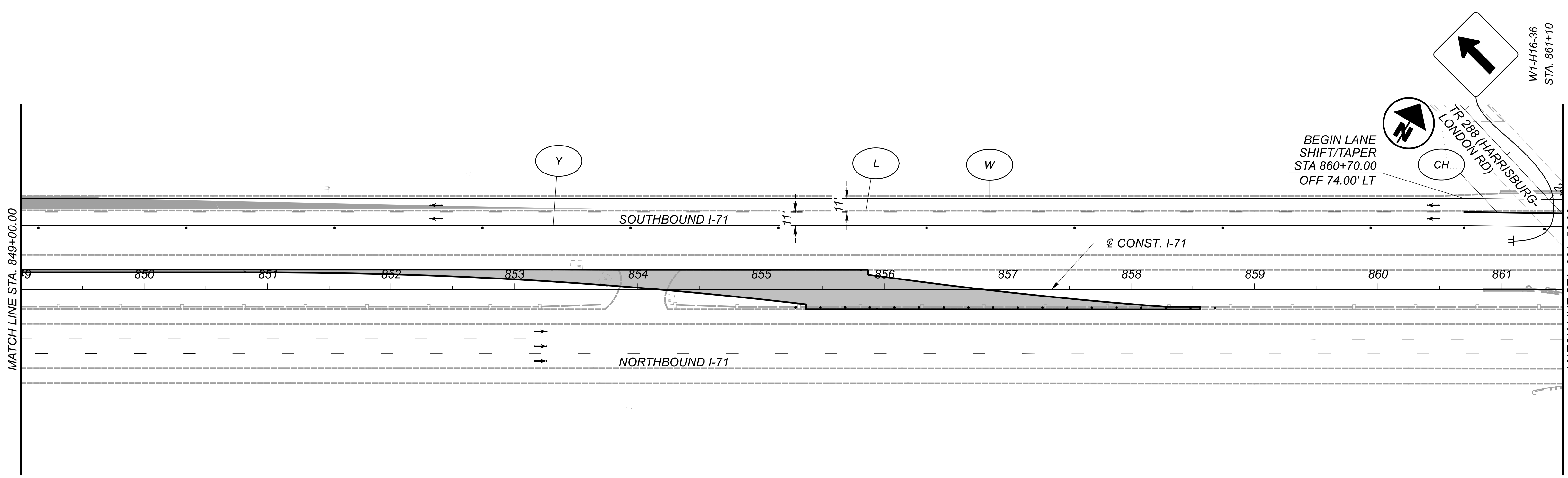
DESIGN AGENCY	DESIGNER	REVIEWER	PROJECT ID	SHEET	TOTAL
E.L. ROBINSON	TDP	MJC 06/25/21	107630	P 44	882

E.L. ROBINSON ENGINEERING OF OHIO, LTD.
1468 West 9th St., Suite 800
Cleveland, Ohio 44113
959 Goodale Blvd., Suite 150
Columbus, Ohio

MAINTENANCE OF TRAFFIC - PHASE 1
STA. 811+50 TO STA. 836+50

HORIZONTAL SCALE IN FEET
0 50
25 100





HORIZONTAL SCALE IN FEET

0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 1
STA. 836+50 TO STA. 861+50

DESIGN AGENCY

E.L. ROBINSON ENGINEERING

1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER: TDP

REVIEWER: MJC 06/25/21

PROJECT ID: 107630

SHEET: P.45 TOTAL: 882

MAD/PIC-71-7.30/0.00

MODEL: 107630_MPI36 PAPERSIZE: 17x11 (in.) DATE: 6/30/2021 TIME: 10:28:32 AM USER: mcornett
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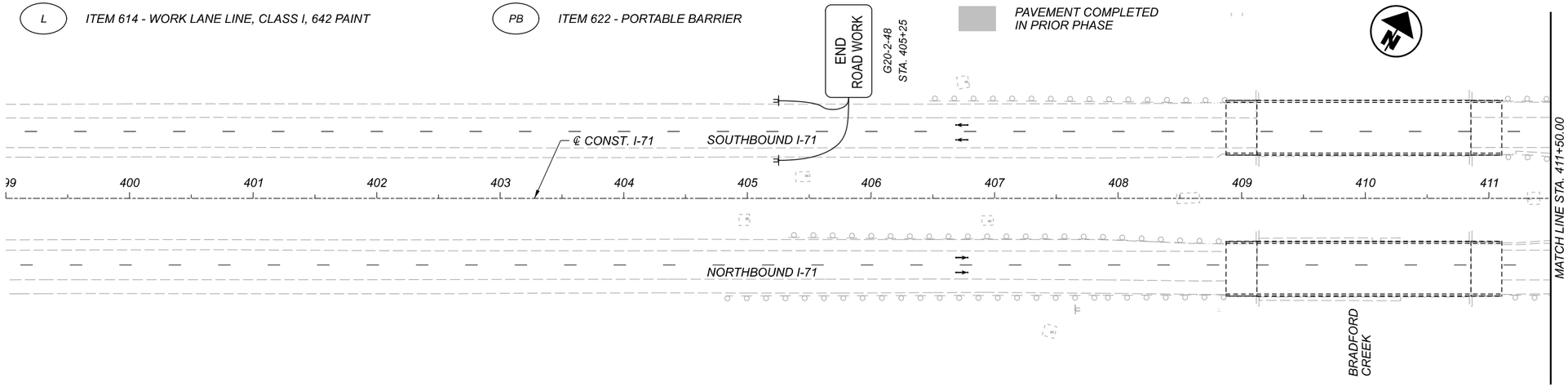
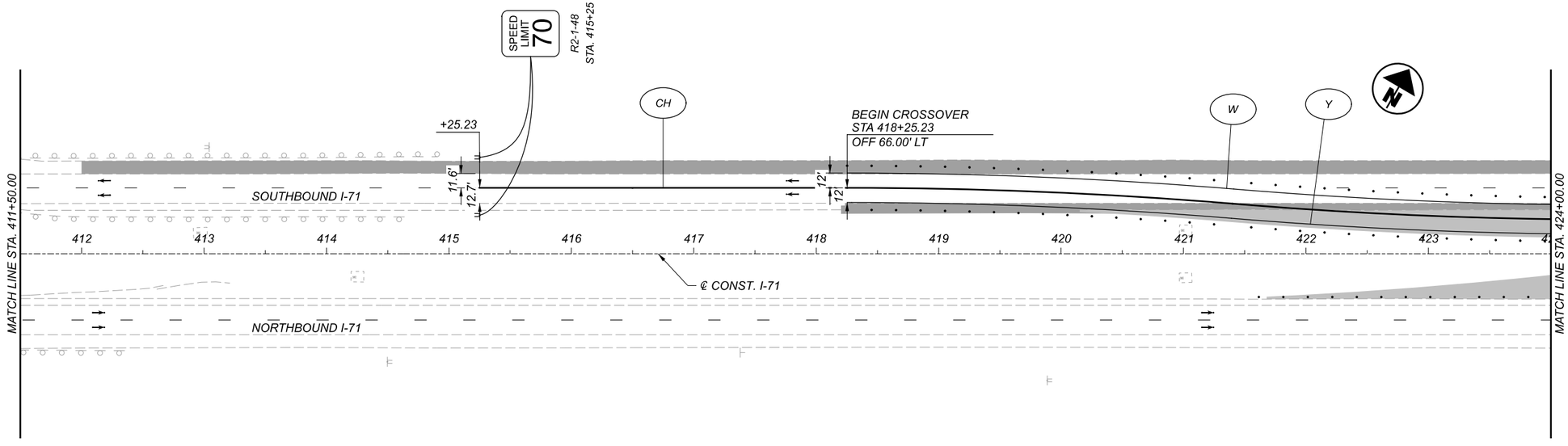
LEGEND

W	ITEM 614 - WORK ZONE EDGE LINE, WHITE, CLASS I, 642 PAINT
Y	ITEM 614 - WORK ZONE EDGE LINE, YELLOW, CLASS I, 642 PAINT
L	ITEM 614 - WORK LANE LINE, CLASS I, 642 PAINT
CH	ITEM 614 - WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT
D	ITEM 614 - WORK ZONE DOTTED LINE, CLASS I, 642 PAINT
PB	ITEM 622 - PORTABLE BARRIER

SHOULDER REHAB
TEMPORARY PAVEMENT
PAVEMENT COMPLETED IN PRIOR PHASE
WORK ZONE
TEMPORARY PAVEMENT COMPLETED IN THIS PHASE





HORIZONTAL SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 2A
STA. 399+00 TO STA. 424+00

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER: TDP
REVIEWER: MJC 06/25/21
PROJECT ID: 107630
SHEET: P.48 TOTAL: 882

MAD/PIC-71-7.30/0.00

MODEL: 107630_MP PAPERSIZE: 17x11 (in.) DATE: 6/30/2021 TIME: 10:29:11 AM USER: mcornett
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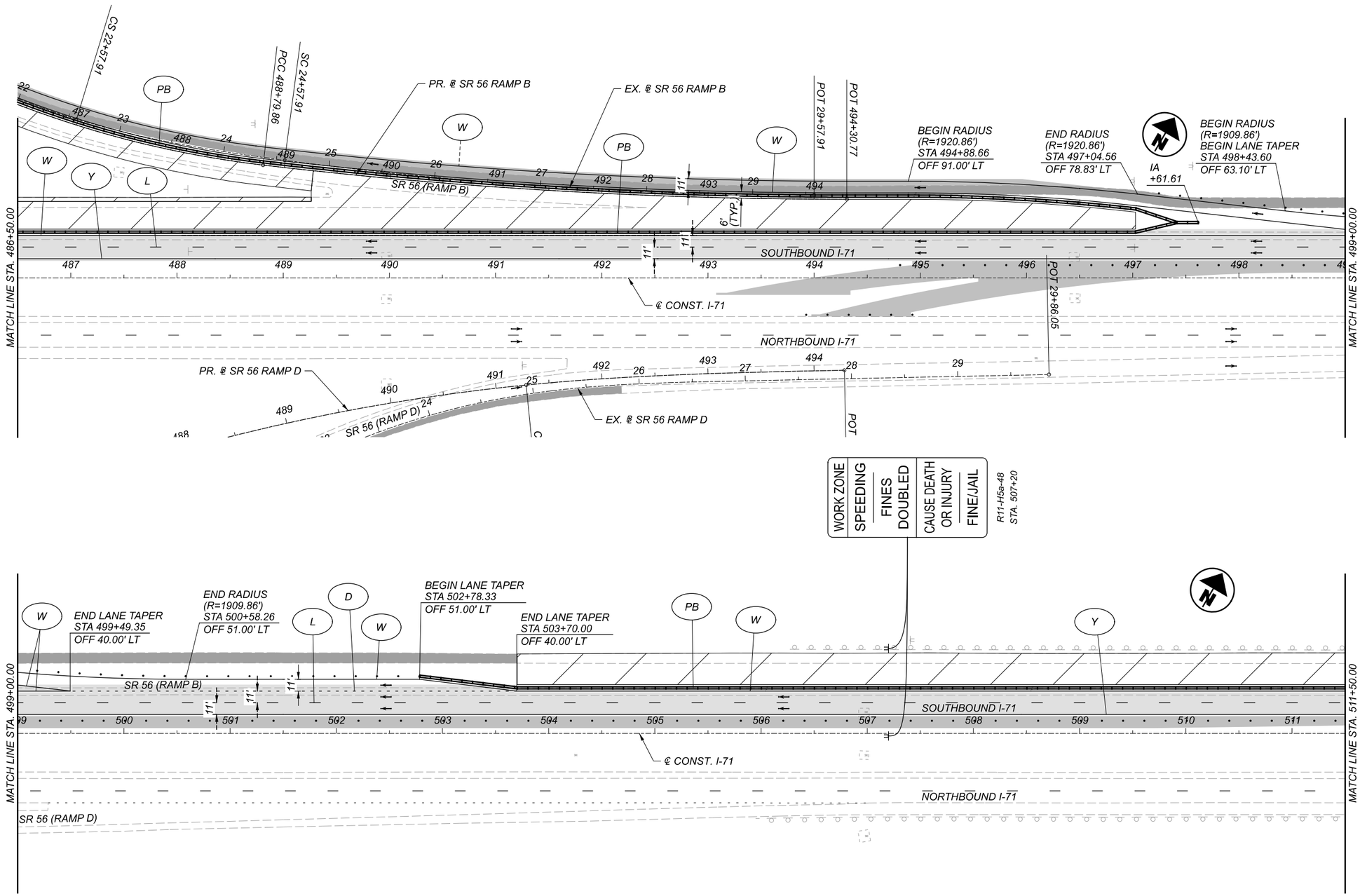


HORIZONTAL SCALE IN FEET
0 25 50 100

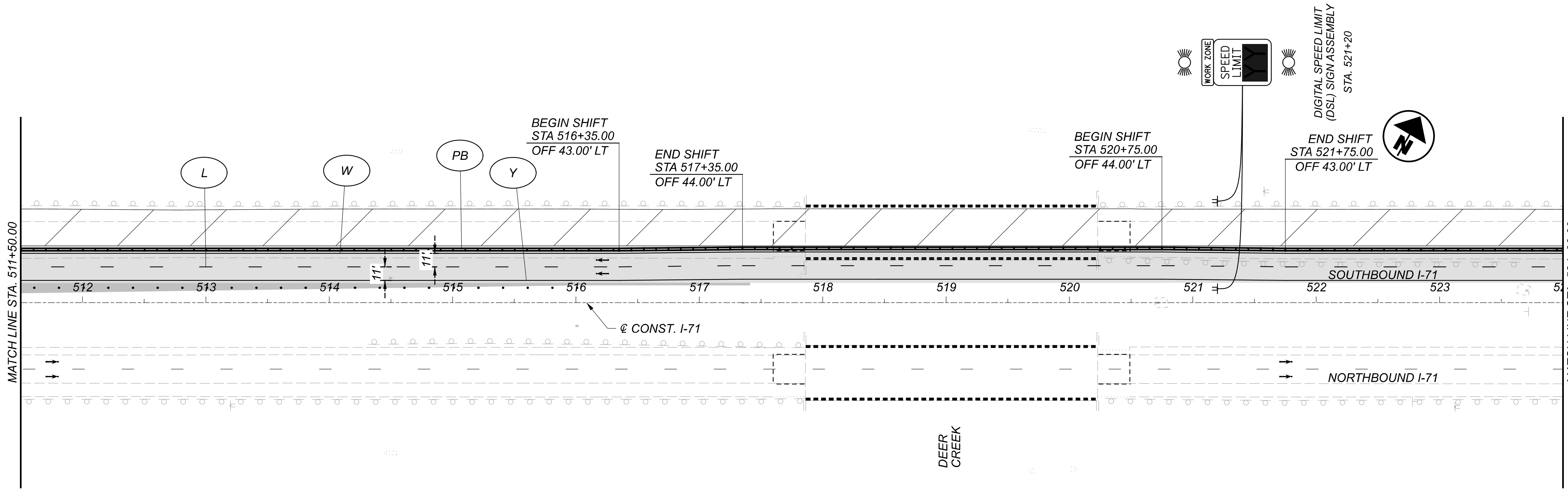
MAINTENANCE OF TRAFFIC - PHASE 2A
STA. 486+50 TO STA. 511+50

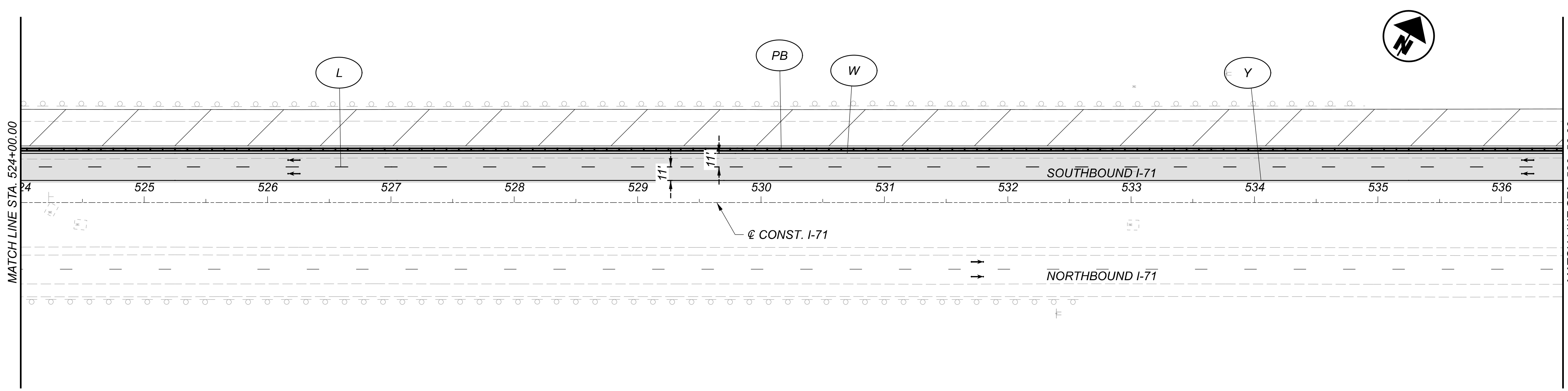
MAD/PIC-71-7.30/0.00

MODEL: 107630_MP205 PAPERSIZE: 17x11(in.) DATE: 6/30/2021 TIME: 10:30:18 AM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\MOT\Sheets\107630_MP205.dgn

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER	TDP
REVIEWER	MJC 06/25/21
PROJECT ID	107630
SHEET	P.52
TOTAL	882





HORIZONTAL SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 2A
STA. 511+50 TO STA. 536+50

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER
TDP

REVIEWER
MJC 06/25/21

PROJECT ID
107630

SHEET P.53 TOTAL 882

MAD/PIC-71-7.30/0.00

MODEL: 107630_MP207 PAPERSIZE: 17x11 (in.) DATE: 6/30/2021 TIME: 10:30:31 AM USER: mcornett
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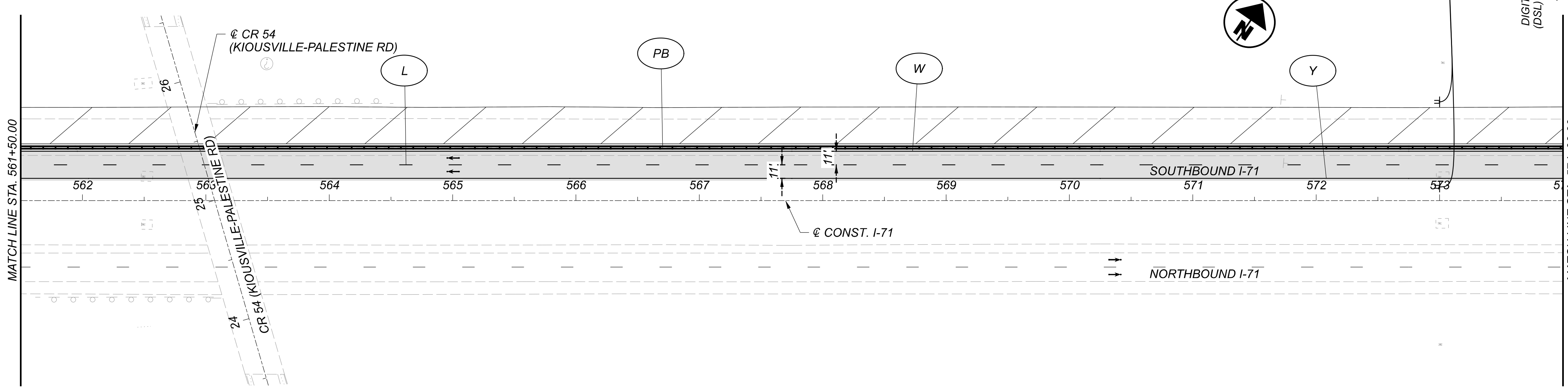
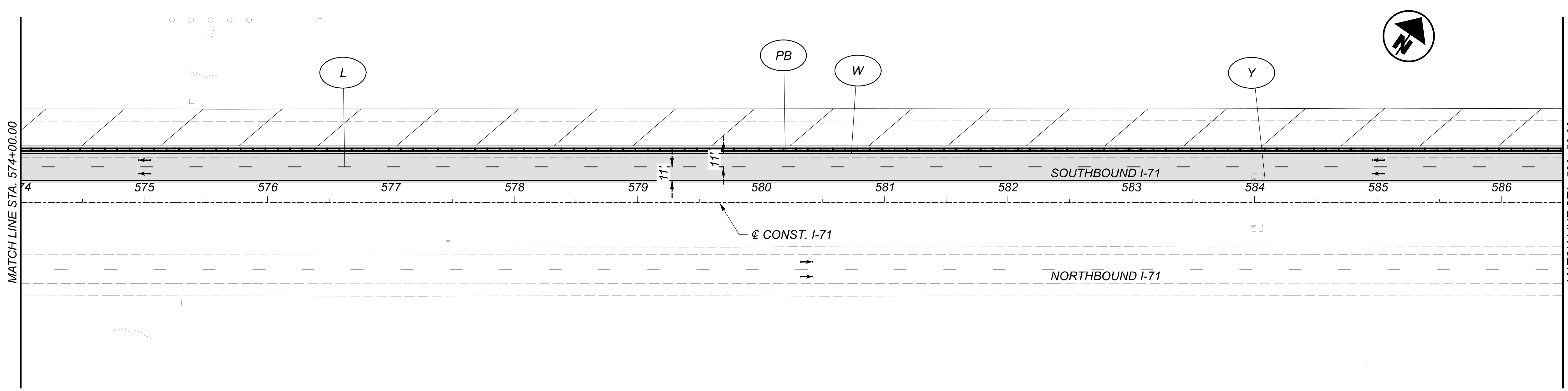




HORIZONTAL SCALE IN FEET

0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 2A
STA. 561+50 TO STA. 586+50

DESIGN AGENCY

E.L. ROBINSON ENGINEERING

1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER
TDP

REVIEWER
MJC 06/25/21

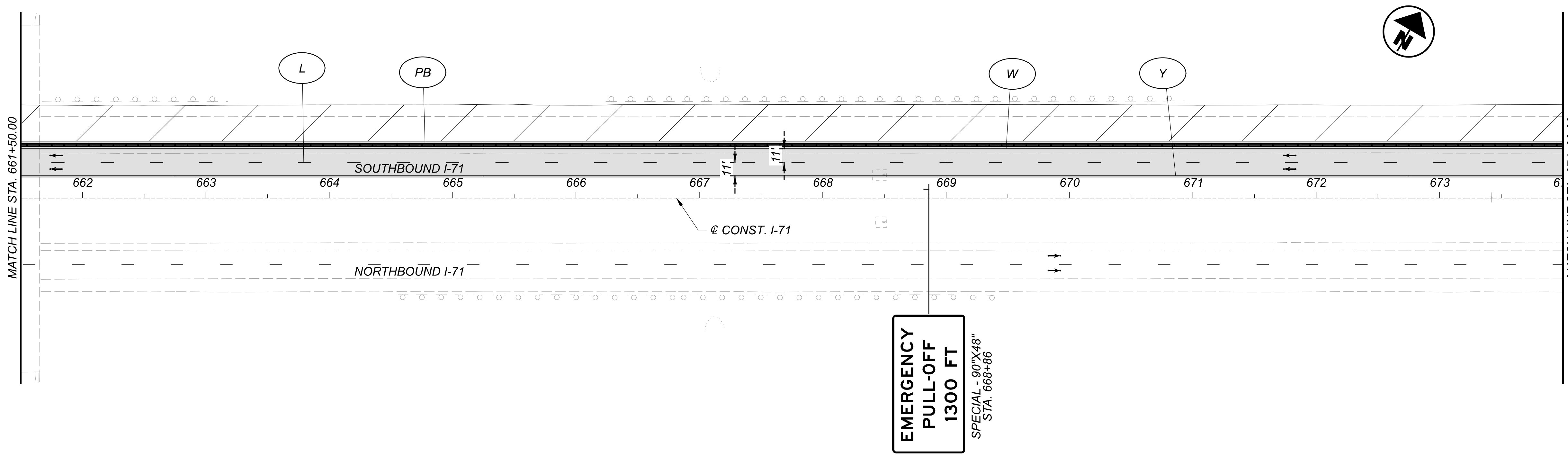
PROJECT ID
107630

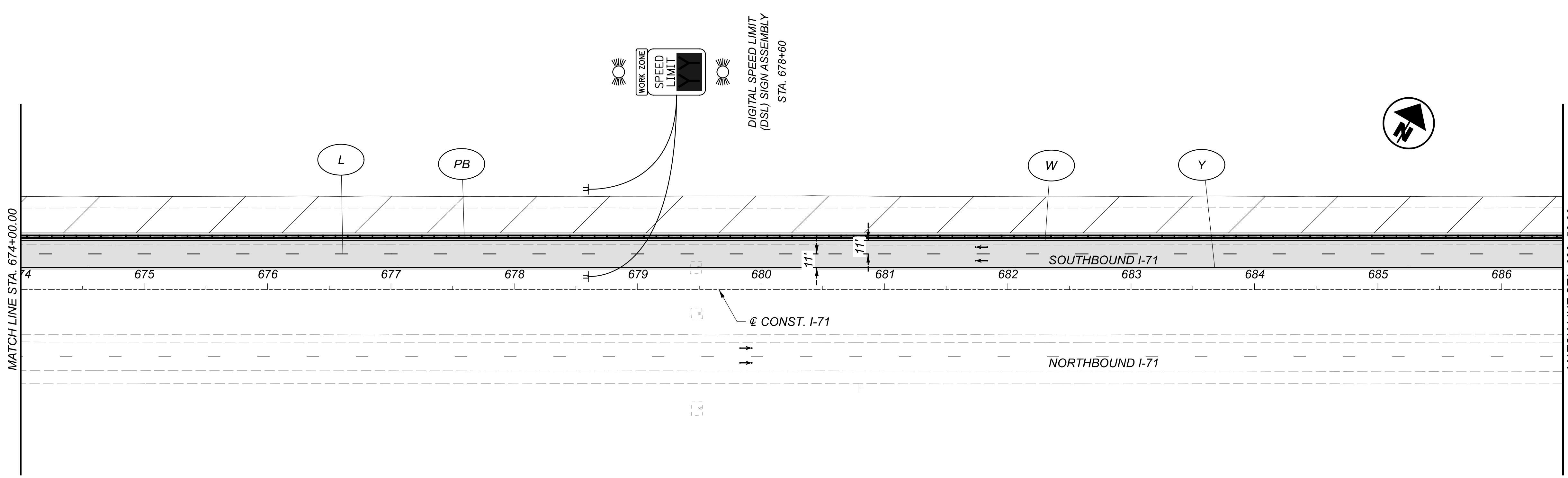
SHEET P.55 TOTAL 882

MAD/PIC-71-7.30/0.00

MODEL: 107630_MP2B PAPERSIZE: 17x11 (in.) DATE: 6/30/2021 TIME: 10:30:59 AM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\MOT\Sheets\107630_MP208.dgn

HORIZONTAL
SCALE IN FEET
0 25 50 100





MAINTENANCE OF TRAFFIC - PHASE 2A
STA. 661+50 TO STA. 686+50

DESIGN AGENCY
E.L. ROBINSON
ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER
TDP

REVIEWER
MJC 06/25/21

PROJECT ID
107630

SHEET P.59 TOTAL 882

MAD/PIC-71-7.30/0.00

MODEL: 107630_MP2I9 PAPERSIZE: 17x11 (in.) DATE: 6/30/2021 TIME: 10:31:56 AM USER: mcornett
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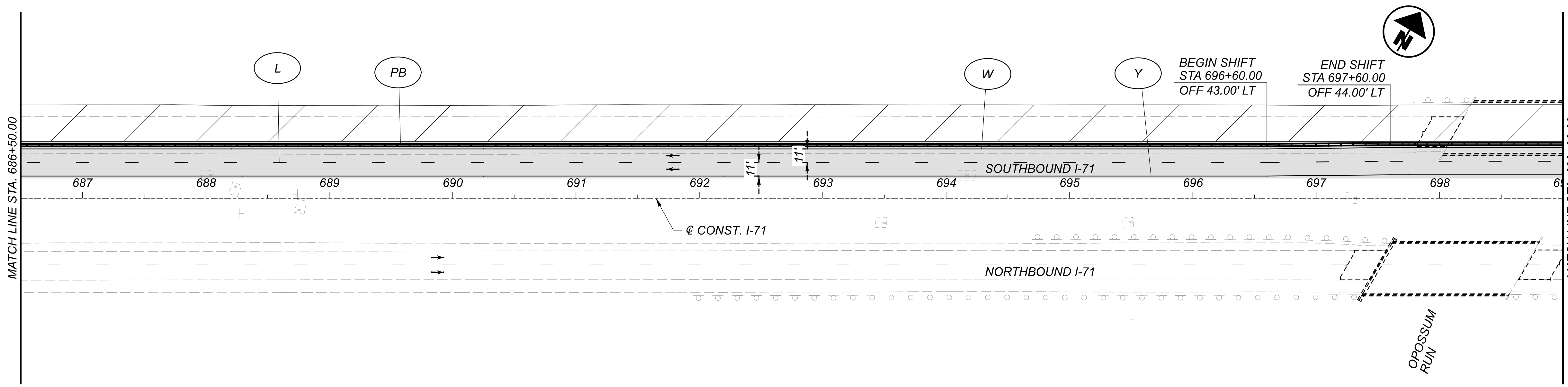

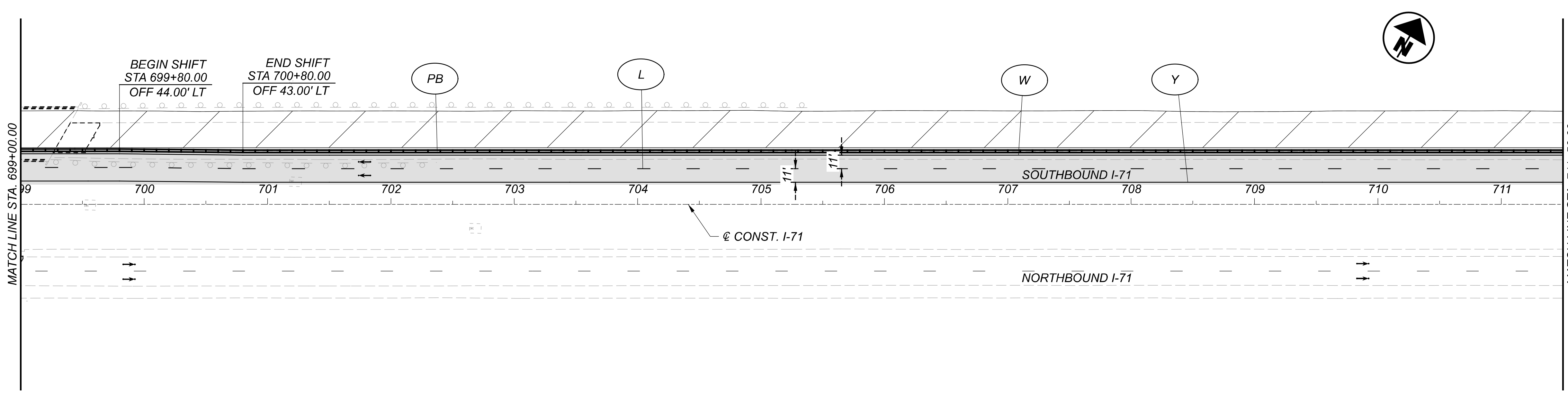

HORIZONTAL SCALE IN FEET

0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 2A
STA. 686+50 TO STA. 711+50

DESIGN AGENCY

E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER
TDP

REVIEWER
MJC 06/25/21

PROJECT ID
107630

SHEET P.60 | TOTAL 882

MAD/PIC-71-7.30/0.00

MODEL: 107630_MP221 PAPERSIZE: 17x11 (in.) DATE: 6/30/2021 TIME: 10:32:09 AM USER: mcornett
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MODEL: I07630_MP225 PAPERSIZE: 17x11(In.) DATE: 6/30/2021 TIME: 10:32:35 AM USER: mcornett
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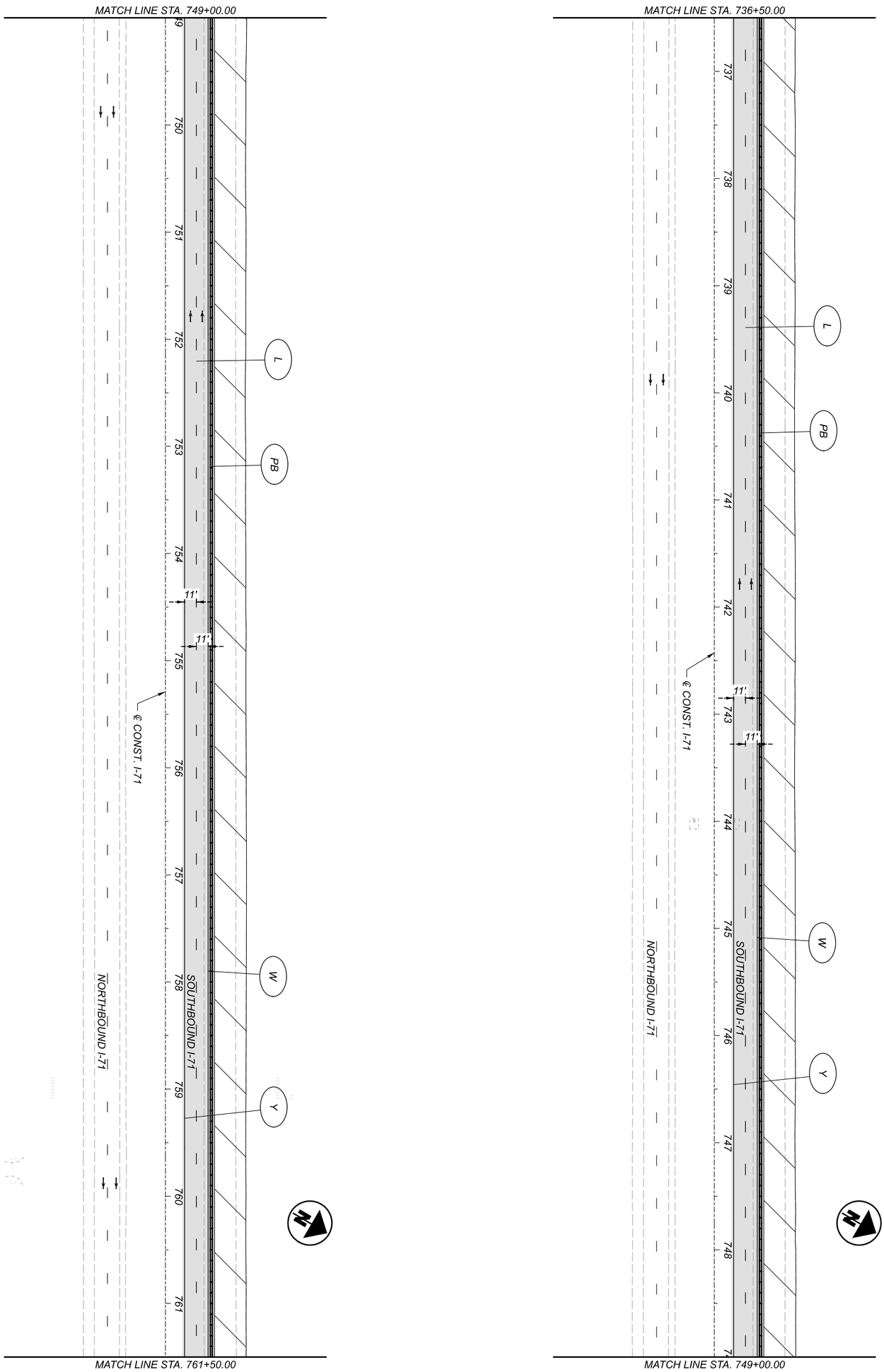

MAINTENANCE OF TRAFFIC - PHASE 2A
STA. 736+50 TO STA. 761+50

HORIZONTAL SCALE IN FEET
0 50
25 100

DESIGN AGENCY
E.L. ROBINSON
1468 West 9th St, Suite 800
Cleveland, Ohio 44113
959 Goodale Blvd, Suite 150
Columbus Heights, Ohio

DESIGNER TDP
REVIEWER MJC 06/25/21
PROJECT ID 107630
SHEET P 62 TOTAL 882

MAD/PIC-71-7.30/0.00

MODEL: 107630_MP231 PAPERSIZE: 17x11 (in.) DATE: 6/30/2021 TIME: 10:33:19 AM USER: mcornett
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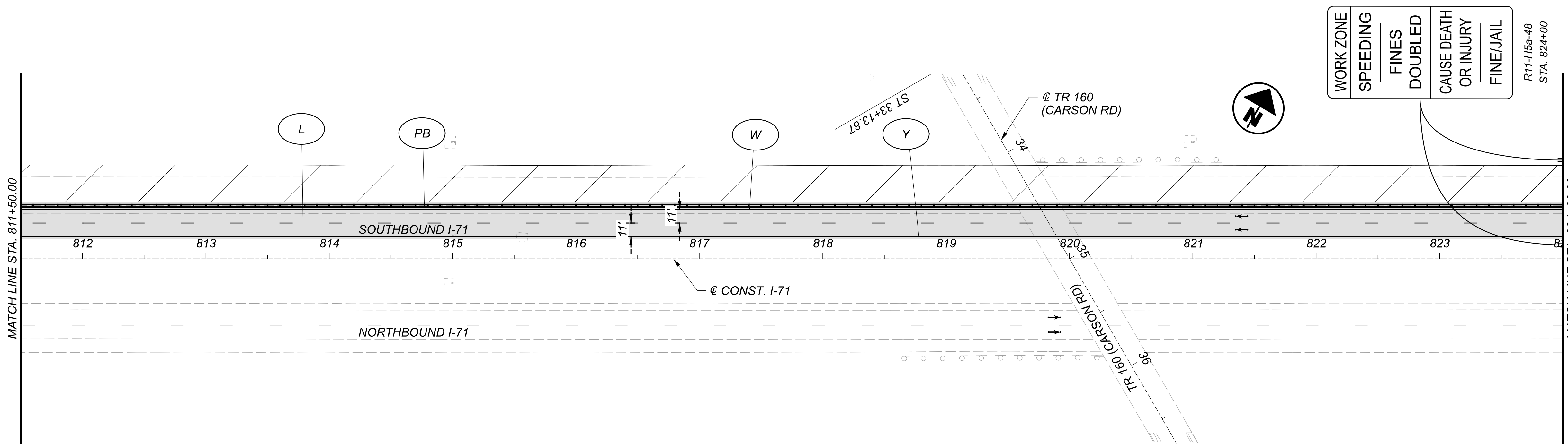
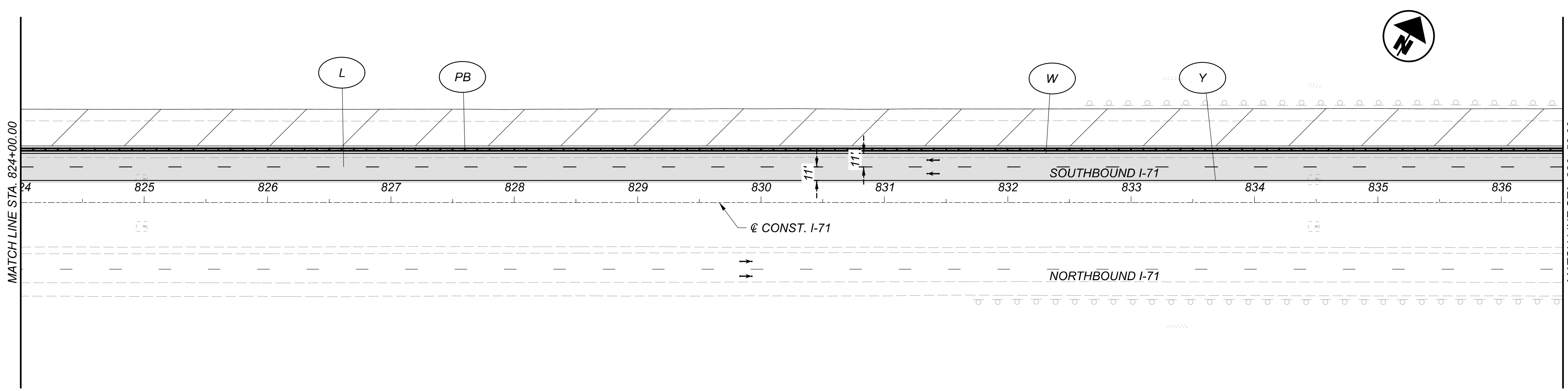




HORIZONTAL SCALE IN FEET

0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 2A
STA. 811+50 TO STA. 836+50

DESIGN AGENCY

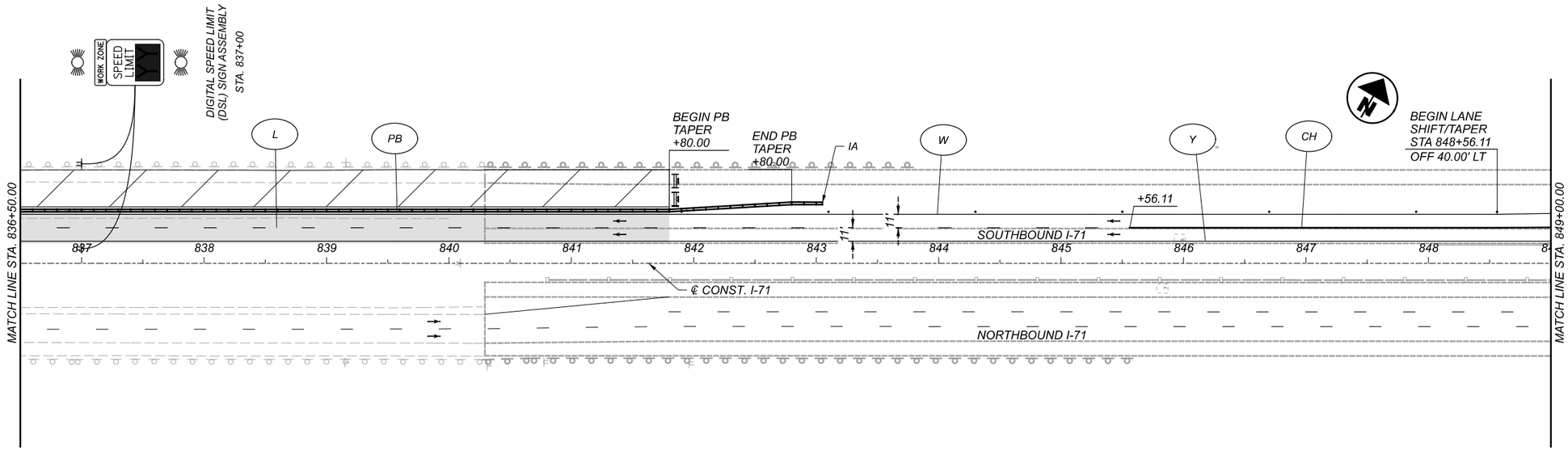
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

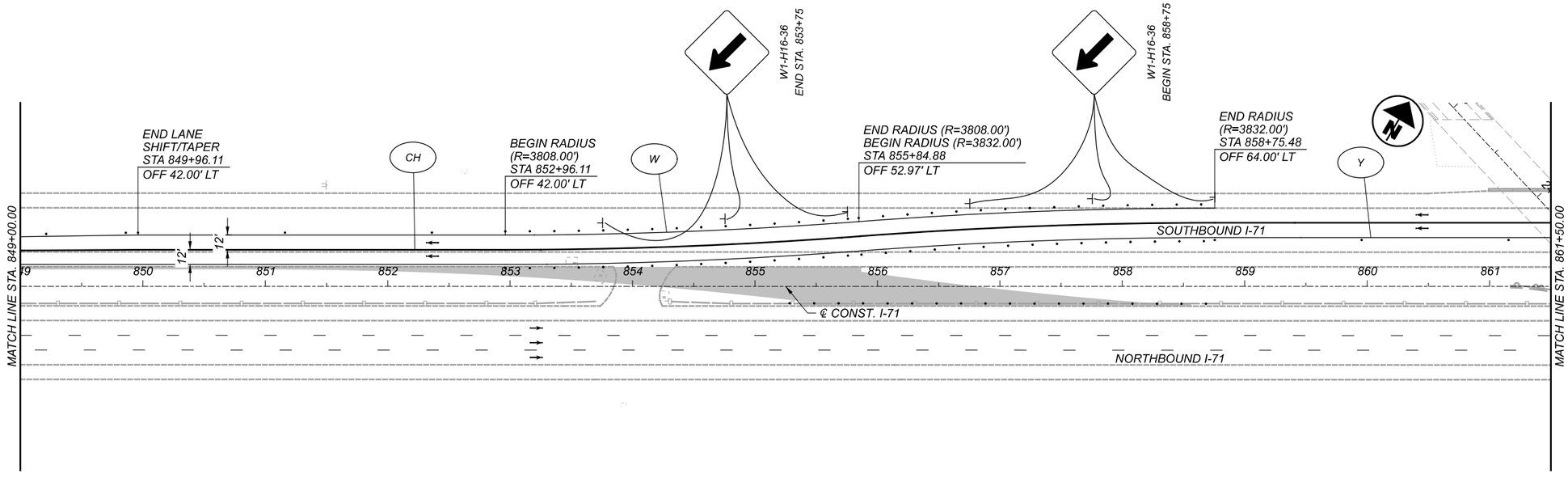
DESIGNER
TDP

REVIEWER
MJC 06/25/21

PROJECT ID
107630

SHEET P.65 TOTAL 882





HORIZONTAL SCALE IN FEET
0 25 50 100

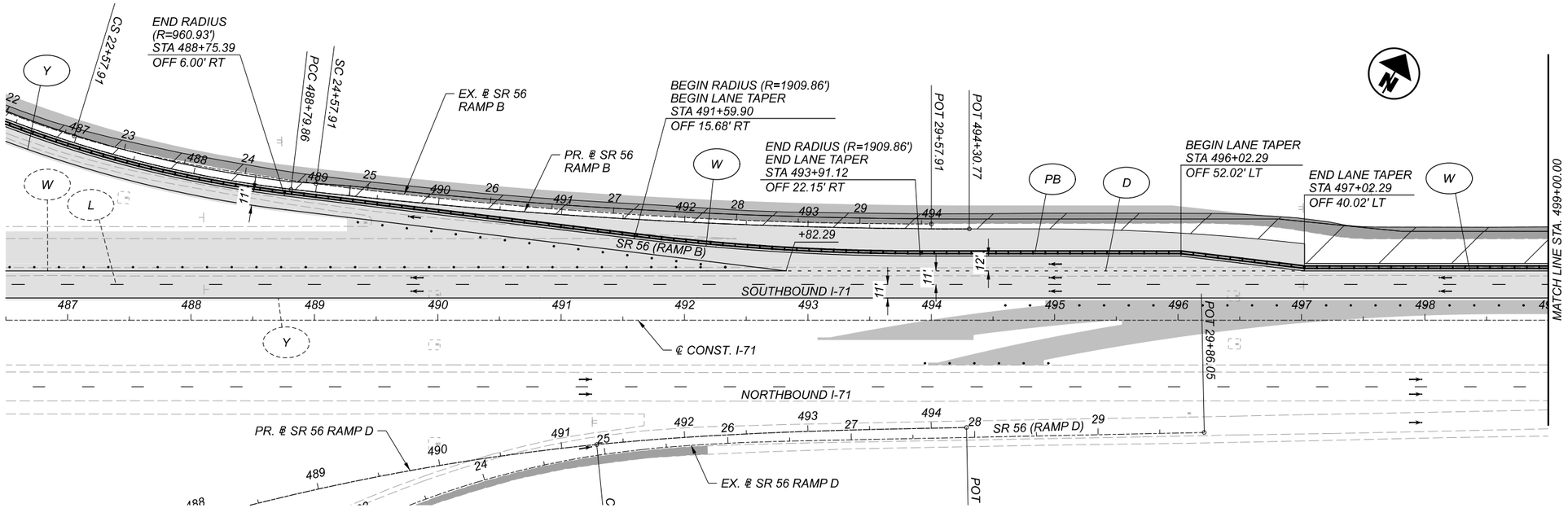
MAINTENANCE OF TRAFFIC - PHASE 2A
STA. 836+50 TO STA. 861+50

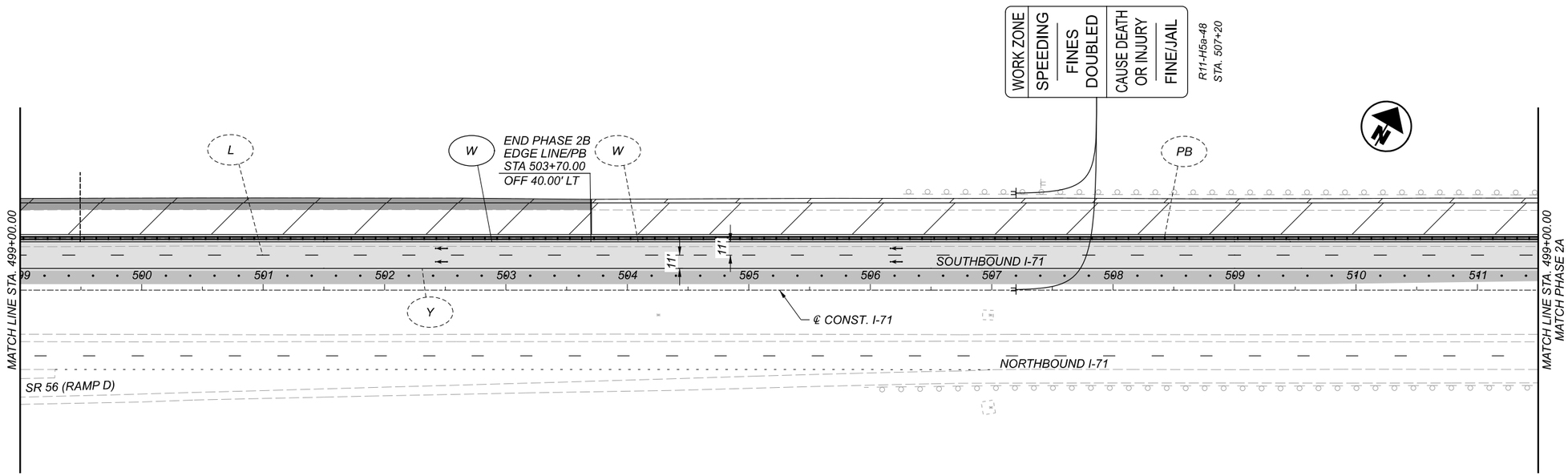
MAD/PIC-71-7.30/0.00

MODEL: 107630_MP233 PAPERSIZE: 17x11(in.) DATE: 6/30/2021 TIME: 10:33:34 AM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\MOT\Sheets\107630_MP219.dgn

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER	TDP
REVIEWER	MJC 06/25/21
PROJECT ID	107630
SHEET	P.66
TOTAL	882





HORIZONTAL SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 2B
STA. 486+50 TO STA. 511+50

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER	
TDP	
REVIEWER	
MJC	06/25/21
PROJECT ID	
107630	
SHEET	TOTAL
P.72	882

MAD/PIC-71-7.30/0.00

MODEL: 107630_MP255 PAPERSIZE: 17x11(in.) DATE: 6/30/2021 TIME: 10:34:55 AM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\MOT\Sheets\107630_MP254.dgn

LEGEND

W — ITEM 614 - WORK ZONE EDGE LINE, WHITE, CLASS I, 642 PAINT

Y — ITEM 614 - WORK ZONE EDGE LINE, YELLOW, CLASS I, 642 PAINT

L — ITEM 614 - WORK LANE LINE, CLASS I, 642 PAINT

CH — ITEM 614 - WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT

D — ITEM 614 - WORK ZONE DOTTED LINE, CLASS I, 642 PAINT

PB — ITEM 622 - PORTABLE BARRIER

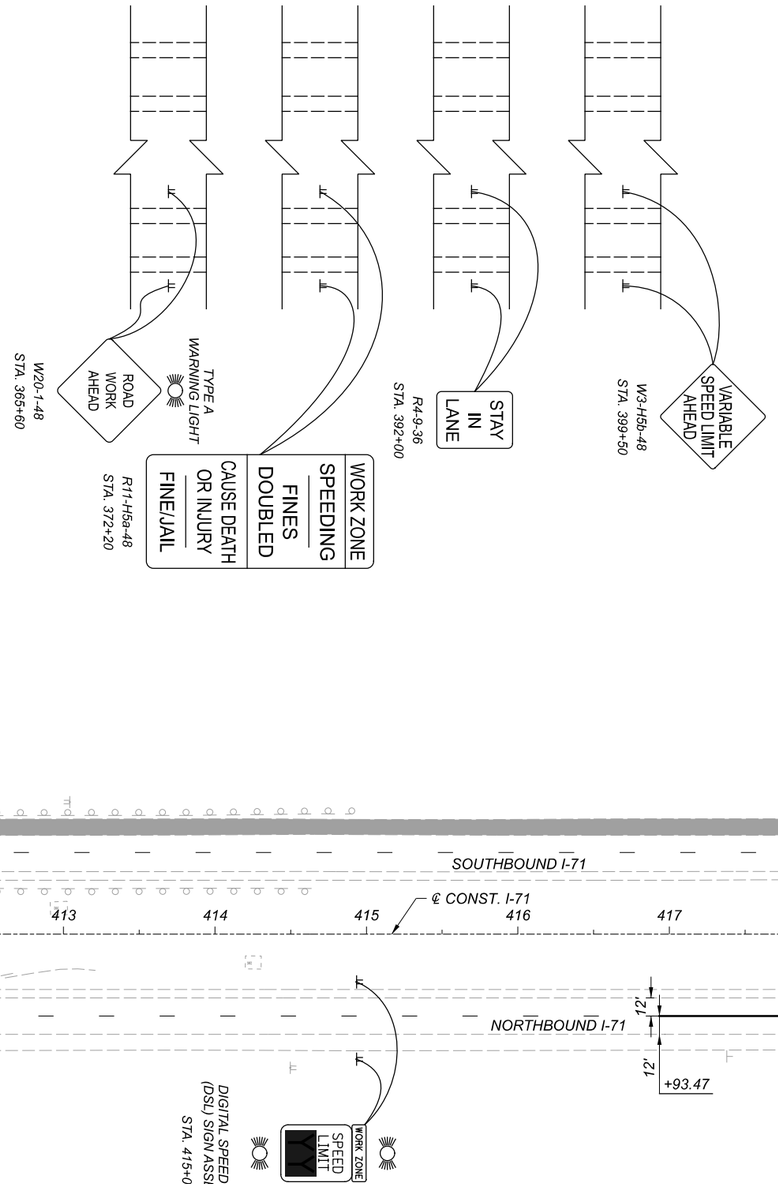
SHOULDER REHAB

TEMPORARY PAVEMENT COMPLETED IN PRIOR PHASE

PAVEMENT COMPLETED IN PRIOR PHASE

WORK ZONE

TEMPORARY PAVEMENT COMPLETED IN THIS PHASE



HORIZONTAL SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 3A
STA. 399+00 TO STA. 424+00

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER: TDP
REVIEWER: MJC 06/25/21
PROJECT ID: 107630
SHEET: P.73 TOTAL: 882

MAD/PIC-71-7.30/0.00

MODEL: 107630_MP30i PAPERSIZE: 17x11 (in.) DATE: 6/30/2021 TIME: 10:35:14 AM USER: mcornett
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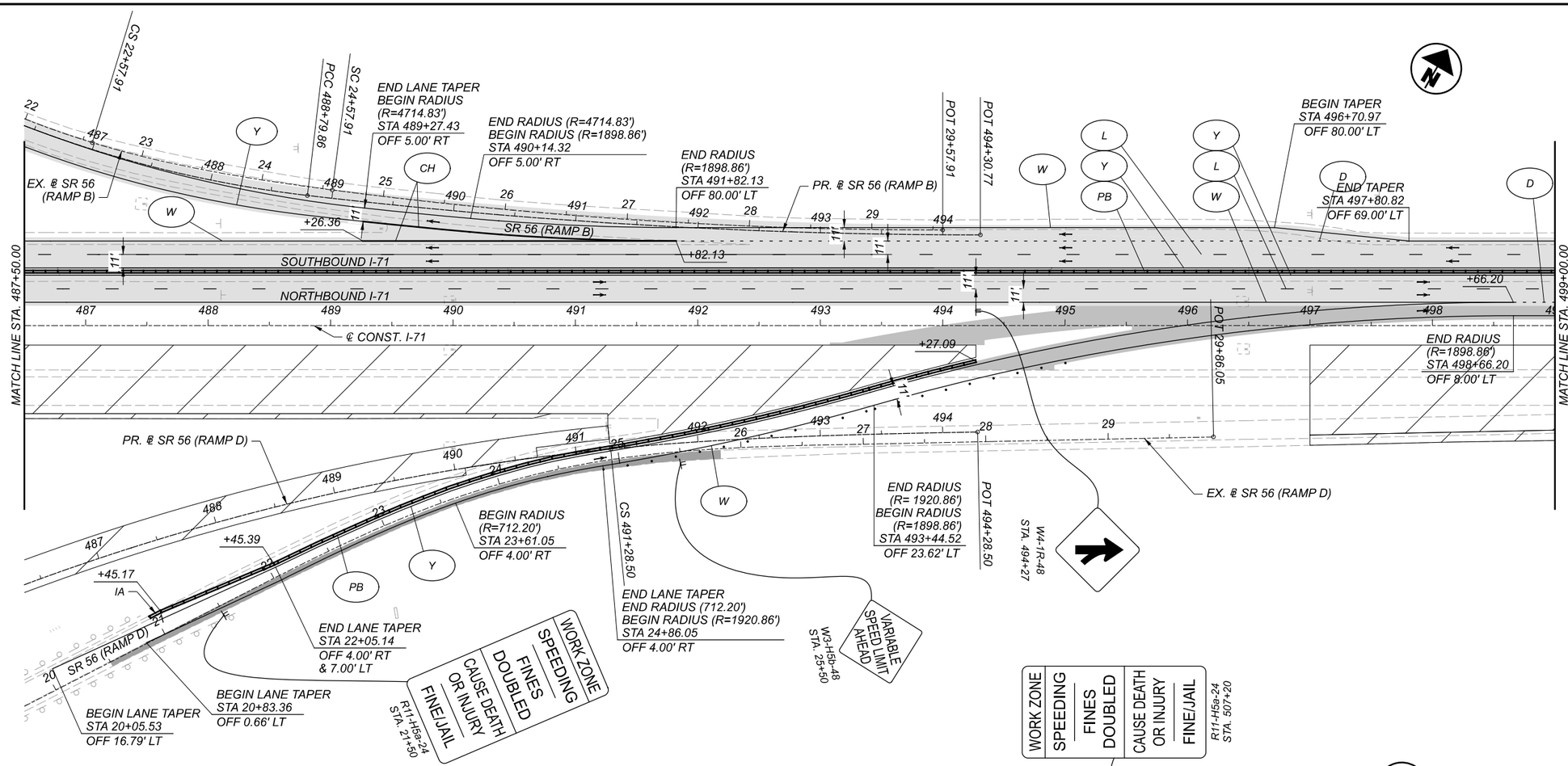

HORIZONTAL
SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 3A
STA. 486+50 TO STA. 511+50

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER	TDP
REVIEWER	MJC 06/25/21
PROJECT ID	107630
SHEET	P.77
TOTAL	882

MAD/PIC-71-7.30/0.00

MODEL: 107630_MP308 PAPERSIZE: 17x11 (in.) DATE: 6/30/2021 TIME: 10:36:25 AM USER: mcornett
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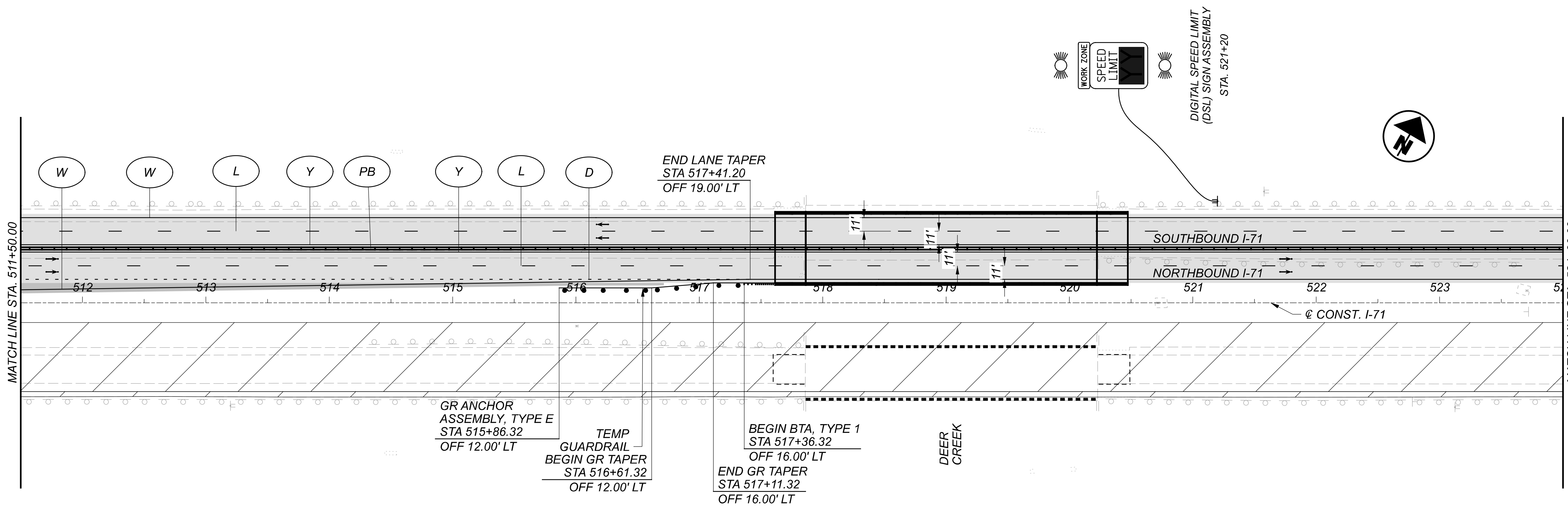
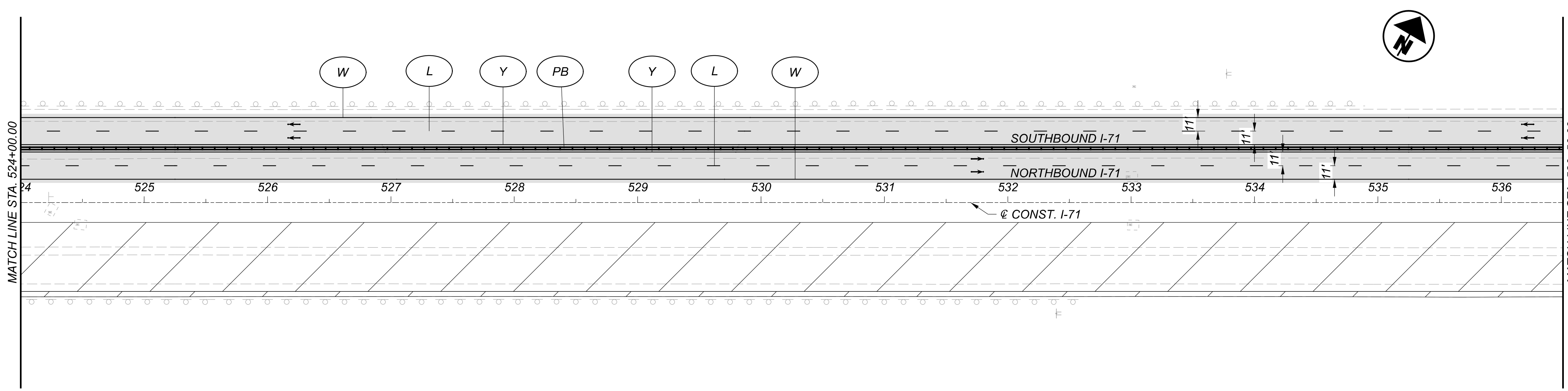




HORIZONTAL SCALE IN FEET
0 25 50 100

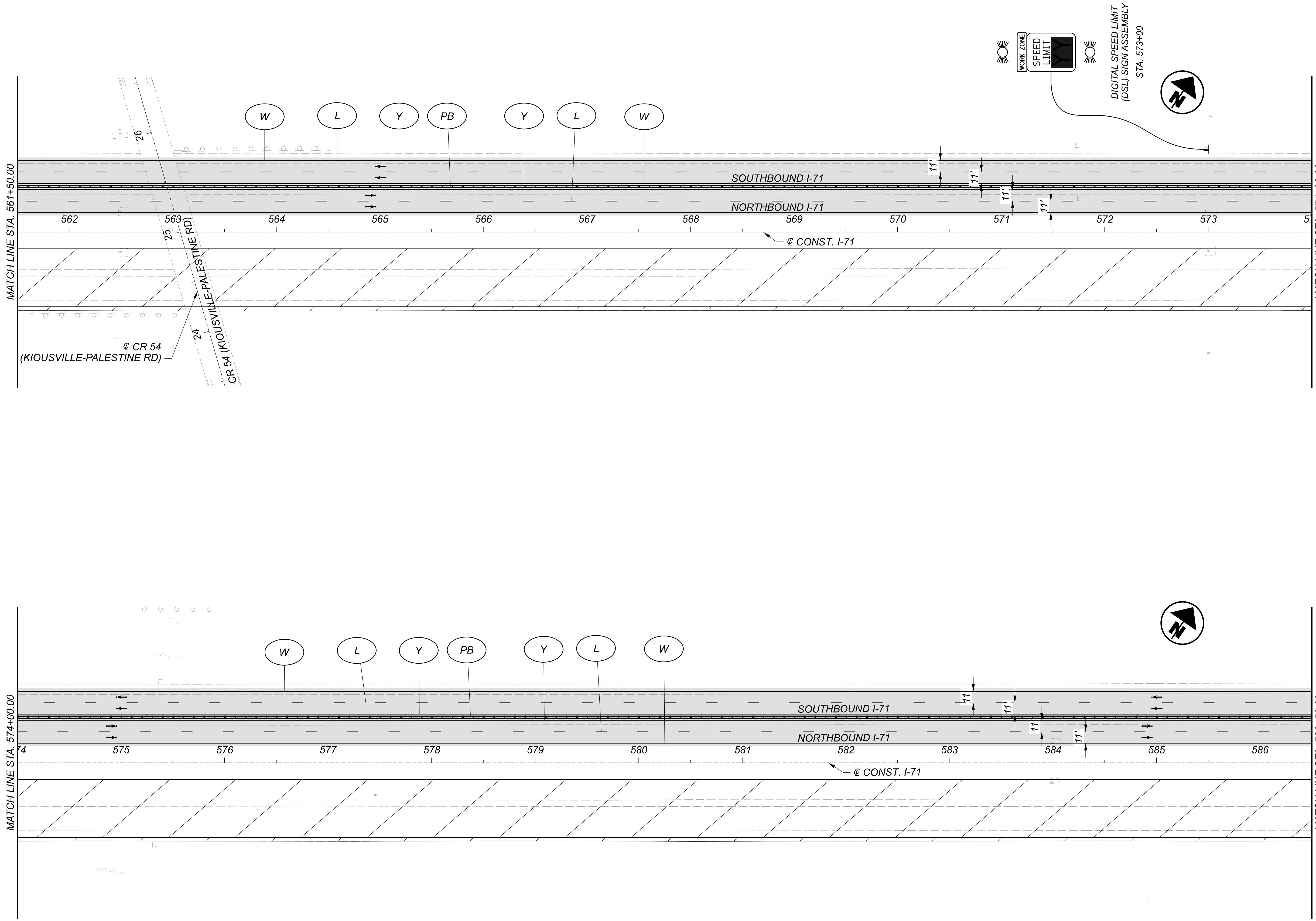
MAINTENANCE OF TRAFFIC - PHASE 3A
STA. 511+50 TO STA. 536+50

MAD/PIC-71-7.30/0.00

MODEL: I07630_MP310 PAPERSIZE: 17x11 (in.) DATE: 6/30/2021 TIME: 10:36:41 AM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\MOT\Sheets\107630_MP306.dgn

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER	TDP
REVIEWER	MJC 06/25/21
PROJECT ID	107630
SHEET	P.78
TOTAL	882



HORIZONTAL SCALE IN FEET
0 25 50 100

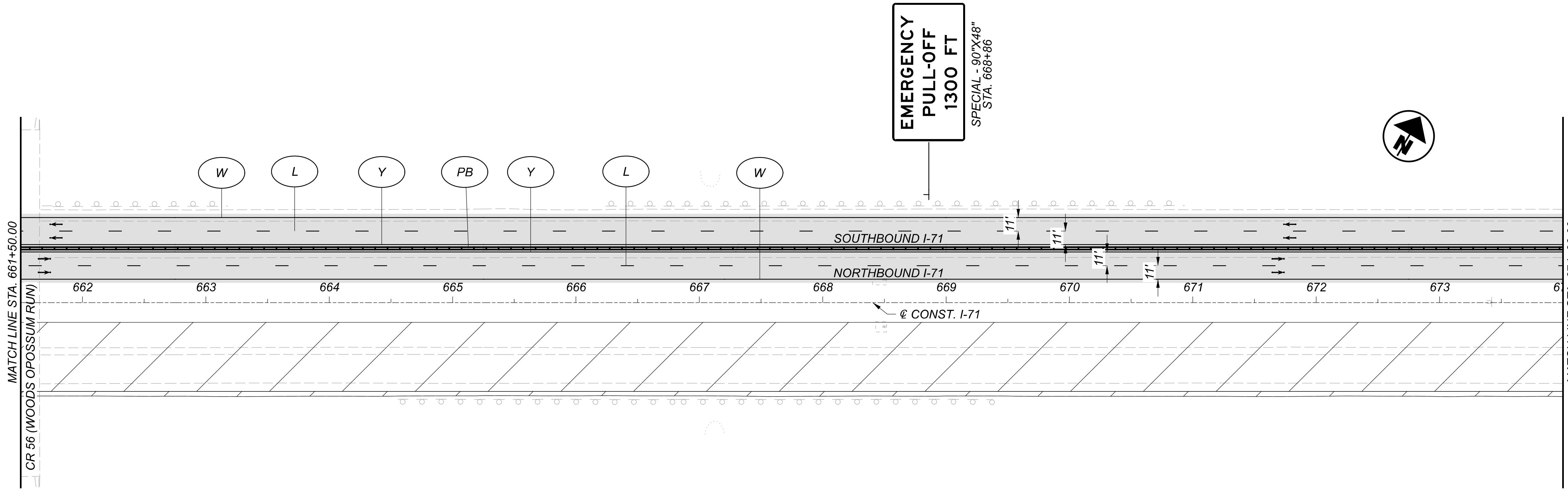
MAINTENANCE OF TRAFFIC - PHASE 3A
STA. 561+50 TO STA. 586+50

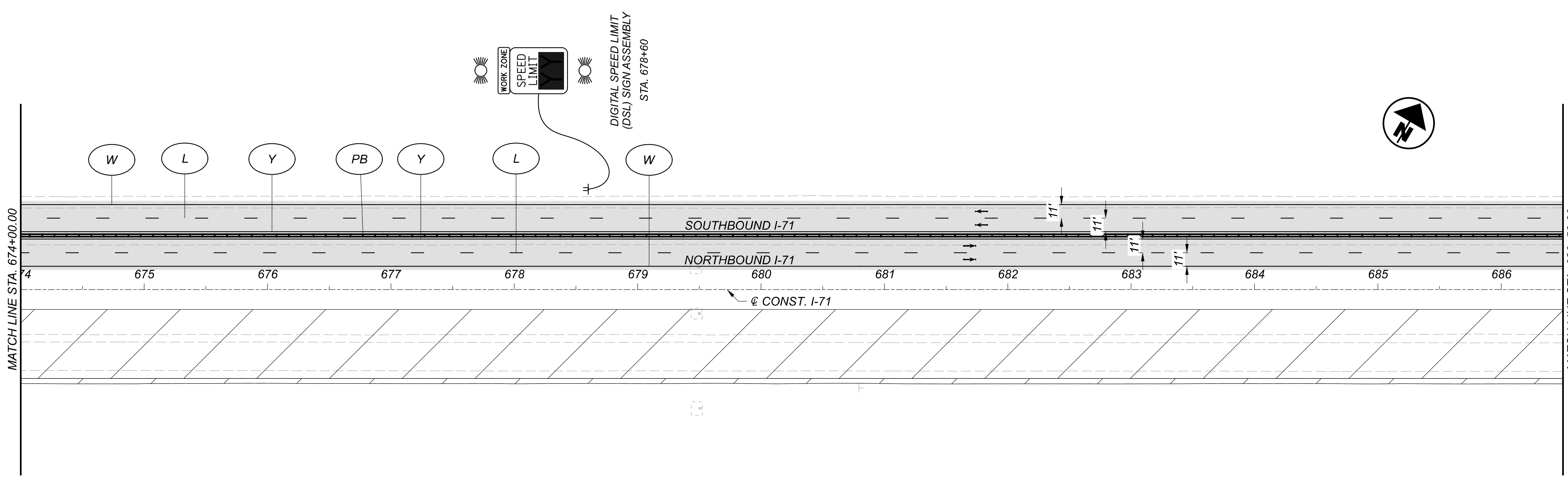
DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER: TDP
REVIEWER: MJC 06/25/21
PROJECT ID: 107630
SHEET: P.80 TOTAL: 882

MAD/PIC-71-7.30/0.00

MODEL: 107630_MP314 PAPERSIZE: 17x11 (in.) DATE: 6/30/2021 TIME: 10:37:14 AM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\MOT\Sheets\107630_MP308.dgn





HORIZONTAL
SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 3A
STA. 661+50 TO STA. 686+50

DESIGN AGENCY

E.L. ROBINSON
ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER	TDP
REVIEWER	MJC 06/25/21
PROJECT ID	107630
SHEET	P.84
TOTAL	882

MAD/PIC-71-7.30/0.00

MODEL: 107630_MP322 PAPERSIZE: 17x11 (in.) DATE: 6/30/2021 TIME: 10:38:18 AM USER: mcornett
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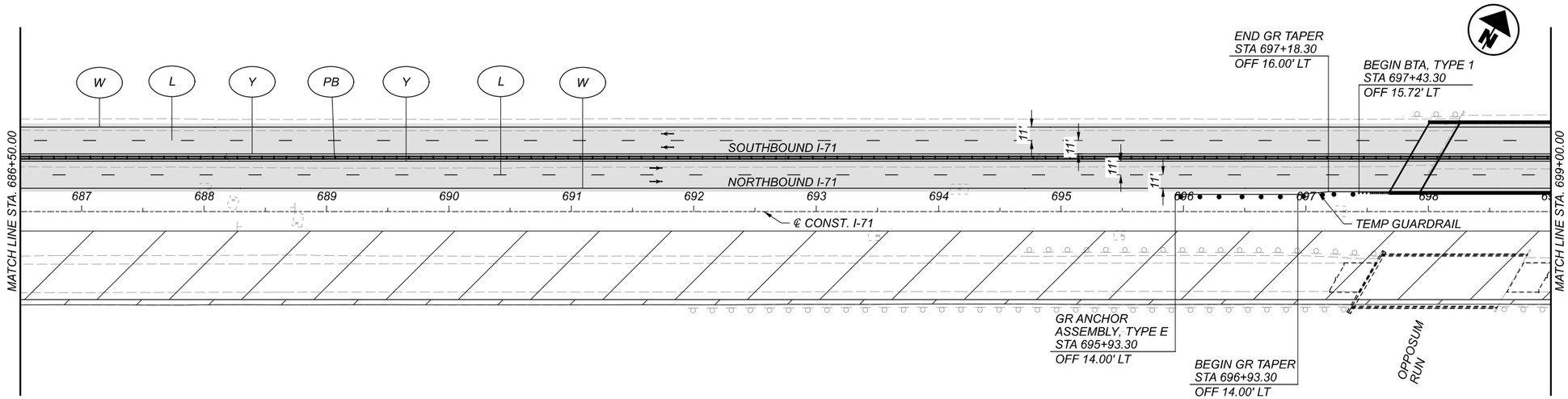

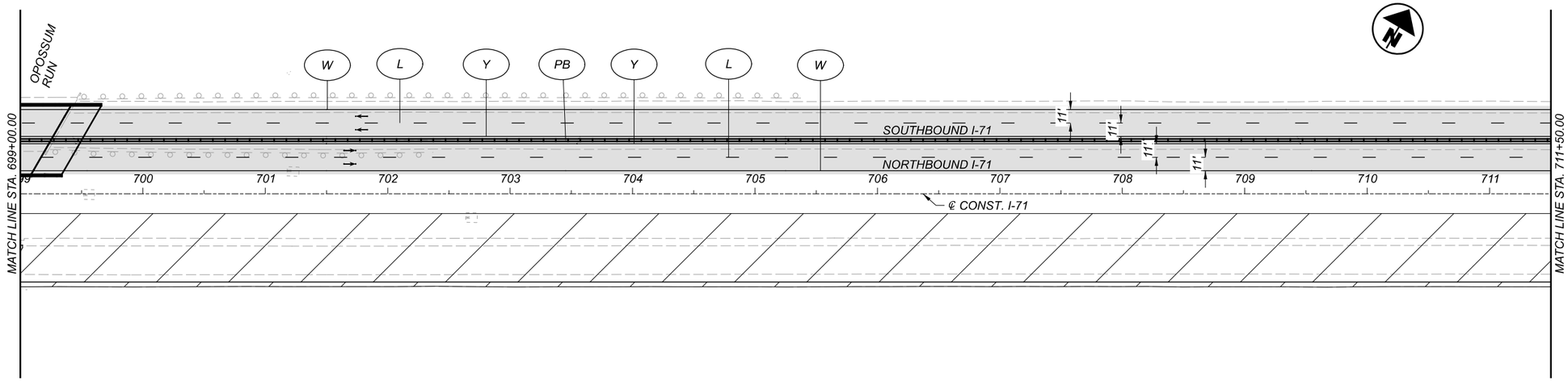

HORIZONTAL
SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 3A
STA. 686+50 TO STA. 711+50

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER
TDP

REVIEWER
MJC 06/25/21

PROJECT ID
107630

SHEET P.85 TOTAL 882

MAD/PIC-71-7.30/0.00

MODEL: I07630_MP324 PAPERSIZE: 17x11(in.) DATE: 6/30/2021 TIME: 10:38:31 AM USER: mcornett
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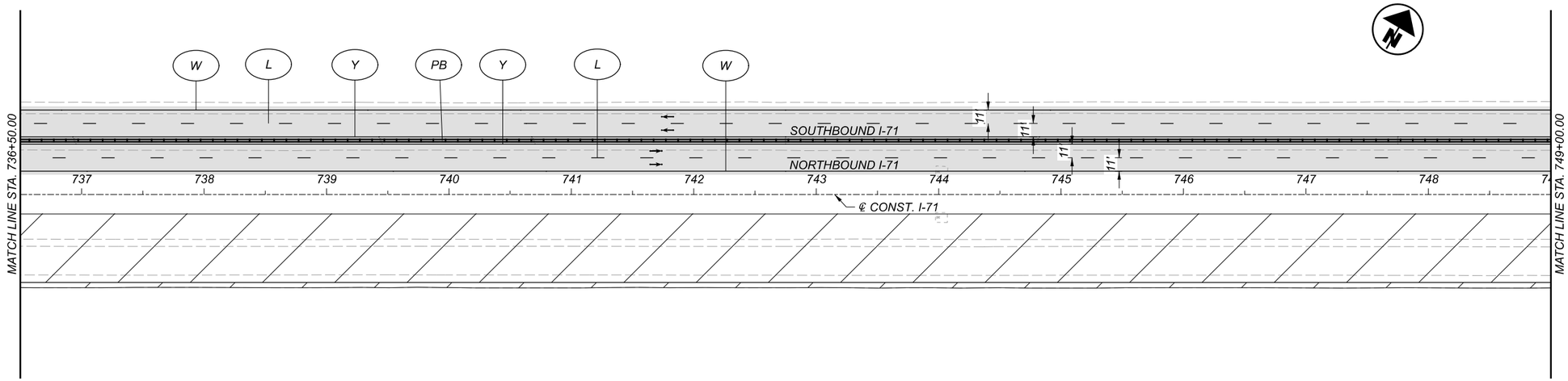
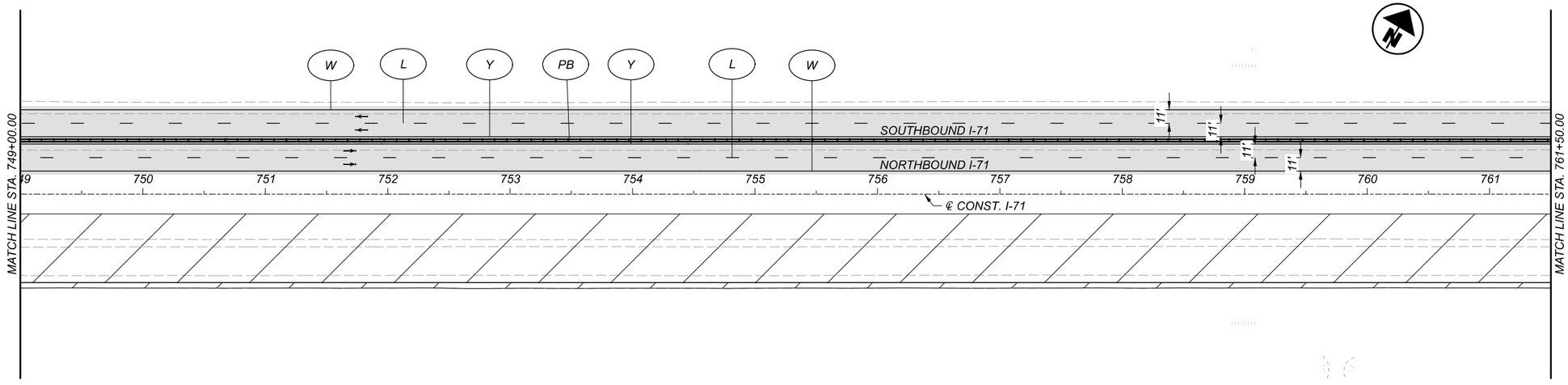




HORIZONTAL SCALE IN FEET
0 25 50 100

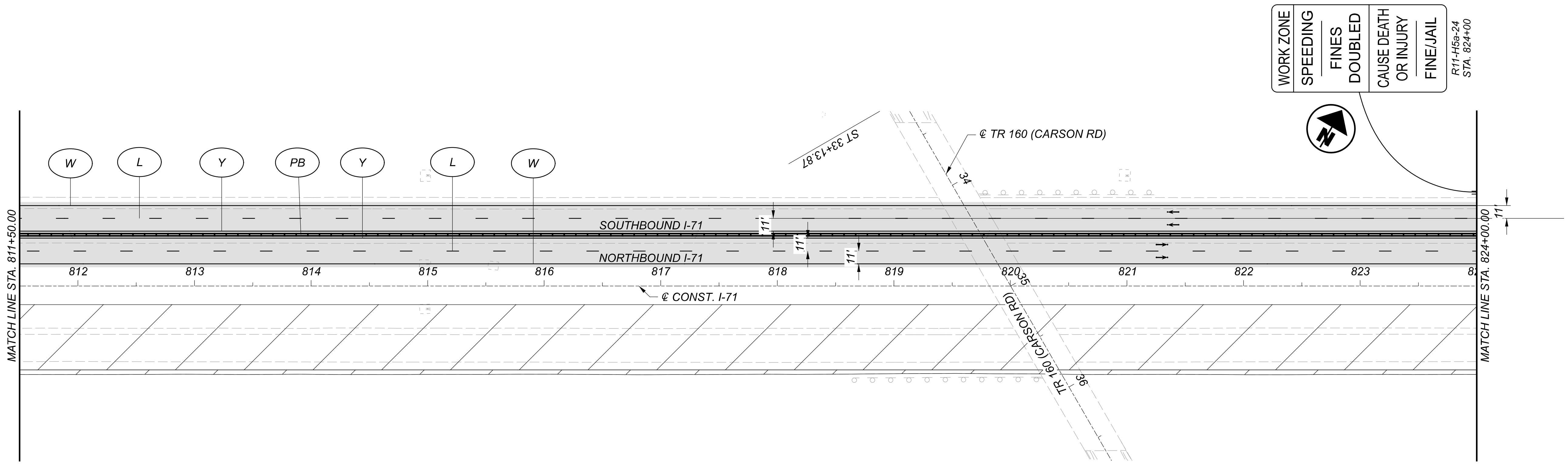
MAINTENANCE OF TRAFFIC - PHASE 3A
STA. 736+50 TO STA. 761+50

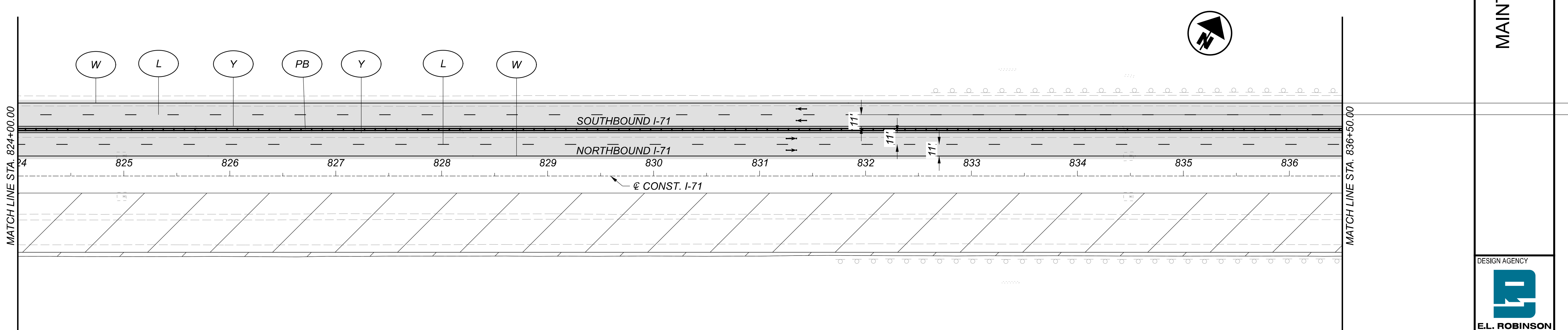
MAD/PIC-71-7.30/0.00

MODEL: 107630_MP328 PAPERSIZE: 17x11(in.) DATE: 6/30/2021 TIME: 10:38:58 AM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\MOT\Sheets\107630_MP315.dgn

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER	TDP
REVIEWER	MJC 06/25/21
PROJECT ID	107630
SHEET	P.87
TOTAL	882





HORIZONTAL SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 3A
STA. 811+50 TO STA. 836+50

DESIGN AGENCY

E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER
TDP

REVIEWER
MJC 06/25/21

PROJECT ID
107630

SHEET P.90 TOTAL 882

MAD/PIC-71-7.30/0.00

MODEL: 107630_MP334 PAPERSIZE: 17x11 (in.) DATE: 6/30/2021 TIME: 10:39:40 AM USER: mcornett
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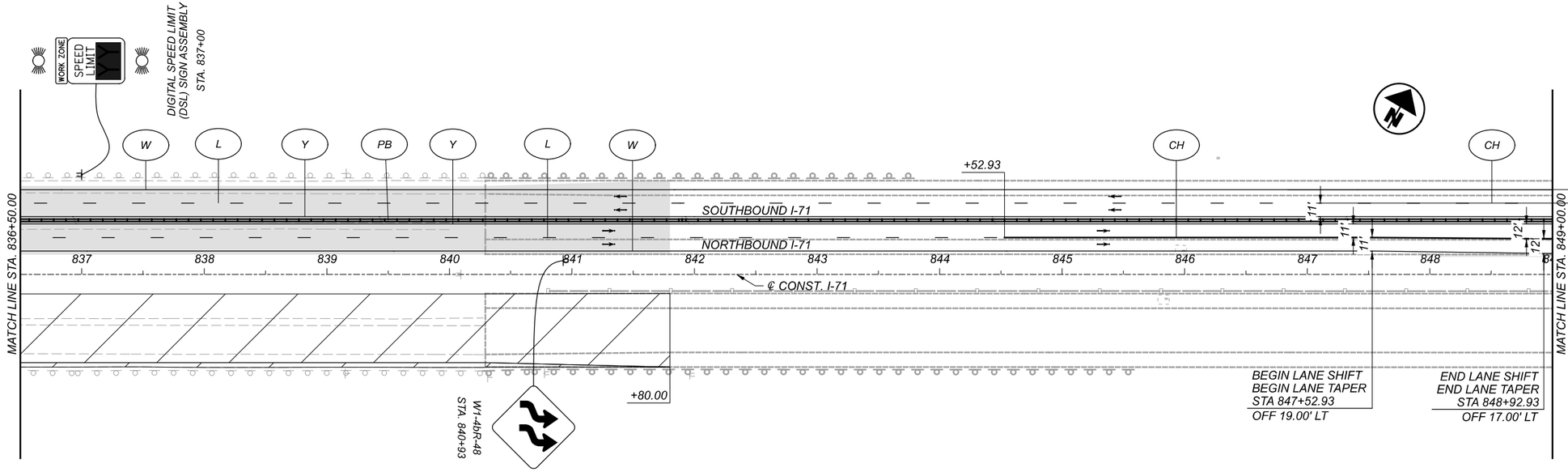
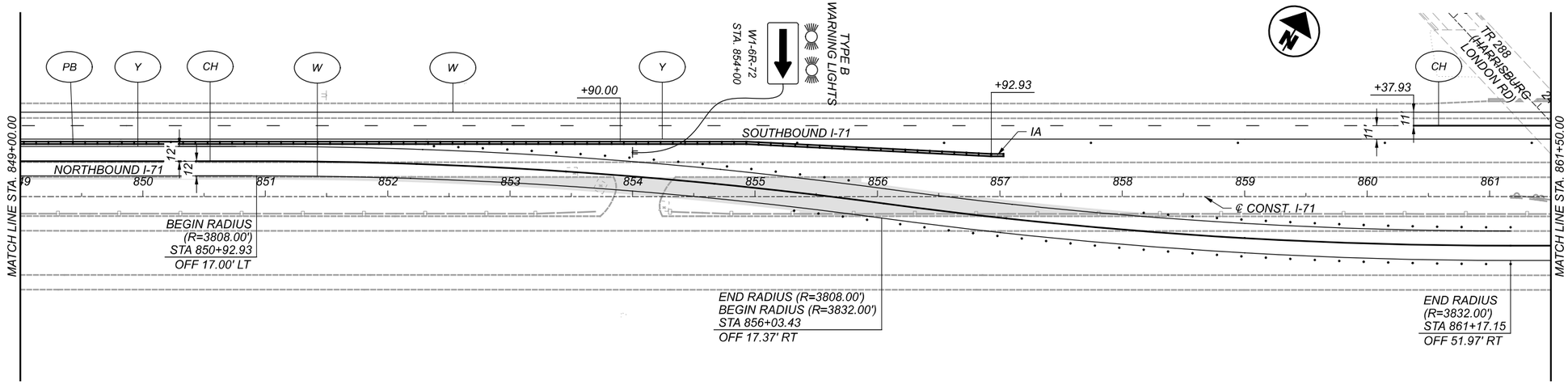




HORIZONTAL SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 3A
STA. 836+50 TO STA. 861+50

MAD/PIC-71-7.30/0.00

MODEL: I07630_MP336 PAPERSIZE: 17x11(in.) DATE: 6/30/2021 TIME: 10:39:56 AM USER: mcornett
P:_OHDOT_Worksets\I07630\400-Engineering\MOT\Sheets\I07630_MP319.dgn

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

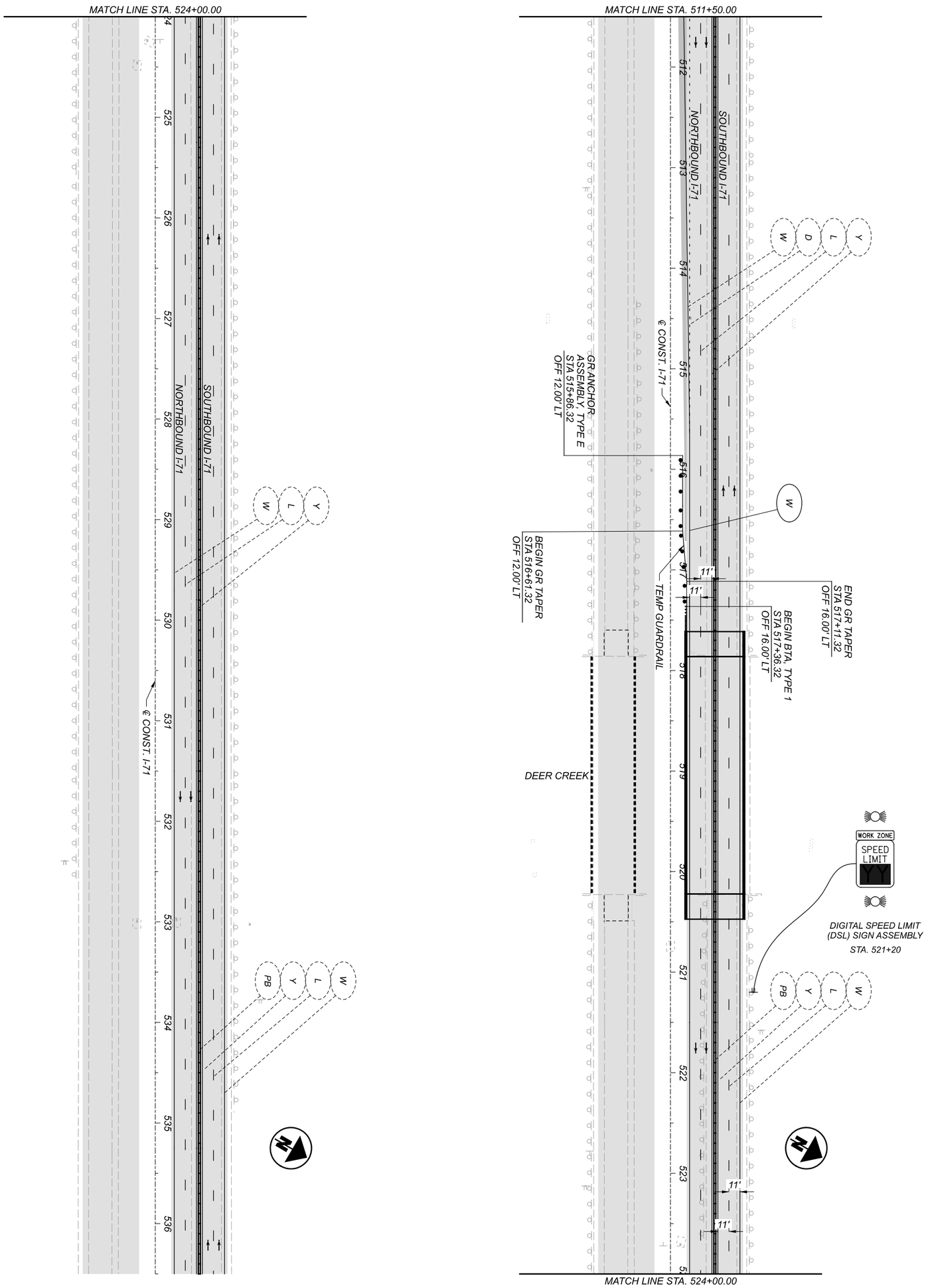
DESIGNER
TDP

REVIEWER
MJC 06/25/21

PROJECT ID
107630

SHEET P.91 | TOTAL 882

MODEL: I07630_MP356 PAPERSIZE: 17x11(In.) DATE: 6/30/2021 TIME: 10:41:37 AM USER: mcornett
P:_OHDOT_Worksets\I07630\400-Engineering\MOT\Sheets\I07630_MP354.dgn

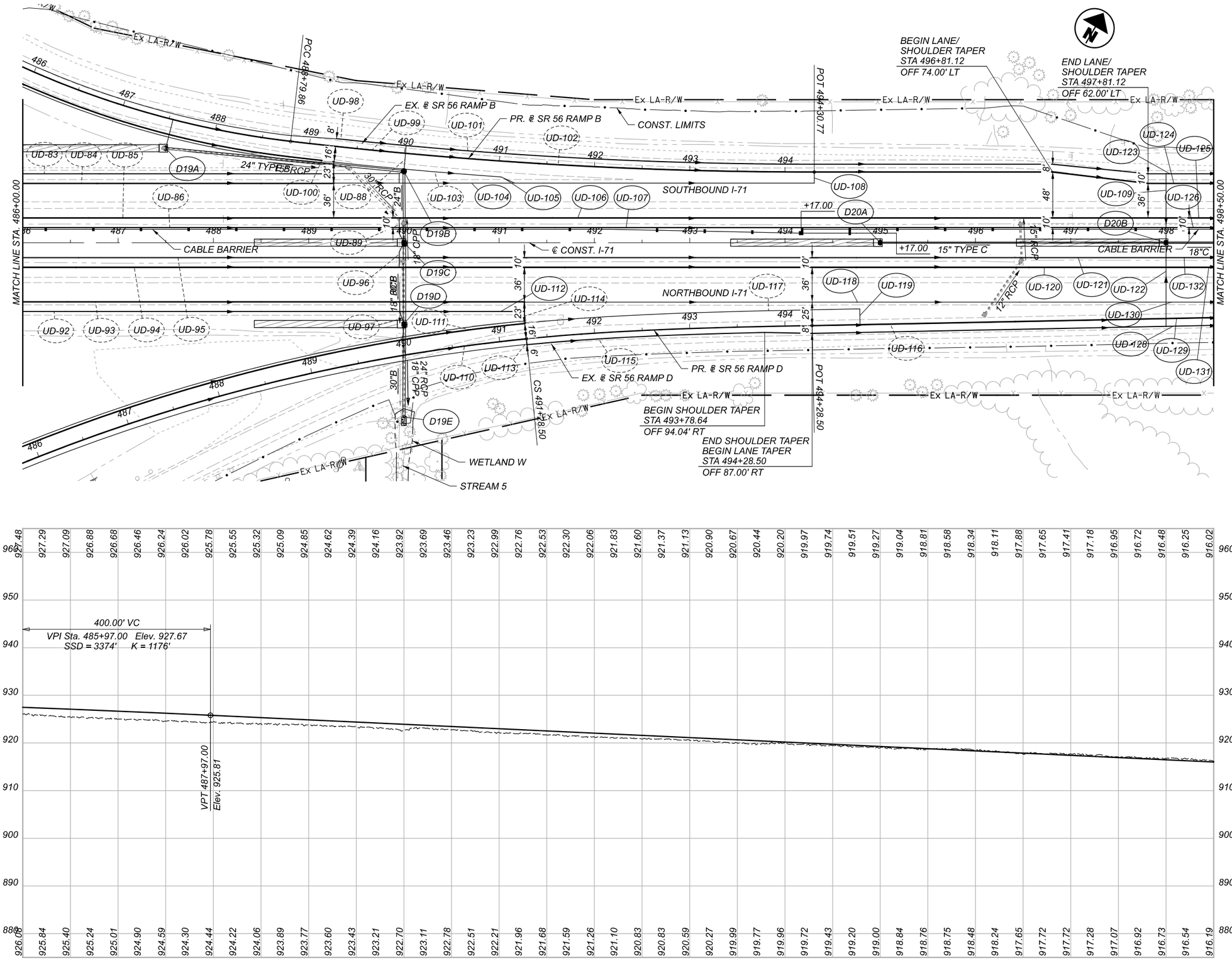


MAINTENANCE OF TRAFFIC - PHASE 3B
STA. 486+50 TO STA. 511+50

HORIZONTAL SCALE IN FEET
0 50
25 100

DESIGN AGENCY
E.L. ROBINSON
1468 West 9th St, Suite 800
Cleveland, Ohio 44113
959 Goodale Blvd, Suite 150
Columbus, Ohio 43212

DESIGNER TDP
REVIEWER MJC 06/25/21
PROJECT ID 107630
SHEET P 97 TOTAL 882



HORIZONTAL
SCALE IN FEET
0 25 50 100

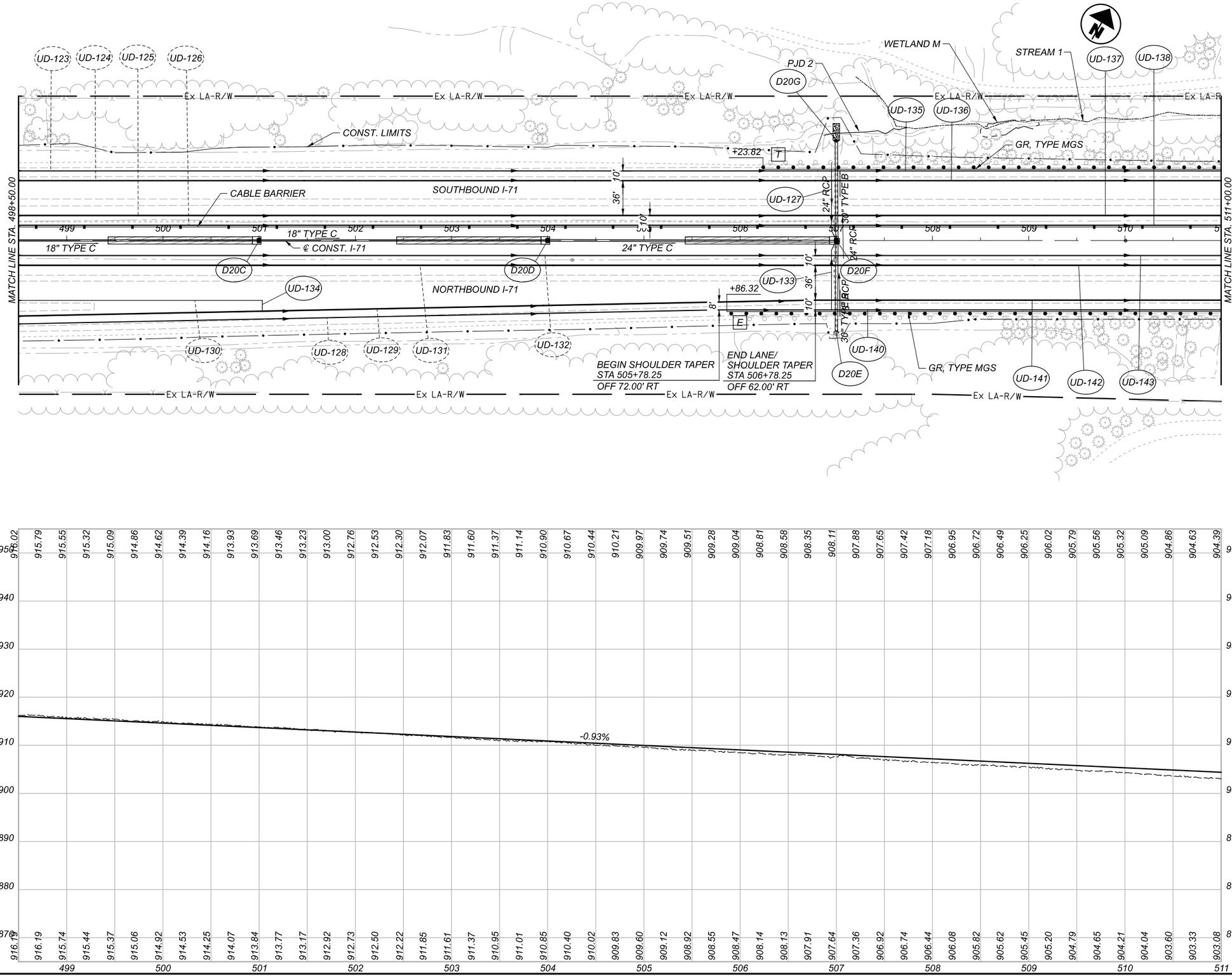
PLAN AND PROFILE - I-71
STA. 486+00 TO STA. 498+50

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER MLL
REVIEWER MJC 06/25/21
PROJECT ID 107630
SHEET P.112 TOTAL 882

MAD/PIC-71-7.30/0.00

MODEL: 107630_GPI05 PAPERSIZE: 17x11(in.) DATE: 6/29/2021 TIME: 6:39:07 PM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\Roadway\Sheets\107630_GPI05.dgn



HORIZONTAL SCALE IN FEET
0 25 50 100

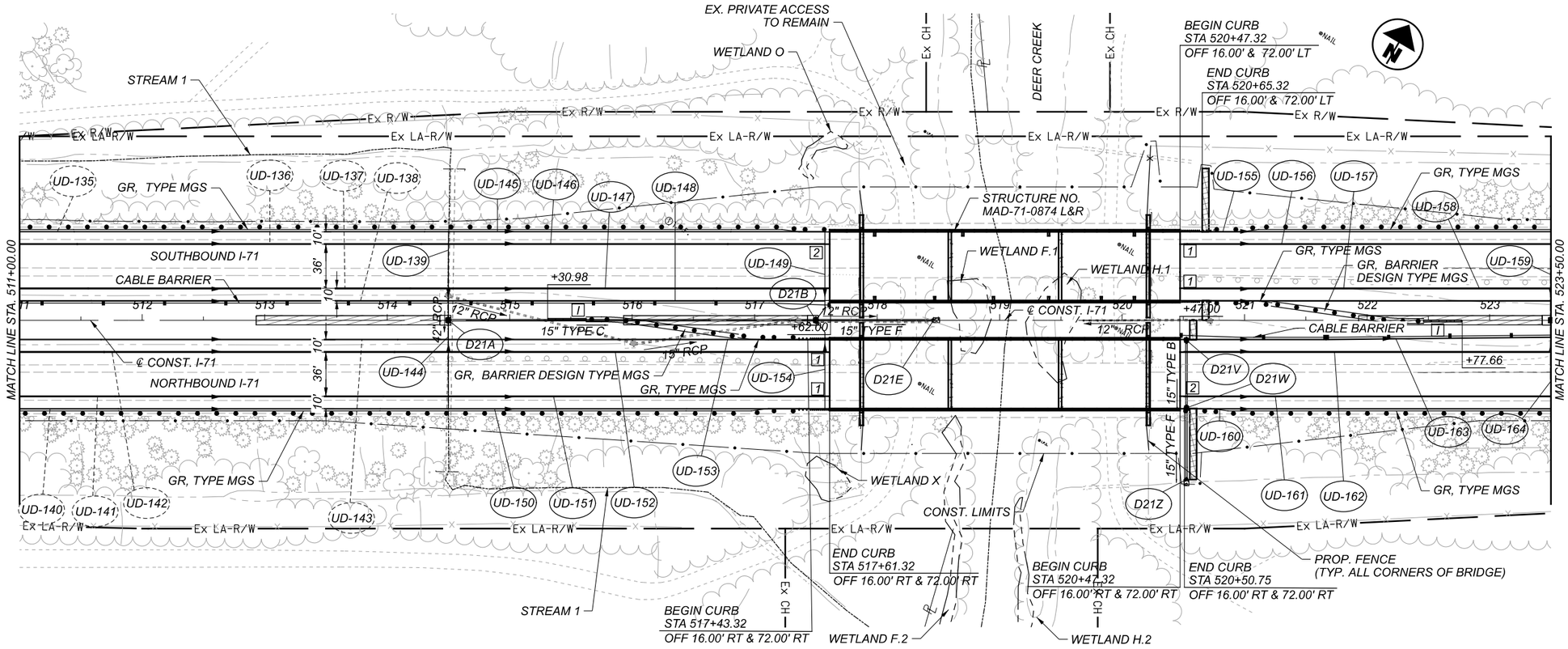
PLAN AND PROFILE - I-71
STA. 498+50 TO STA. 511+00

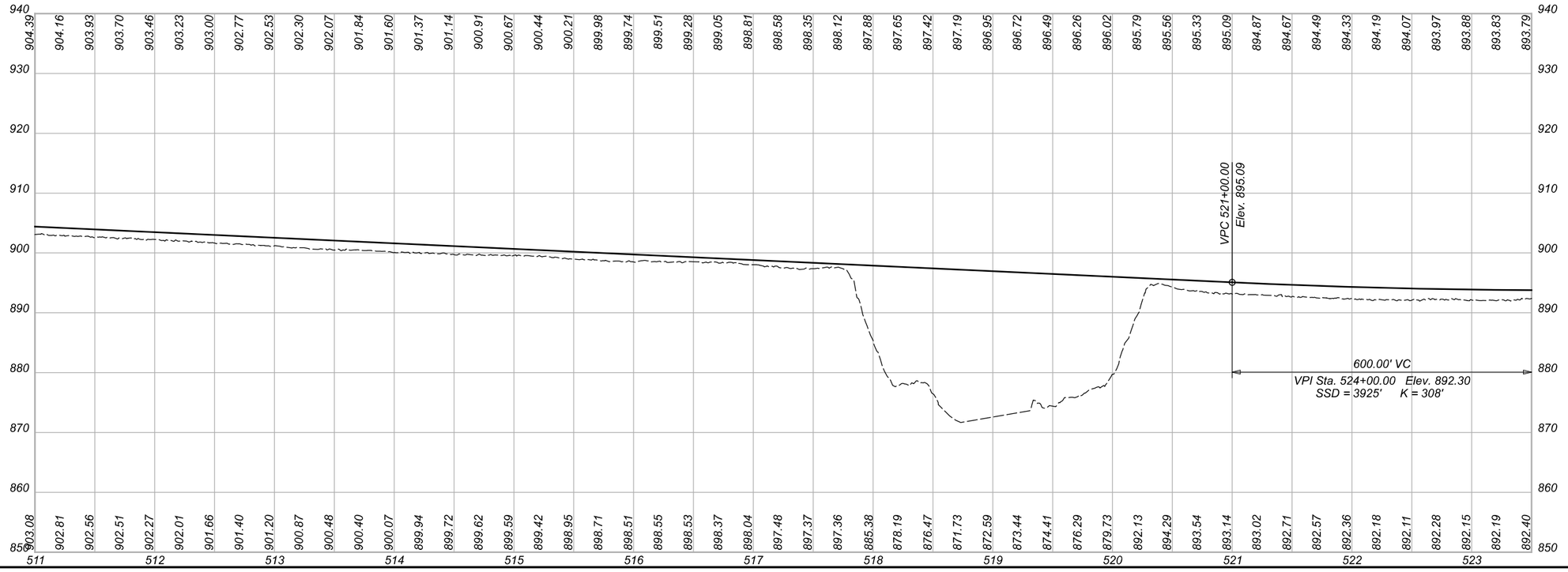
MAD/PIC-71-7.30/0.00

MODEL: I07630_GP106 PAPERSIZE: 17x11(in.) DATE: 6/29/2021 TIME: 6:40:06 PM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\Roadway\Sheets\107630_GP106.dgn

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER	MLL
REVIEWER	MJC 06/25/21
PROJECT ID	107630
SHEET	P.113
TOTAL	882





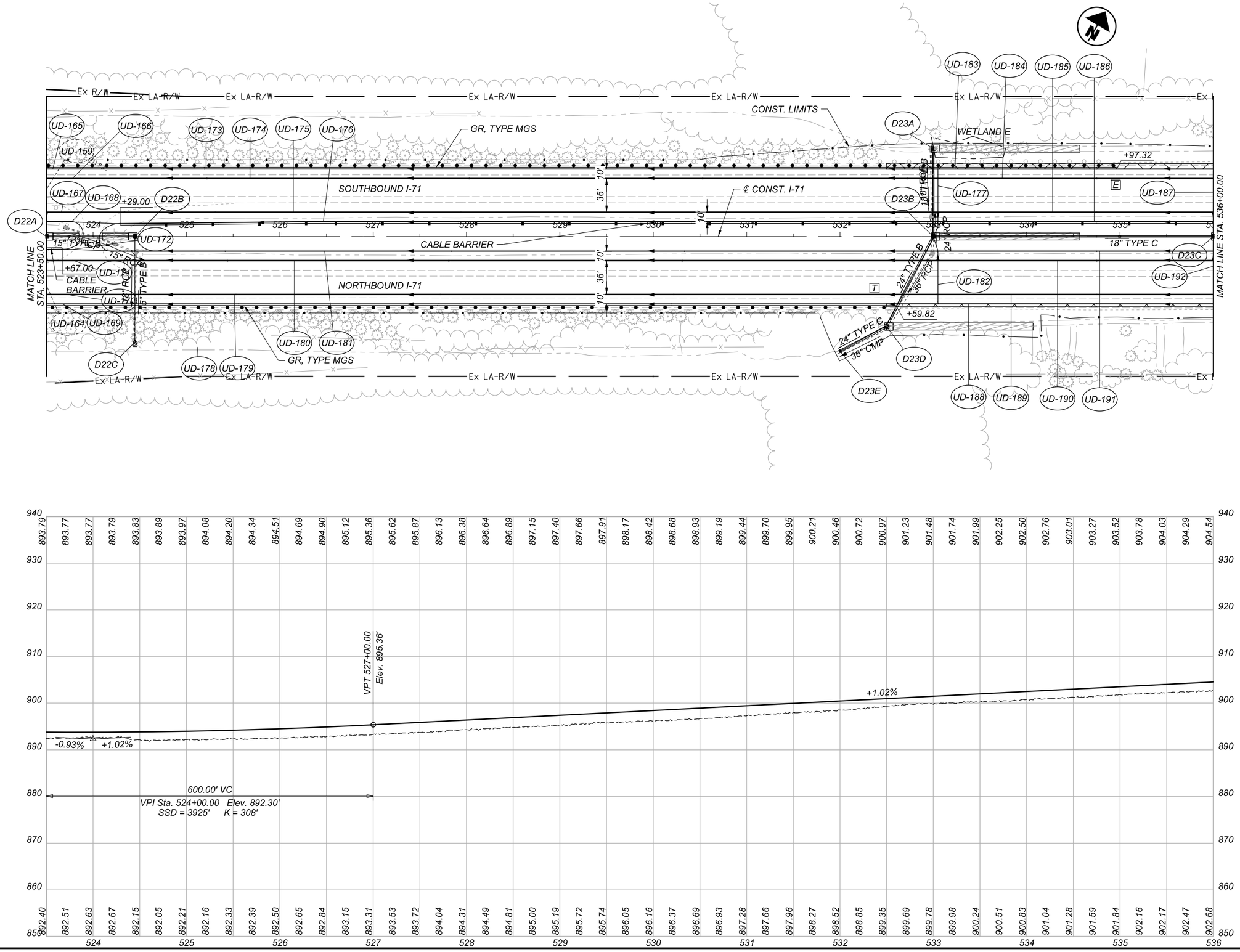
PLAN AND PROFILE - I-71
STA. 511+00 TO STA. 523+50

MODEL: 107630_GP107 PAPERSIZE: 17x11(in) DATE: 6/29/2021 TIME: 6:41:05 PM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\Roadway\Sheets\107630_GP107.dgn

MAD/PIC-71-7.30/0.00

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER	MLL
REVIEWER	MJC 06/25/21
PROJECT ID	107630
SHEET	P.114
TOTAL	882



HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN AND PROFILE - I-71
STA. 523+50 TO STA. 536+00

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER
MLL

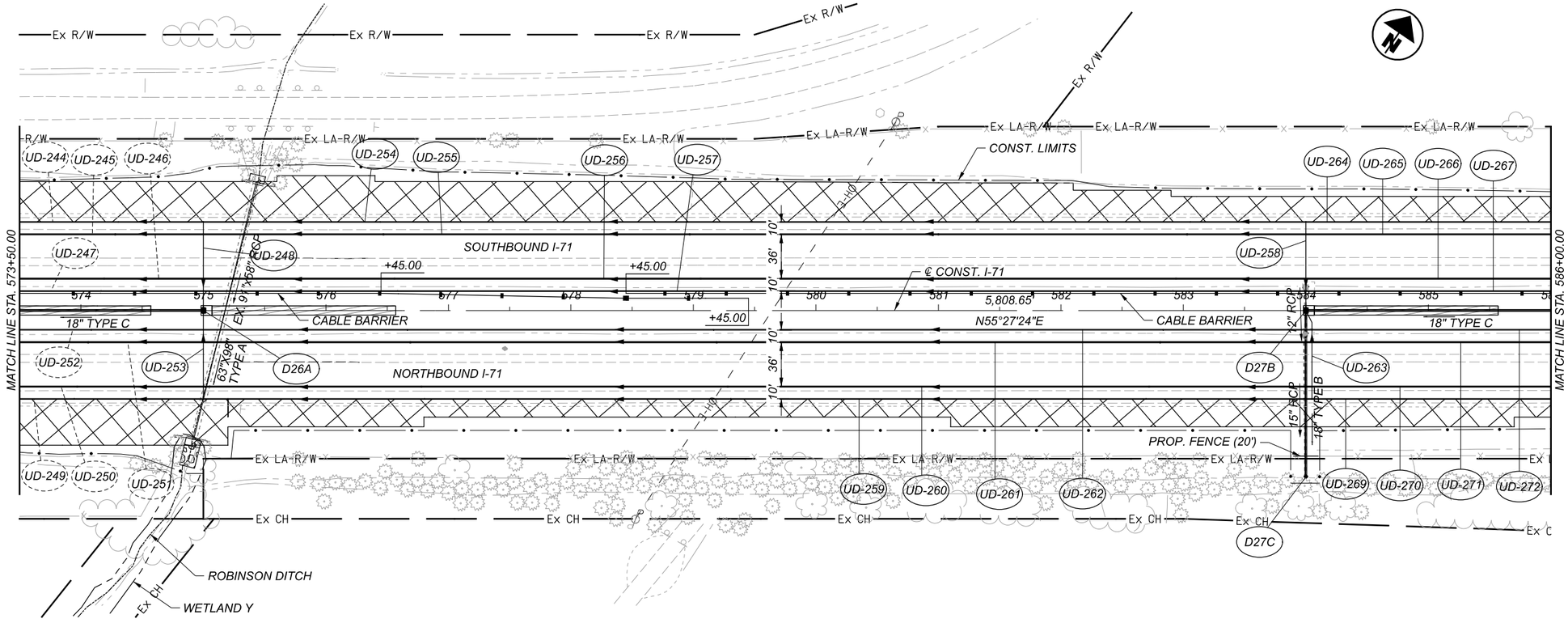
REVIEWER
MJC 06/25/21

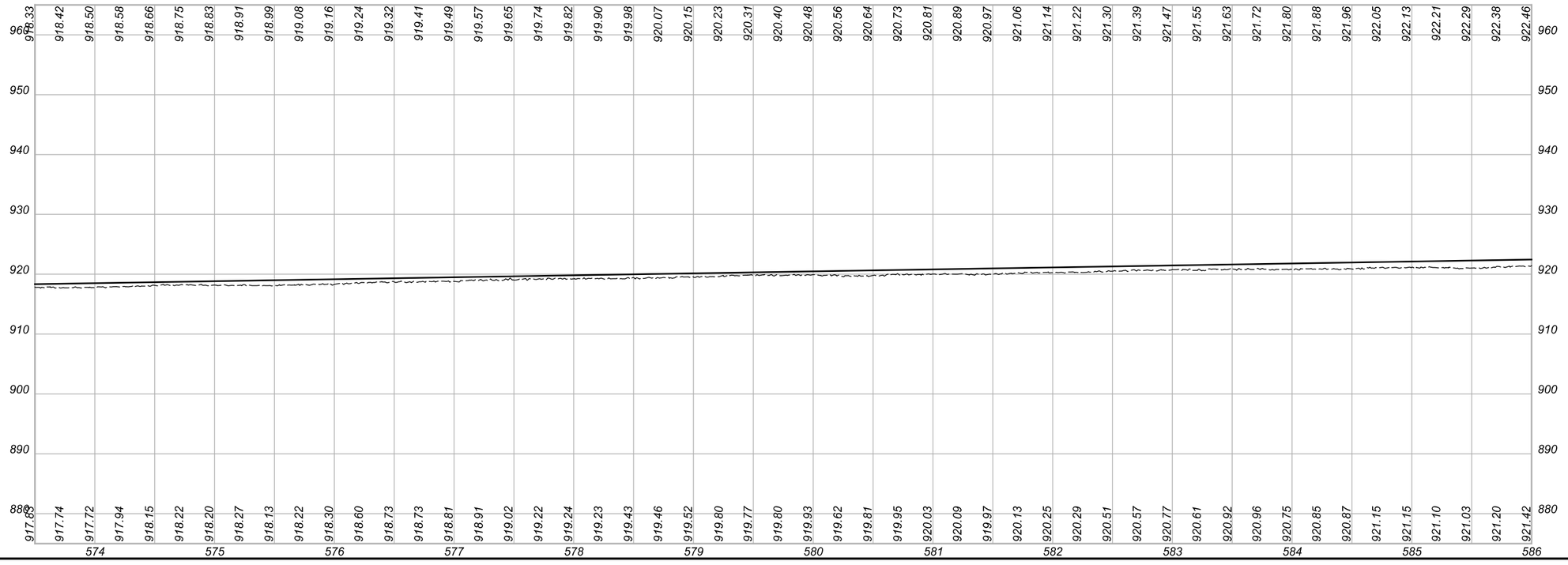
PROJECT ID
107630

SHEET P.115 TOTAL 882

MAD/PIC-71-7.30/0.00

MODEL: 107630_GP108 PAPERSIZE: 17x11 (in.) DATE: 6/29/2021 TIME: 6:42:10 PM USER: mcornett
P:_OHDOT_Work sets\107630\400-Engineering\Roadway\Sheets\107630_GP108.dgn





HORIZONTAL SCALE IN FEET
0 25 50 100

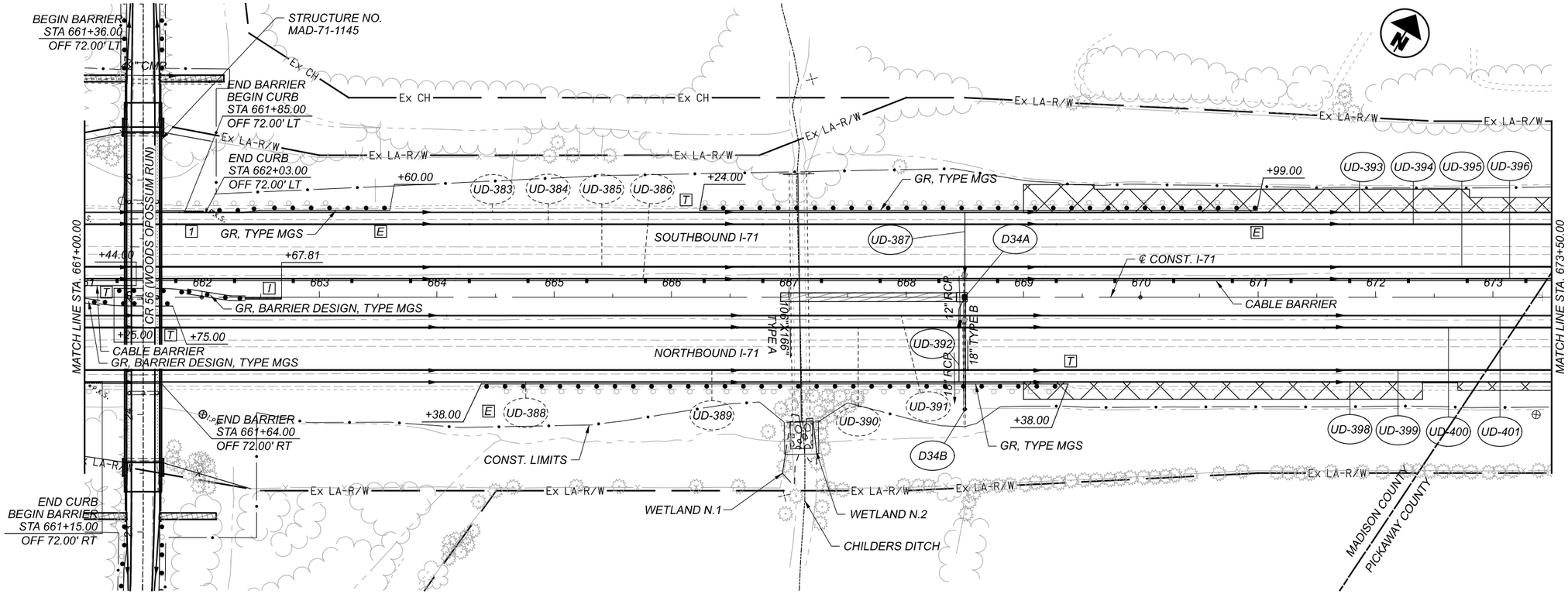
PLAN AND PROFILE - I-71
STA. 573+50 TO STA. 586+00

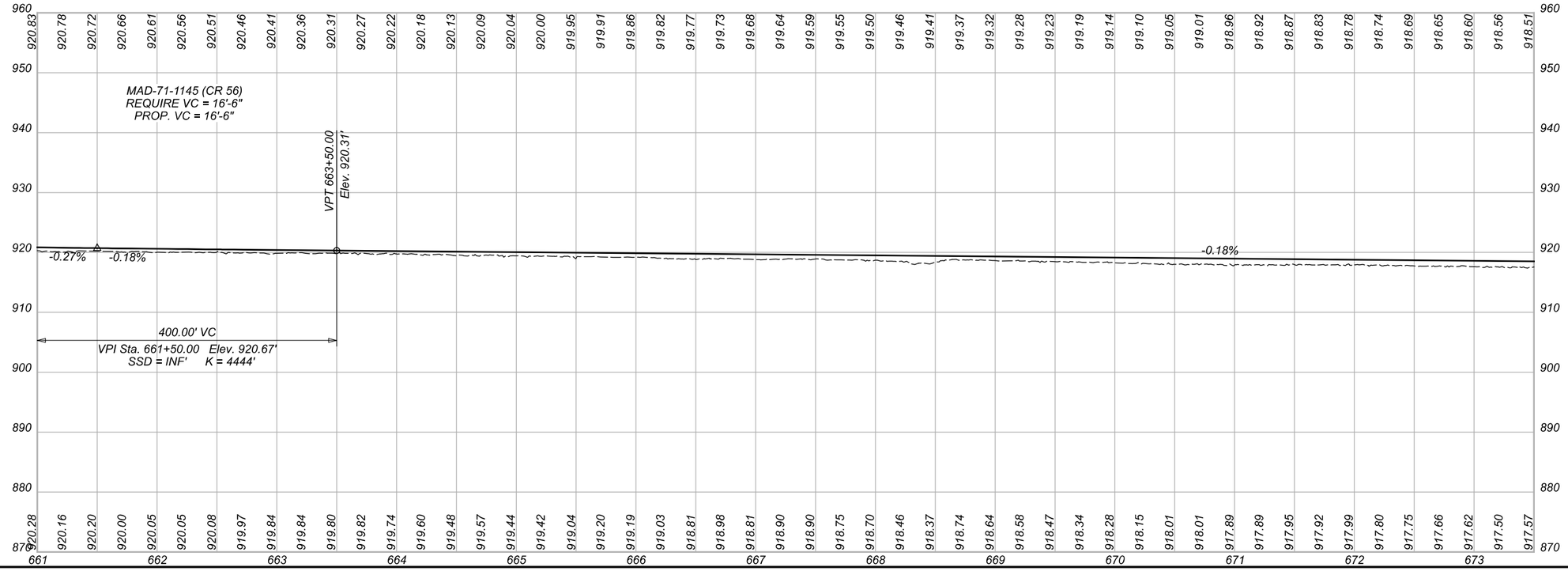
MAD/PIC-71-7.30/0.00

MODEL: 107630_GPI2 PAPERSIZE: 17x11(in.) DATE: 6/29/2021 TIME: 6:46:16 PM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\Roadway\Sheets\107630_GPI2.dgn

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER: MLL
REVIEWER: MJC 06/25/21
PROJECT ID: 107630
SHEET: P.119 TOTAL: 882





HORIZONTAL SCALE IN FEET
0 25 50 100

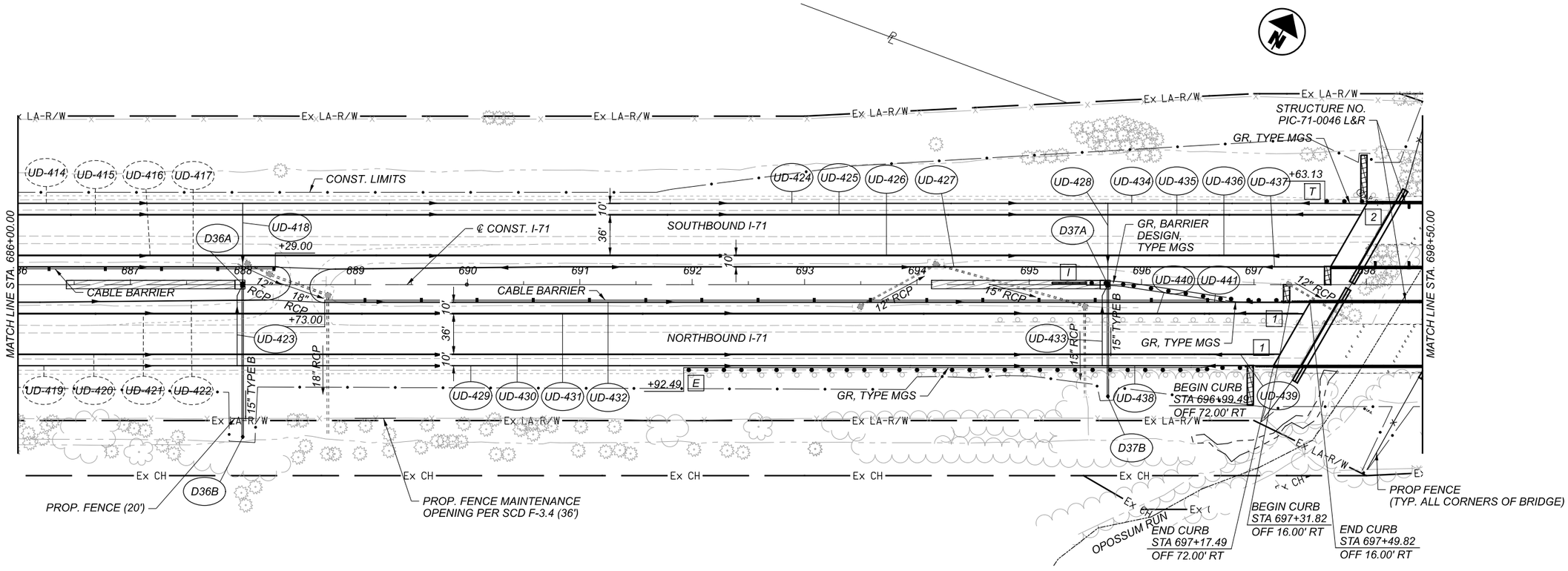
PLAN AND PROFILE - I-71
STA. 661+00 TO STA. 673+50

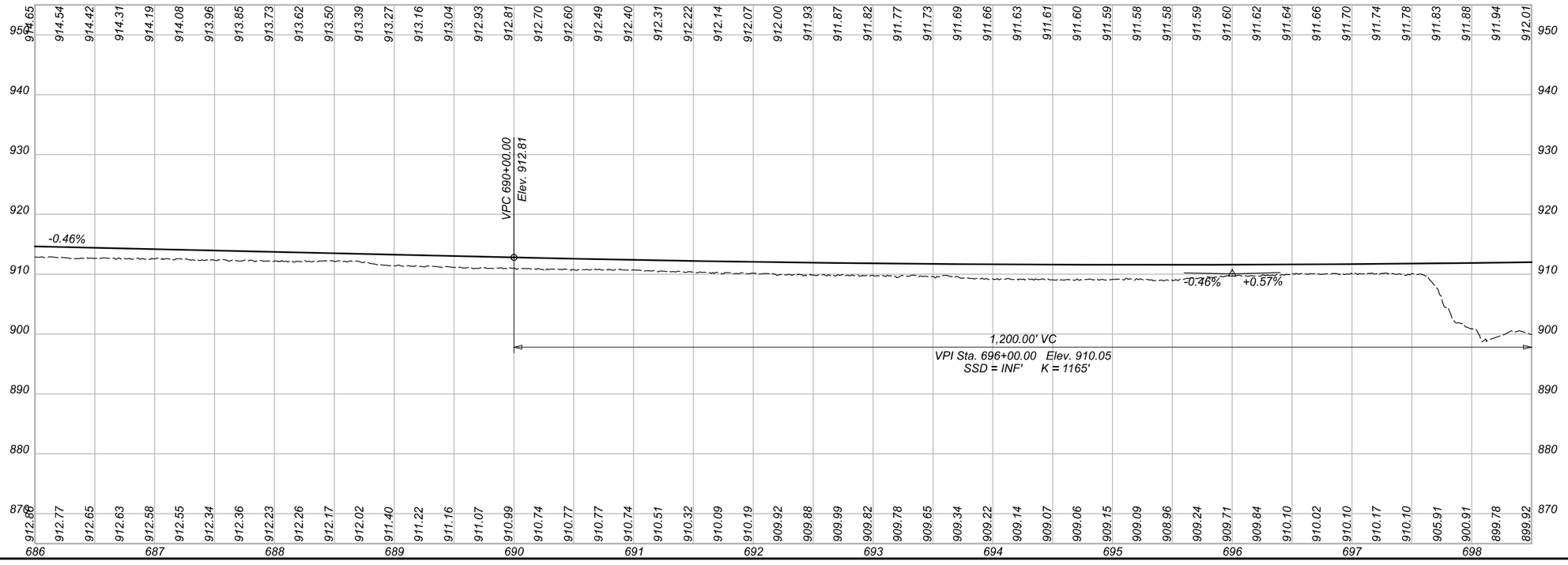
MAD/PIC-71-7.30/0.00

MODEL: 107630_GPI9 PAPERSIZE: 17x11(in.) DATE: 6/29/2021 TIME: 6:53:25 PM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\Roadway\Sheets\107630_GPI9.dgn

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER: MLL
REVIEWER: MJC 06/25/21
PROJECT ID: 107630
SHEET: P.126 TOTAL: 882





HORIZONTAL SCALE IN FEET
0 25 50 100

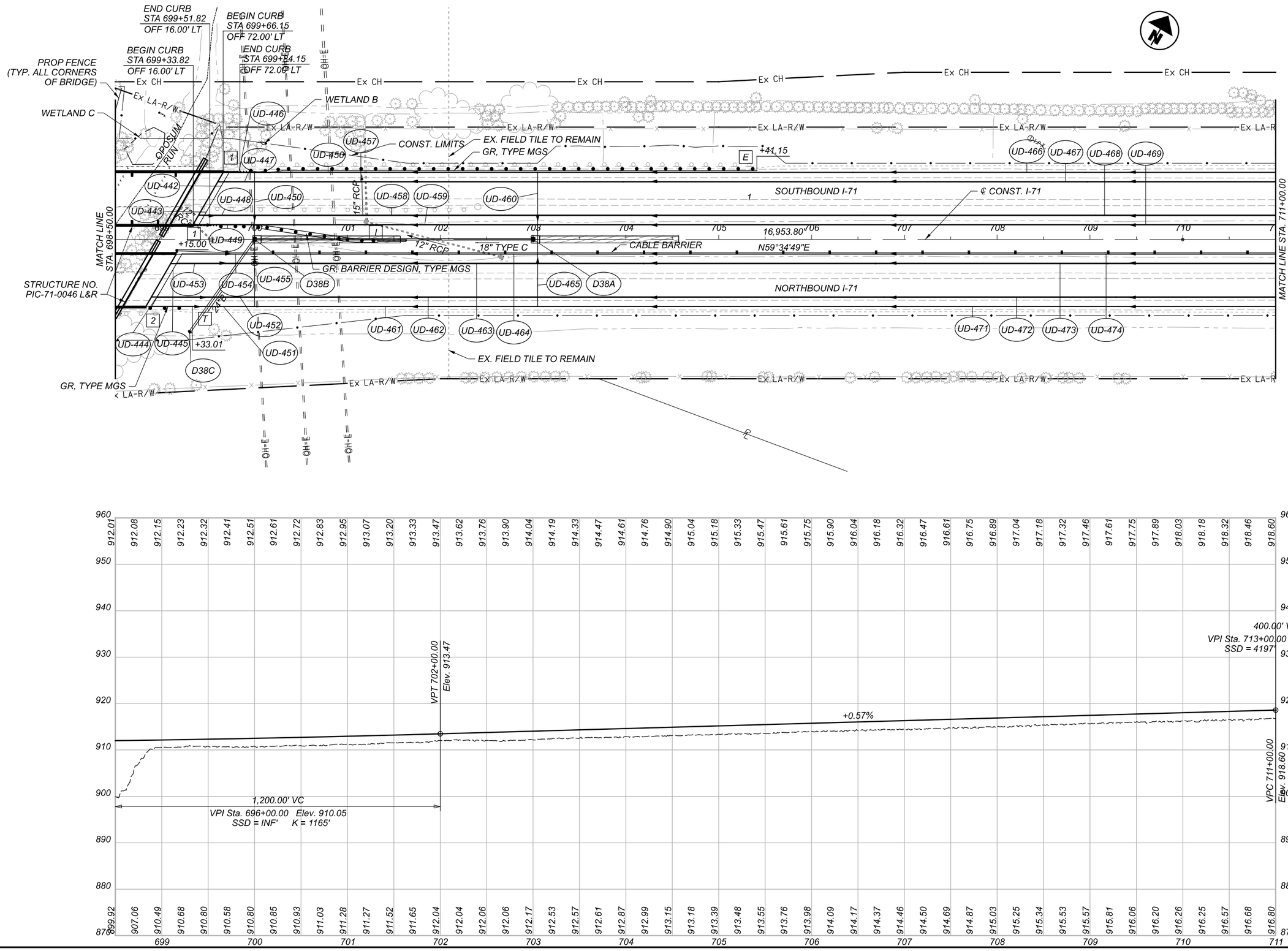
PLAN AND PROFILE - I-71
STA. 686+00 TO STA. 698+50

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER MLL
REVIEWER MJC 06/25/21
PROJECT ID 107630
SHEET P.128 TOTAL 882

MAD/PIC-71-7.30/0.00

MODEL: 107630_GP12I PAPERSIZE: 17x11in.) DATE: 6/29/2021 TIME: 6:55:29 PM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\Roadway\Sheets\107630_GP12I.dgn



HORIZONTAL SCALE IN FEET
0 25 50 100

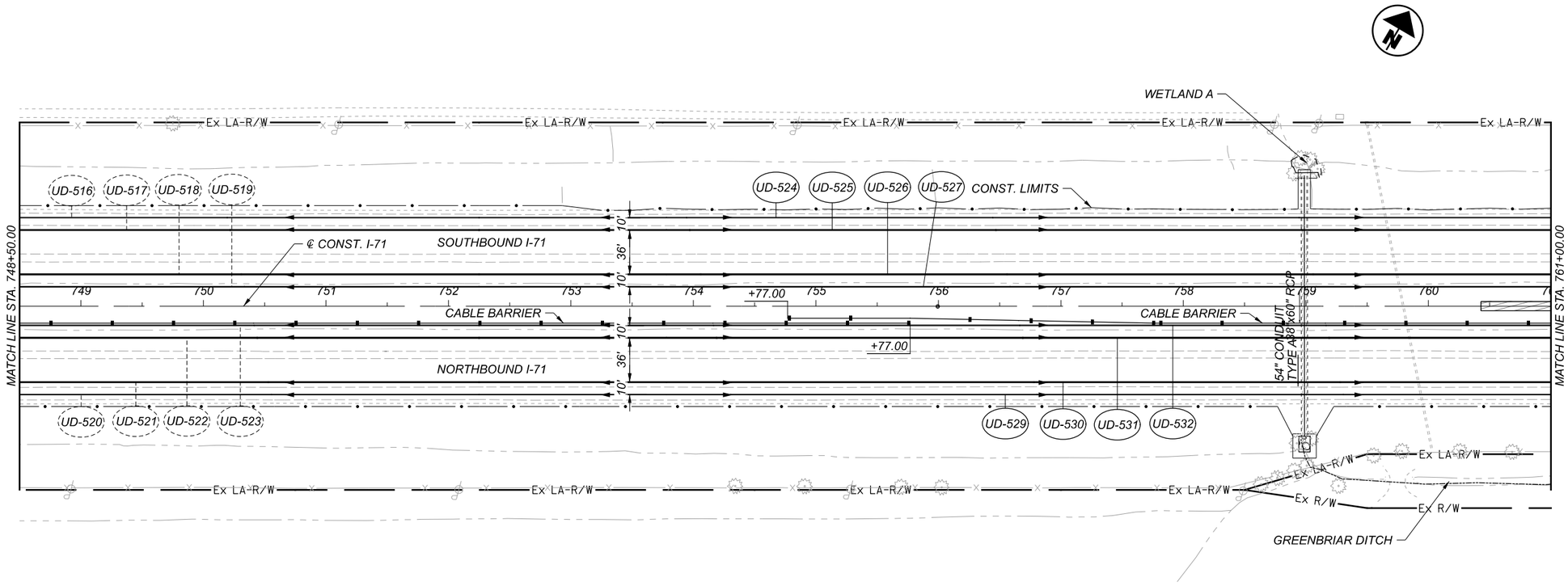
PLAN AND PROFILE - I-71
STA. 698+50 TO STA. 711+00

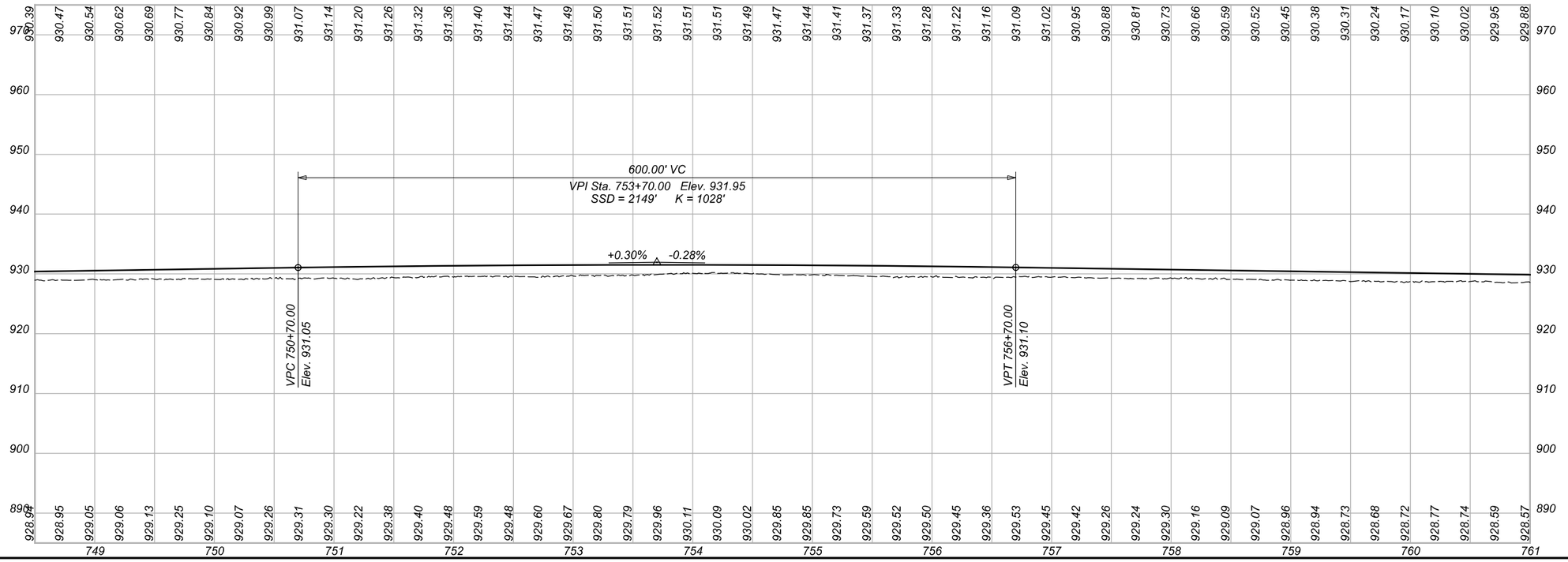
DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER: MLL
REVIEWER: MJC 06/25/21
PROJECT ID: 107630
SHEET: P.129 TOTAL: 882

MAD/PIC-71-7.30/0.00

MODEL: I07630_GPI22 PAPERSIZE: 17x11(in.) DATE: 6/29/2021 TIME: 6:56:32 PM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\Roadway\Sheets\107630_GPI22.dgn





HORIZONTAL SCALE IN FEET
0 25 50 100

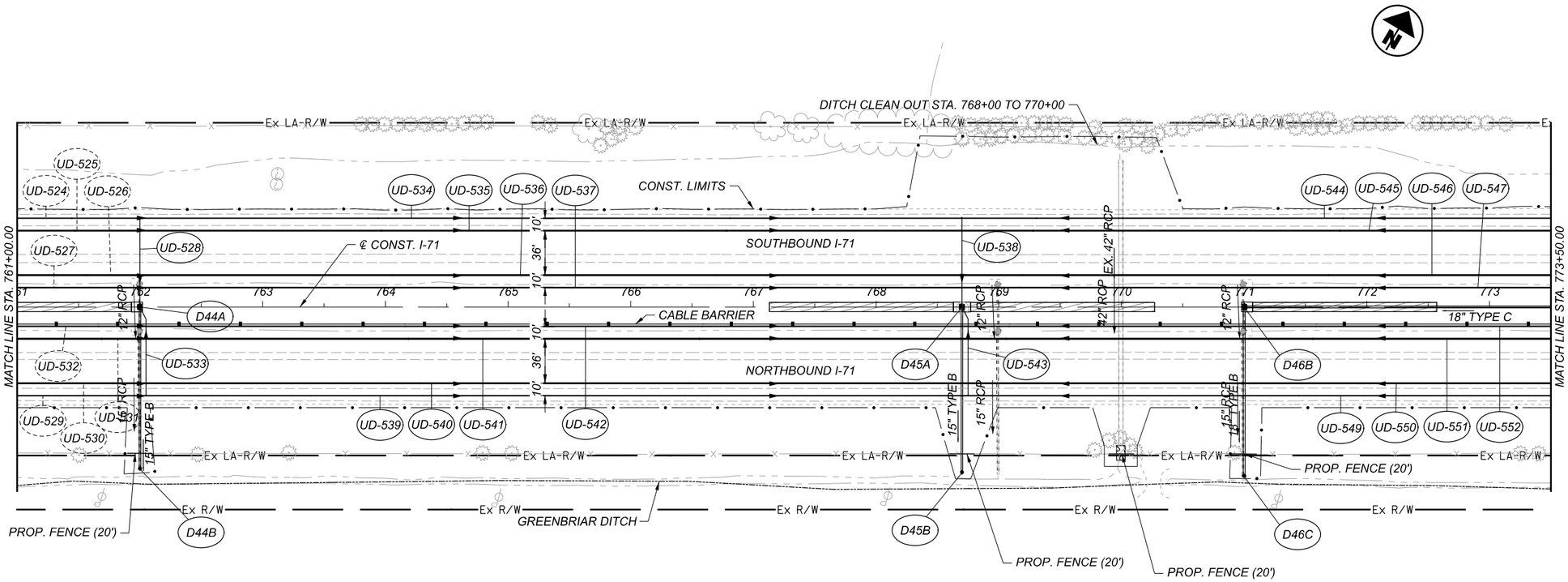
PLAN AND PROFILE - I-71
STA. 748+50 TO STA. 761+00

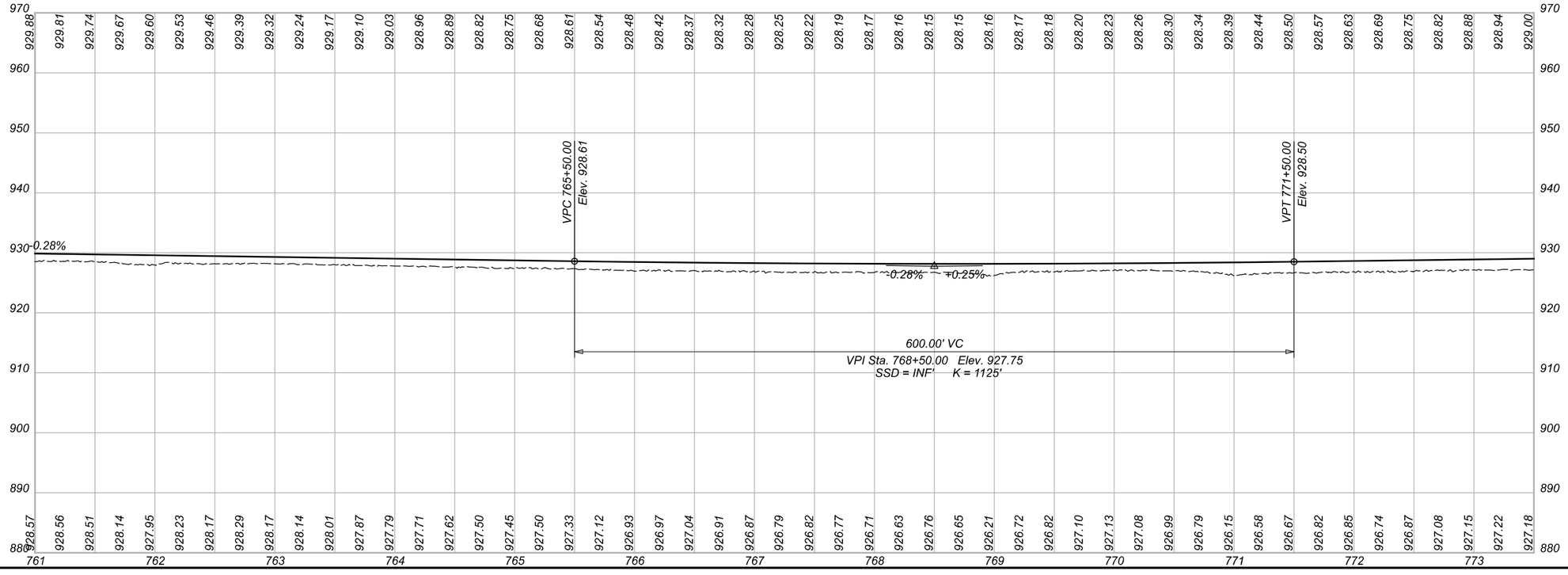
MAD/PIC-71-7.30/0.00

MODEL: 107630_GPI26 PAPERSIZE: 17x11(in.) DATE: 6/29/2021 TIME: 7:00:38 PM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\Roadway\Sheets\107630_GPI26.dgn

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER	MLL
REVIEWER	MJC 06/25/21
PROJECT ID	107630
SHEET	P.133
TOTAL	882





HORIZONTAL SCALE IN FEET
0 25 50 100

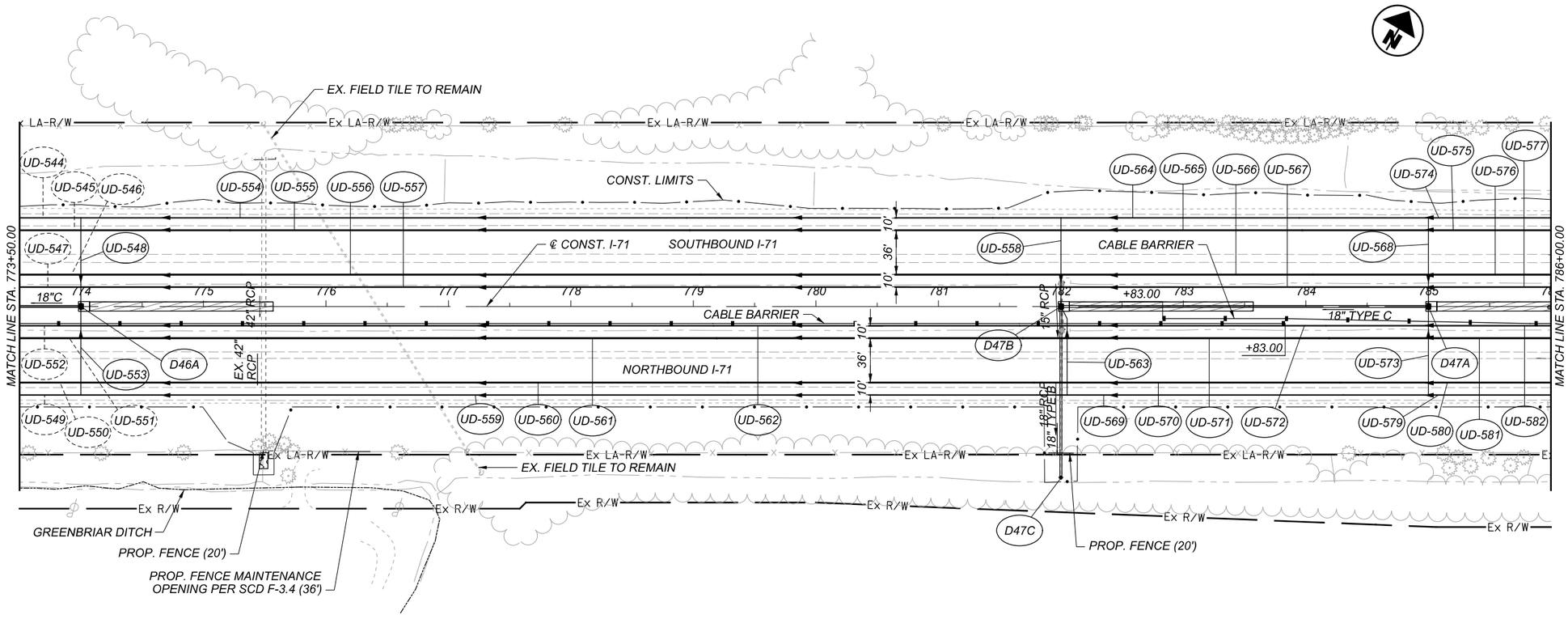
PLAN AND PROFILE - I-71
STA. 761+00 TO STA. 773+50

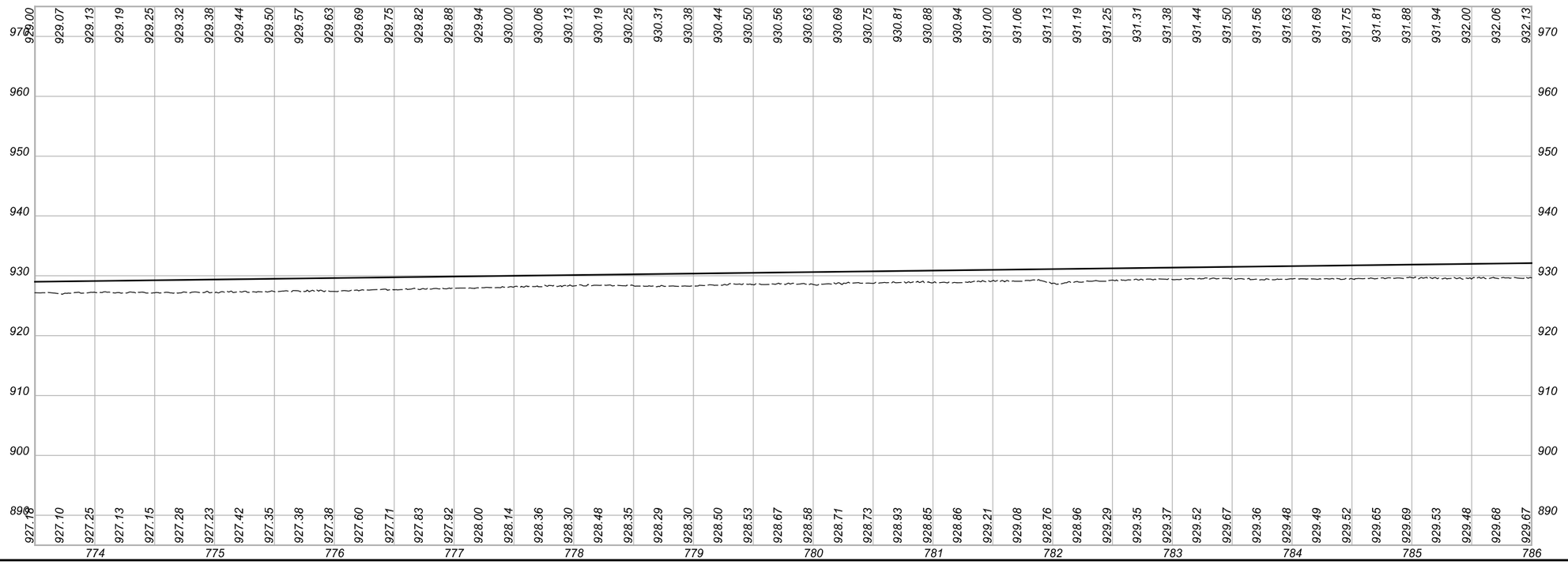
MAD/PIC-71-7.30/0.00

MODEL: 107630_GP127 PAPERSIZE: 17x11(in.) DATE: 6/30/2021 TIME: 10:07:59 AM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\Roadway\Sheets\107630_GP127.dgn

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER	MLL
REVIEWER	MJC 06/25/21
PROJECT ID	107630
SHEET	P.134
TOTAL	882





HORIZONTAL SCALE IN FEET
0 25 50 100

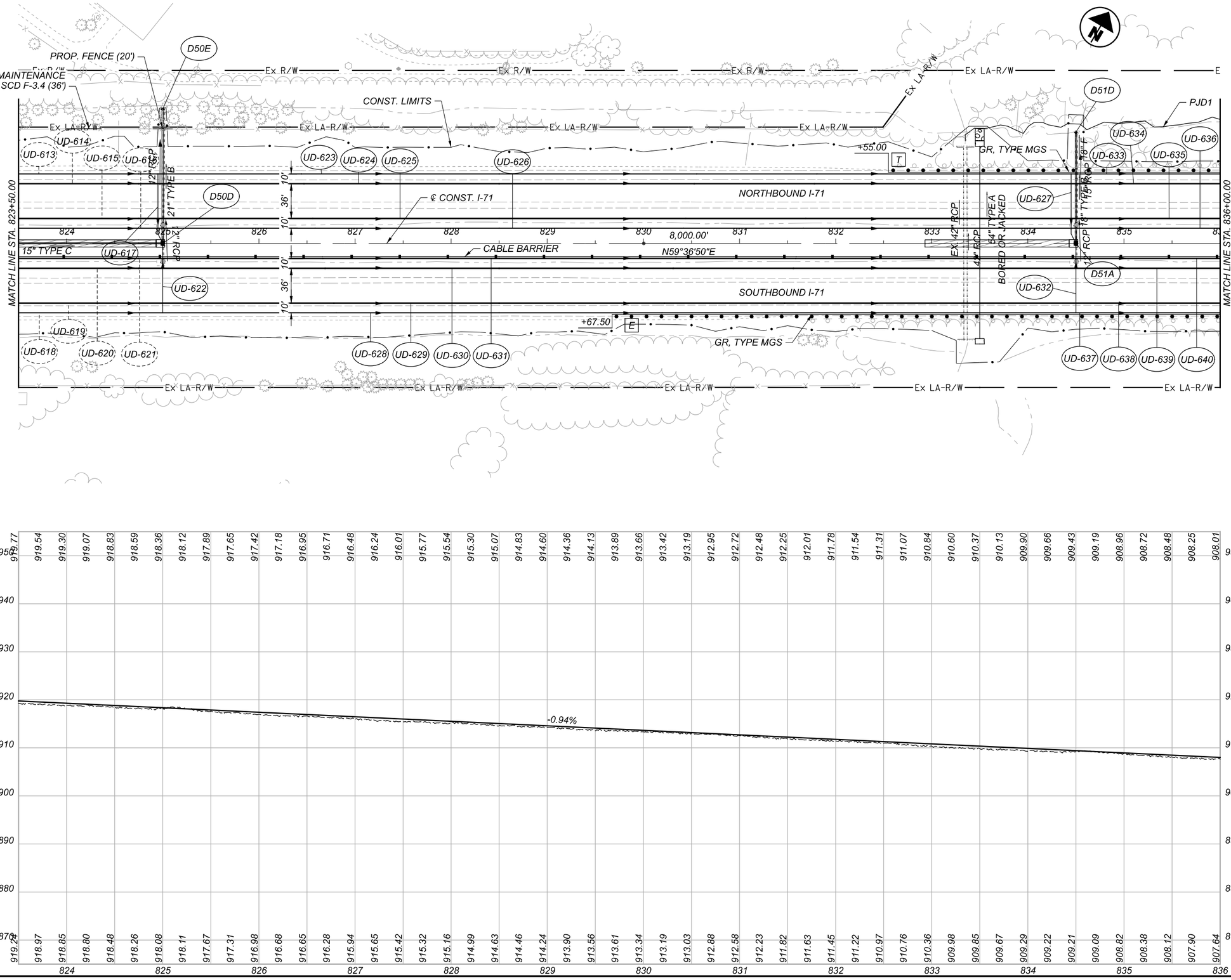
PLAN AND PROFILE - I-71
STA. 773+50 TO STA. 786+00

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER: MLL
REVIEWER: MJC 06/25/21
PROJECT ID: 107630
SHEET: P.135 TOTAL: 882

MAD/PIC-71-7.30/0.00

MODEL: 107630_GPI28 PAPERSIZE: 17x11(in.) DATE: 6/29/2021 TIME: 7:02:41PM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\Roadway\Sheets\107630_GPI28.dgn



HORIZONTAL SCALE IN FEET
0 25 50 100

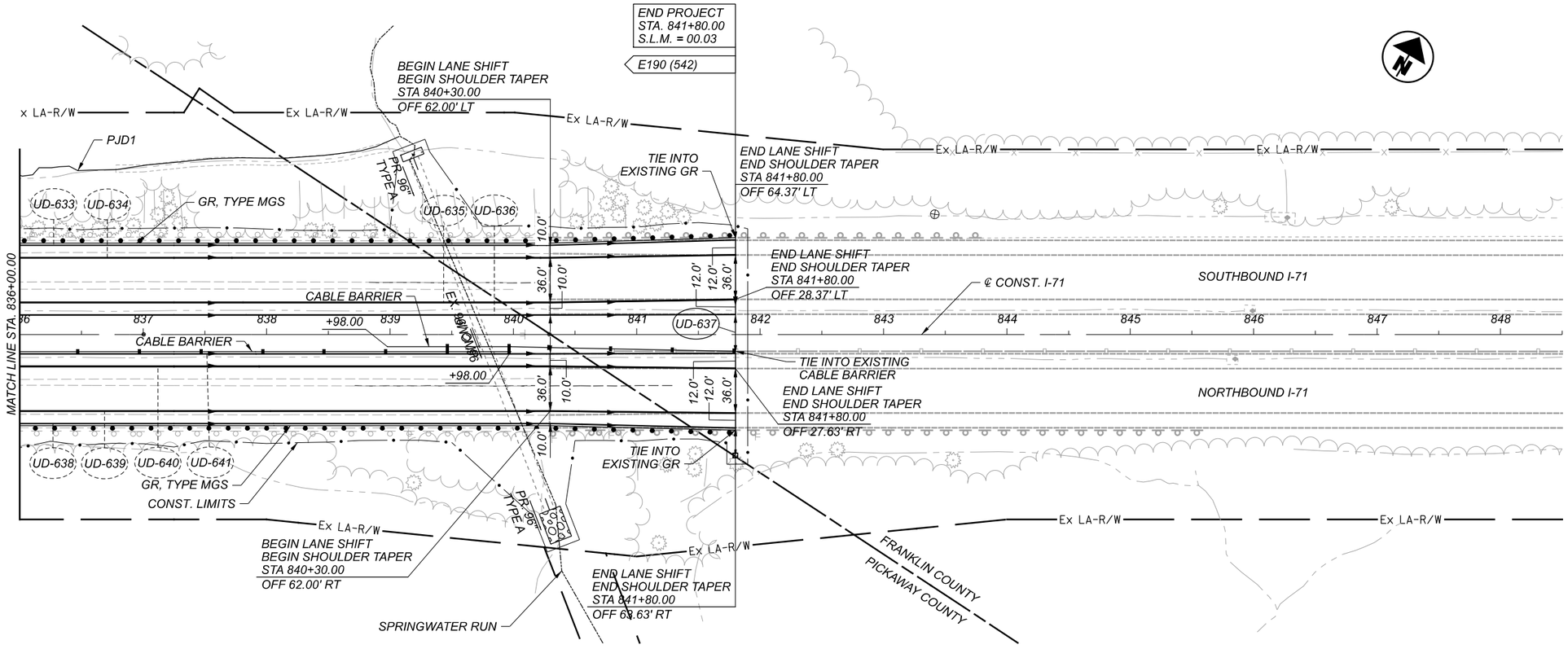
PLAN AND PROFILE - I-71
STA. 823+50 TO STA. 836+00

MAD/PIC-71-7.30/0.00

MODEL: 107630_GP132 PAPERSIZE: 17x11(in.) DATE: 6/29/2021 TIME: 7:06:45 PM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\Roadway\Sheets\107630_GP132.dgn

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER	MLL
REVIEWER	MJC 06/25/21
PROJECT ID	107630
SHEET	P.139
TOTAL	882



HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN AND PROFILE - I-71
STA. 836+00 TO STA. 848+50

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER
MLL

REVIEWER
MJC 06/25/21

PROJECT ID
107630

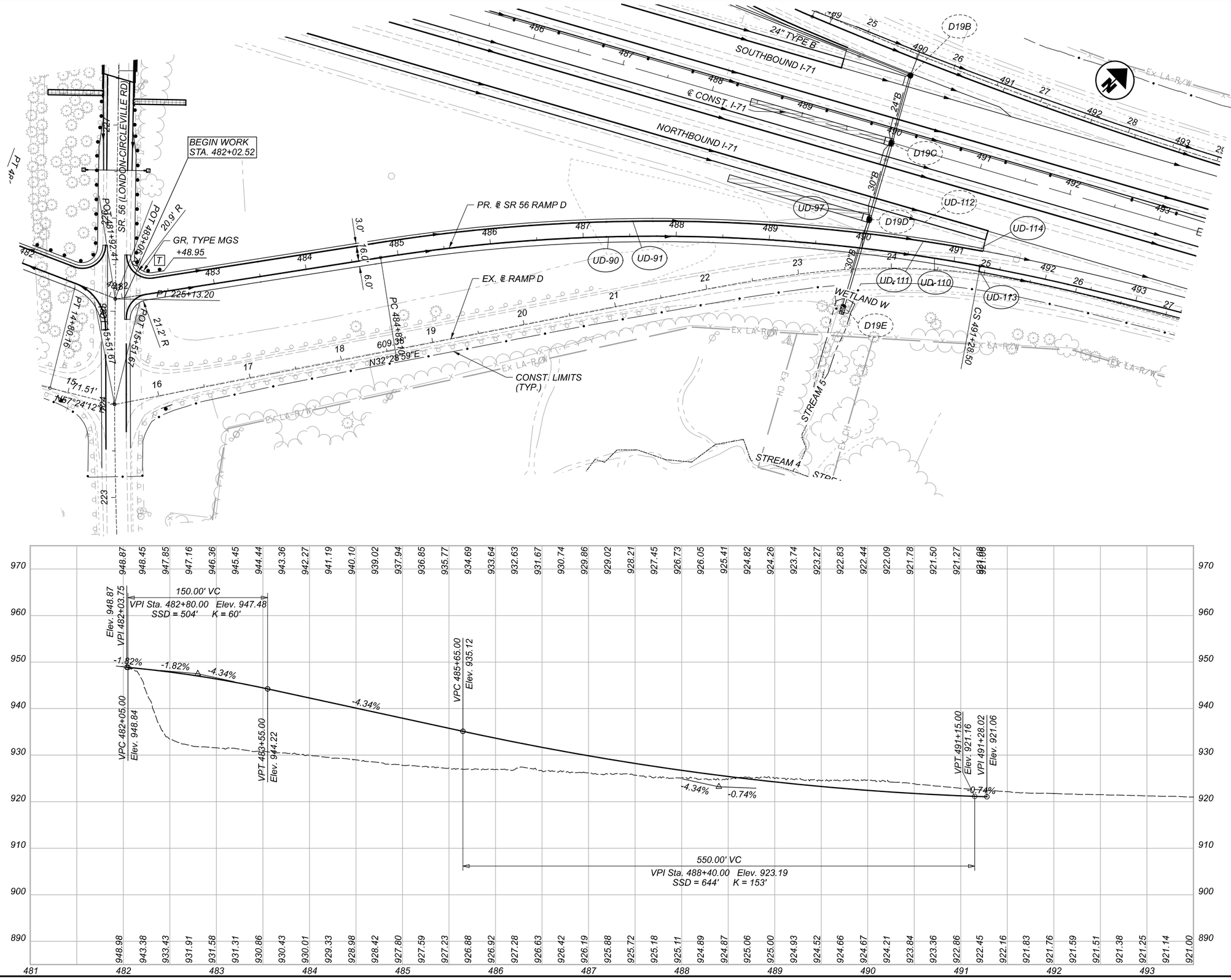
SHEET P.140 TOTAL 882

MAD/PIC-71-7.30/0.00

MODEL: 107630_GP133 PAPERSIZE: 17x11(in.) DATE: 6/29/2021 TIME: 7:07:43 PM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\Roadway\Sheets\107630_GP133.dgn

MAD/PIC-71-7.30/0.00

MODEL: I07630_GP54i PAPERSIZE: 17x11(in.) DATE: 6/29/2021 TIME: 7:41:48 PM USER: mcornett
P:_OhDOT_Worksets\07630\400-Engineering\Roadway\Sheets\07630_GP54i.dgn



HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN AND PROFILE - RAMP D
STA. 481+92.41 TO STA. 493+50.00

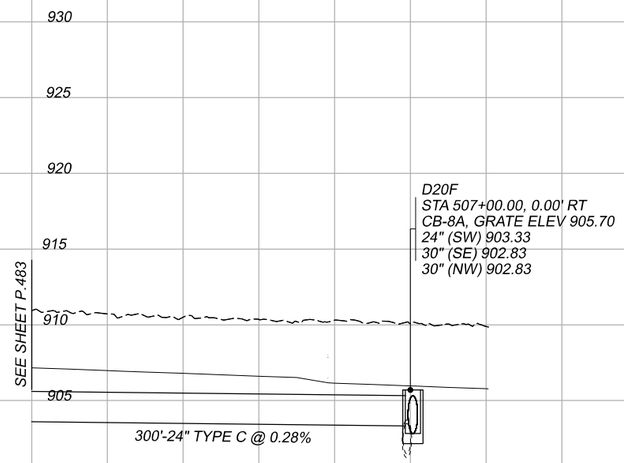
DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER
MLL

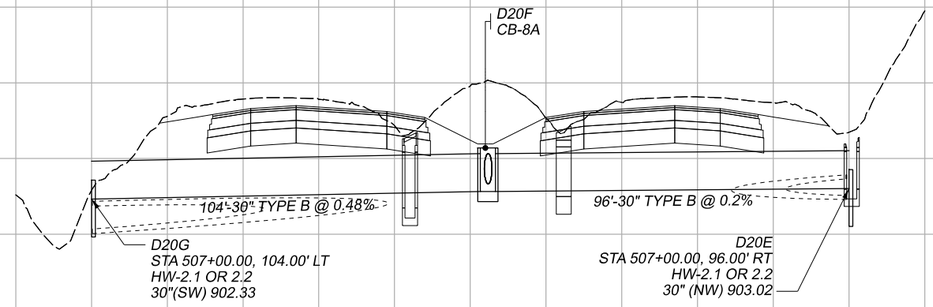
REVIEWER
MJC 06/25/21

PROJECT ID
107630

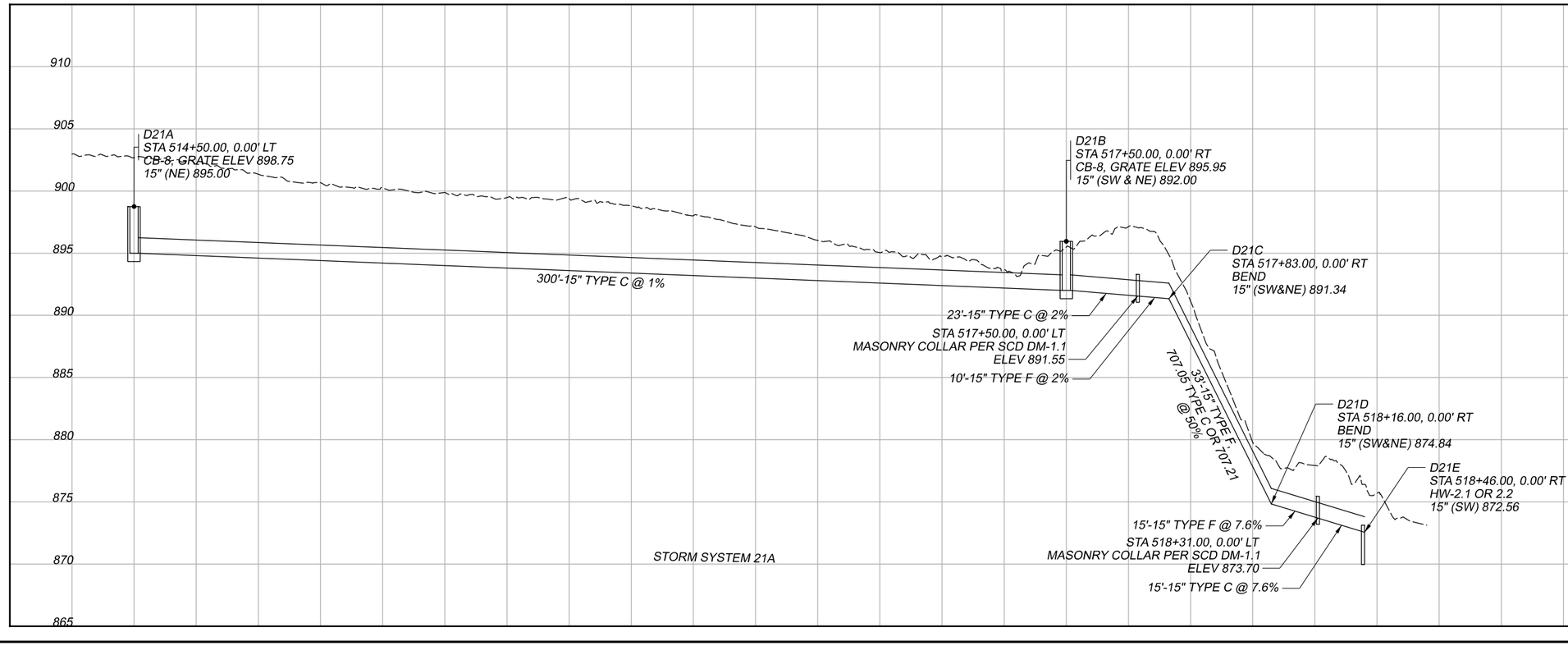
SHEET P.144 TOTAL 882



STORM SYSTEM 020



STORM SYSTEM 020



STORM SYSTEM 21A

STORM SEWER PROFILES

MAD/PIC-71-7.30/0.00

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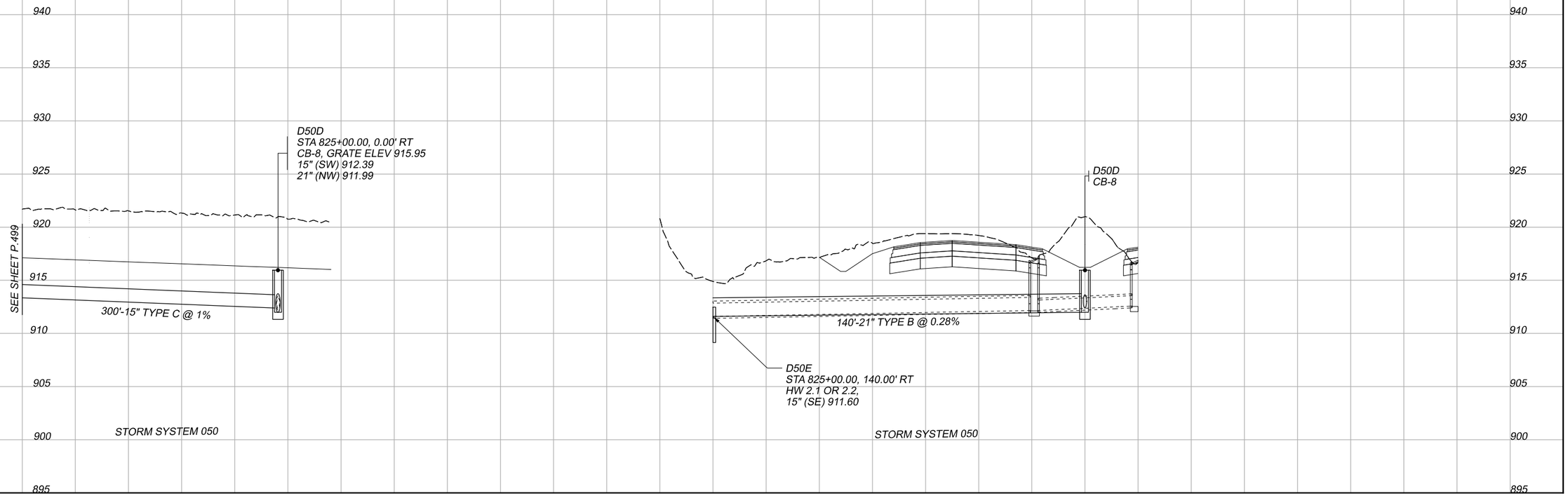
DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

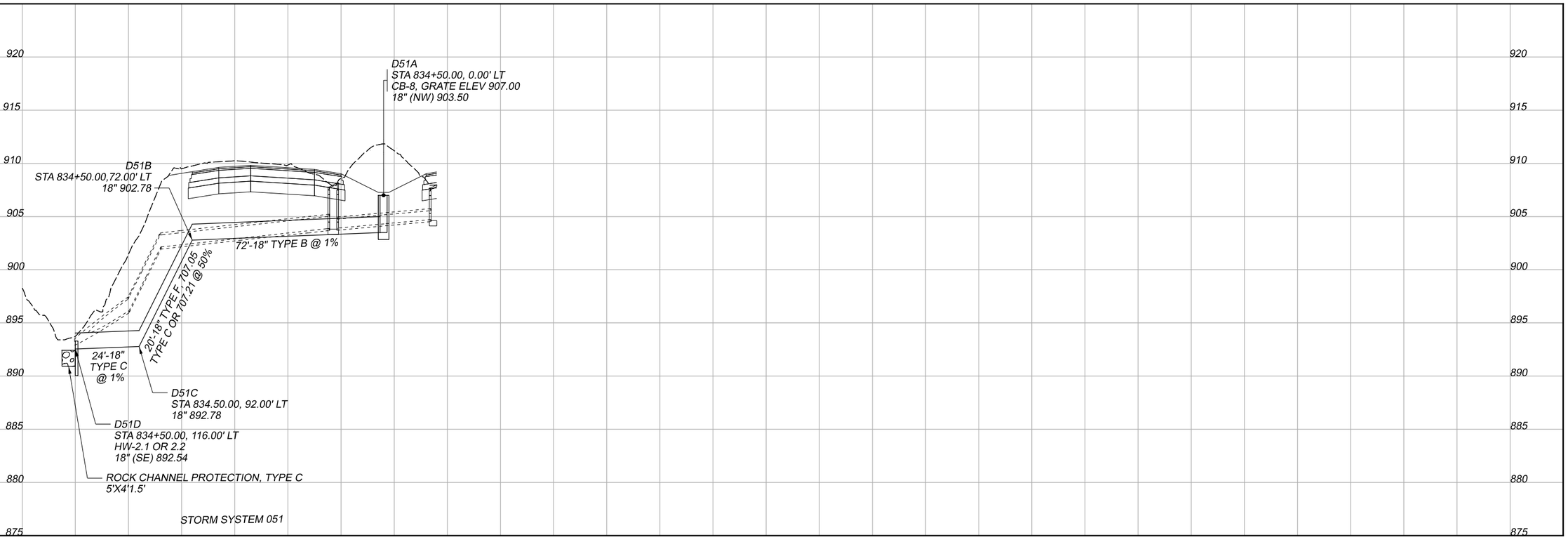
DESIGNER
CDS

REVIEWER
ENB 06/25/21

PROJECT ID
107630

SHEET P.484 | TOTAL 882





STORM SEWER PROFILES

MAD/PIC-71-7.30/0.00

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\\cdfs01\projects_OHDOT_Worksets\107630\400-Engineering\Drainage\Sheets\107630_DF604.dgn

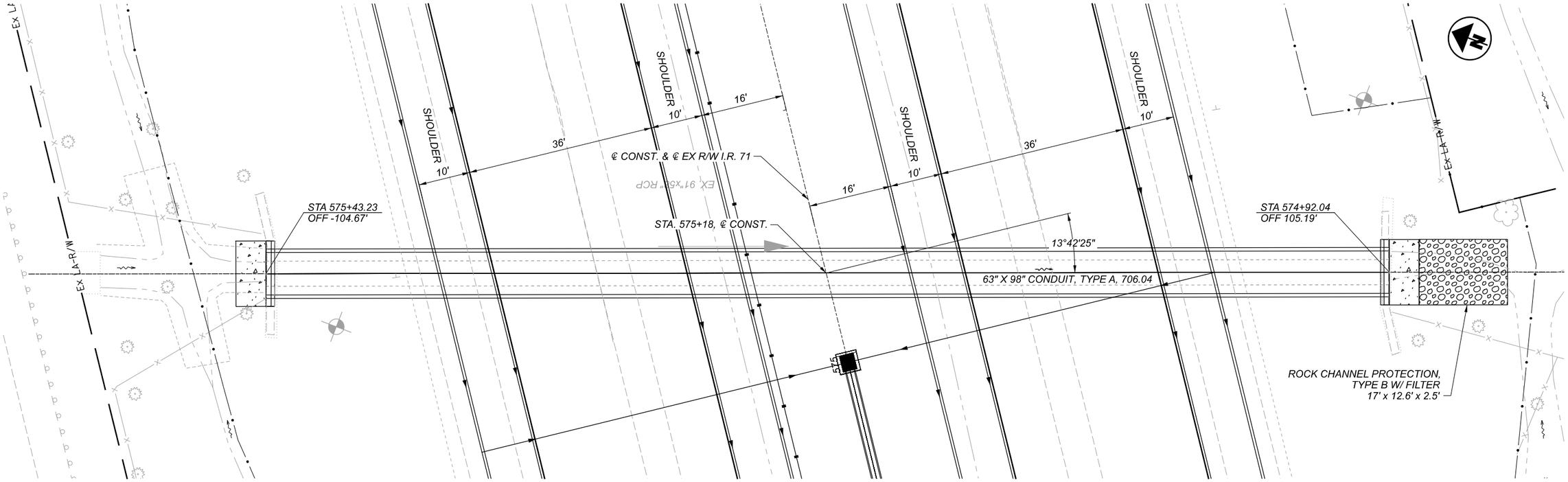
DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

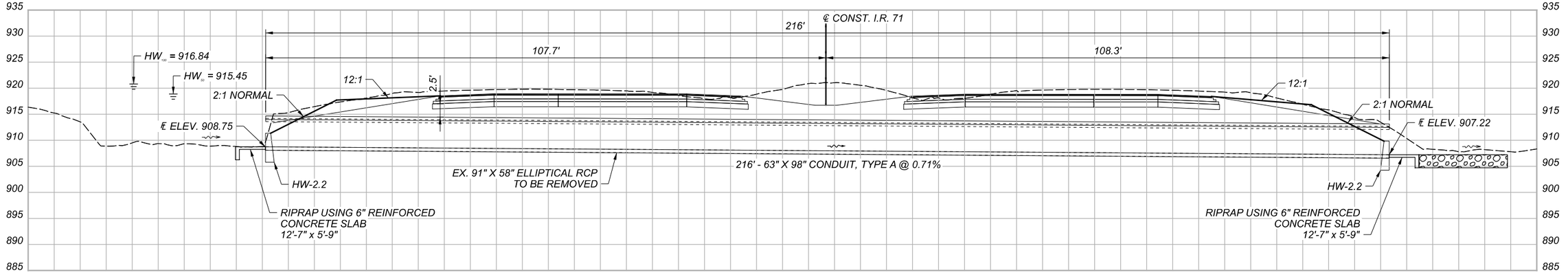
DESIGNER
CDS

REVIEWER
ENB 06/25/21

PROJECT ID
107630

SHEET P.500 | TOTAL 882





EXISTING STRUCTURE	
TYPE:	91" X 58" ELLIPTICAL RCP
LENGTH:	212' +/-
SKEW:	13° 42' 25" L.F.
WEARING SURFACE:	ASPHALT CONCRETE
YEAR BUILT:	_____
CONDITION:	POOR
CFN:	1885189

HYDRAULIC DESIGN DATA			
DRAINAGE AREA:	=	493	AC
Q50	=	312	CFS
Q100	=	375	CFS
HW50	=	915.45	
HW100	=	916.84	
V50	=	12.50	FPS
V100	=	10.75	FPS
ORDINARY HIGH WATER MARK	=	911.35	FT
SERVICE LIFE	=	75	YR
pH	=	7.2	
ABRASION LEVEL	=	1	
CFN	=	_____	

I.R. 71 STA. 575+18 - ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
202	2	EACH	HEADWALL REMOVED
202	212	FT	PIPE REMOVED, OVER 24"
209	100	FT	DITCH CLEANOUT
601	16	SY	RIPRAP
601	24	CY	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER
611	216	FT	63" X 98" CONDUIT, TYPE A, 706.04 OR 706.03

QUANTITIES CARRIED TO DRAINAGE SUBSUMMARY, SHEET X

HORIZONTAL SCALE IN FEET
0 5 10 20

CULVERT DETAILS I.R. 71 STA. 575+18

MAD/PIC-71-7.30/0.00

MODEL: I07630_DC57500 PAPERSIZE: 17x11 (in.) DATE: 6/30/2021 TIME: 1:35:55 AM USER: mcornett
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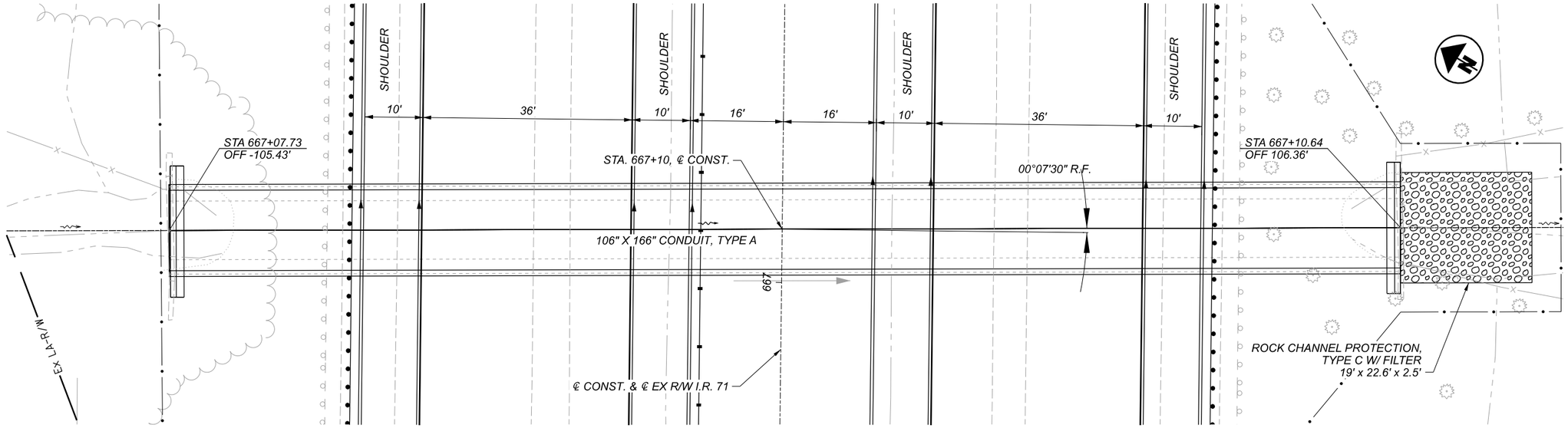
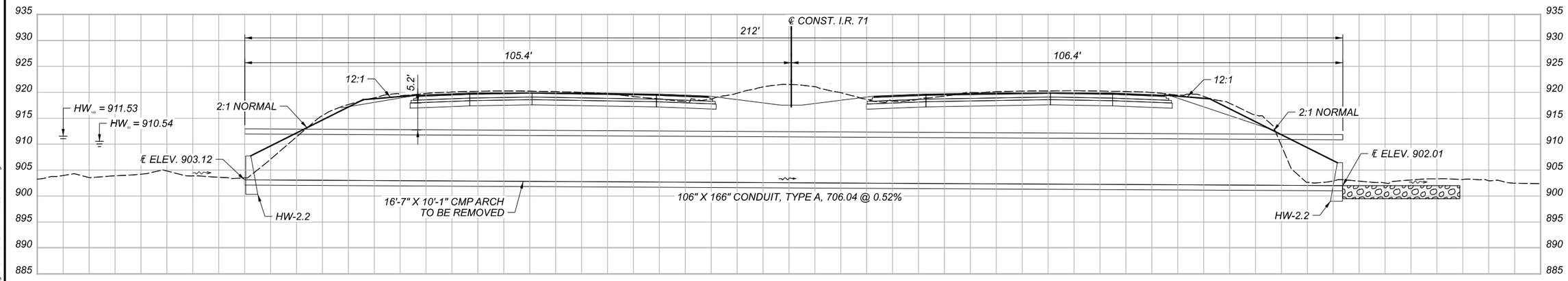
DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER JAB
REVIEWER ENB 06/25/21
PROJECT ID 107630
SHEET P.505 TOTAL 882





EXISTING STRUCTURE	
TYPE:	16'-7" X 10'-1" CMP ARCH
LENGTH:	212' +/-
SKEW:	1° R.F.
WEARING SURFACE:	ASPHALT CONCRETE
YEAR BUILT:	____
CONDITION:	SATISFACTORY
CFN:	1977446

HYDRAULIC DESIGN DATA			
DRAINAGE AREA:	=	1357	AC
Q50	=	671	CFS
Q100	=	804	CFS
HW50	=	910.54	
HW100	=	911.53	
V50	=	7.98	FPS
V100	=	8.79	FPS
ORDINARY HIGH WATER MARK	=	905.19	FT
SERVICE LIFE	=	75	YR
pH	=	7.2	
ABRASION LEVEL	=	2	
CFN	=	____	

I.R. 71 STA. 667+10 - ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
202	1	LS	STRUCTURE REMOVED
202	2	EACH	HEADWALL REMOVED
209	100	FT	DITCH CLEANOUT
601	40	CY	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER
602	13.2	CY	CONCRETE MASONRY
611	212	FT	106" X 166" CONDUIT, TYPE A, 706.04 OR 706.03

QUANTITIES CARRIED TO DRAINAGE SUBSUMMARY, SHEET X

HORIZONTAL SCALE IN FEET
0 5 10 20

CULVERT DETAILS I.R. 71 STA. 667+10

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER JAB
REVIEWER ENB 06/25/21
PROJECT ID 107630
SHEET P.506 TOTAL 882

MAD/PIC-71-7.30/0.00

MODEL: 107630_DC50| PAPERSIZE: 17x11(in.) DATE: 6/30/2021 TIME: 1:36:14 AM USER: mcornett
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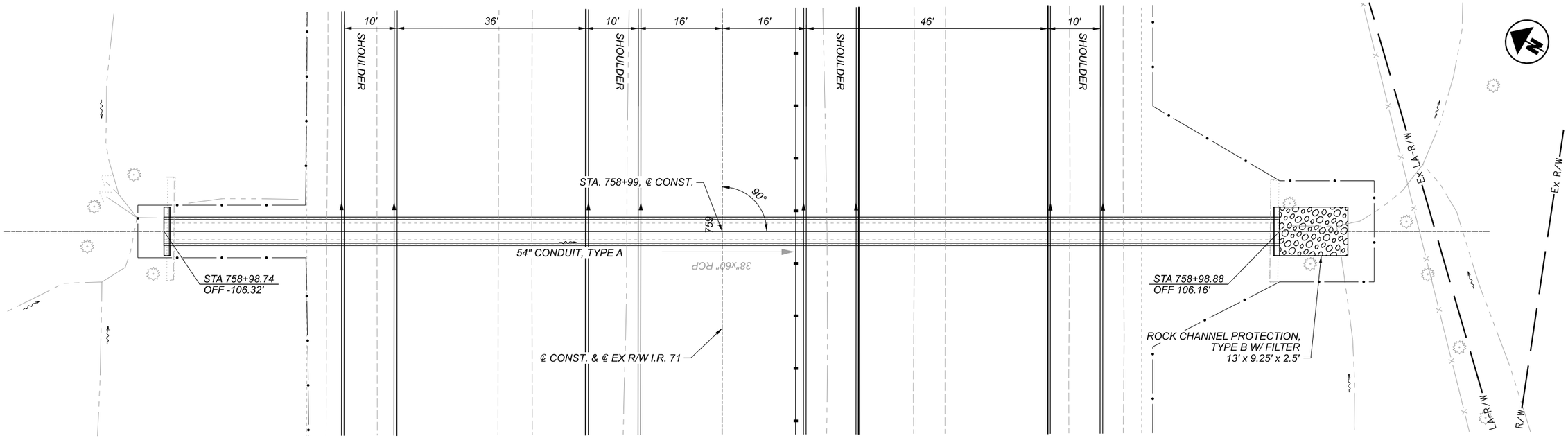

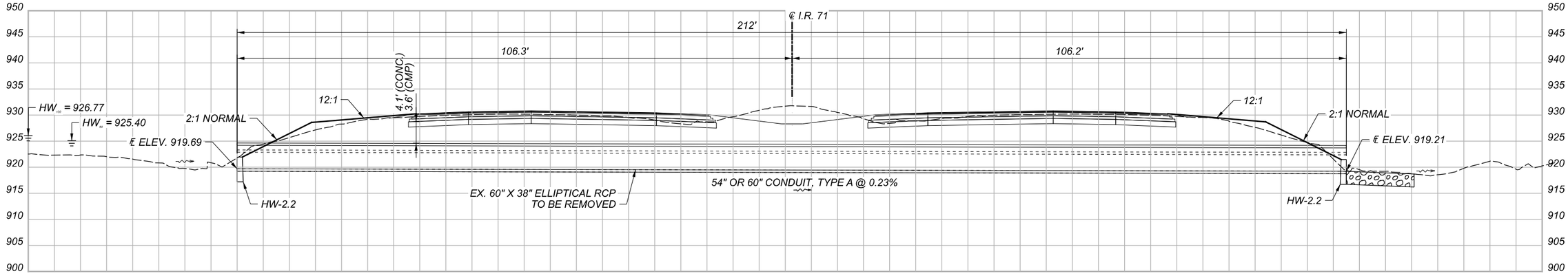

EXISTING STRUCTURE	
TYPE:	30" X 19" ELLIPTICAL RCP-CULVERT/STORM COMBO
LENGTH:	210' +/-
SKEW:	0°
WEARING SURFACE:	ASPHALT CONCRETE
YEAR BUILT:	____
CONDITION:	FAIR
CFN:	1842882

HYDRAULIC DESIGN DATA			
DRAINAGE AREA:	=	14	AC
Q50	=	20.9	CFS
Q100	=	22.6	CFS
HW50	=	924.48	
HW100	=	924.93	
V50	=	7.13	FPS
V100	=	7.52	FPS
ORDINARY HIGH WATER MARK	=	921.51	FT
SERVICE LIFE	=	75	YR
pH	=	7.2	
ABRASION LEVEL	=	1	
CFN	=	____	

I.R. 71 STA. 733+00 - ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
202	2	EACH	HEADWALL REMOVED
202	210	FT	PIPE REMOVED, OVER 24"
202	2	EACH	CATCH BASIN REMOVED
209	100	FT	DITCH CLEANOUT
601	1.8	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER
602	0.7	CY	CONCRETE MASONRY
611	210	FT	19" X 30" CONDUIT, TYPE A, 706.04

QUANTITIES CARRIED TO DRAINAGE SUBSUMMARY, SHEET X

HORIZONTAL SCALE IN FEET
0 5 10 20

CULVERT DETAILS
I.R. 71 STA. 759+00

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER: JAB
REVIEWER: ENB 06/25/21
PROJECT ID: 107630
SHEET: P.507 TOTAL: 882

MAD/PIC-71-7.30/0.00

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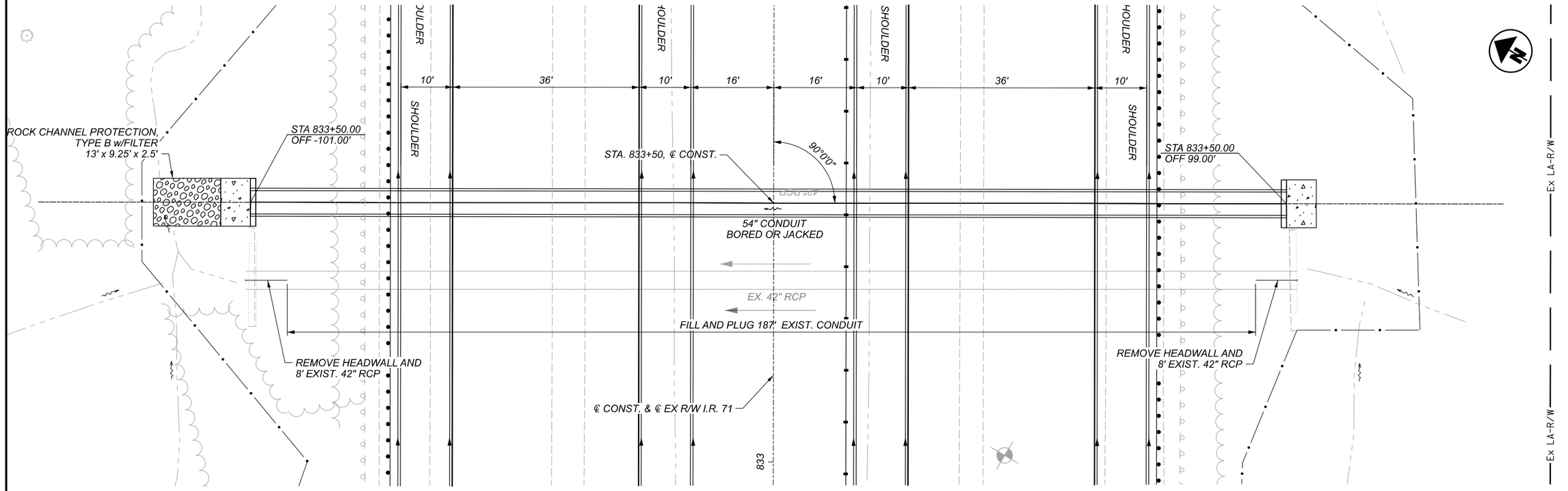

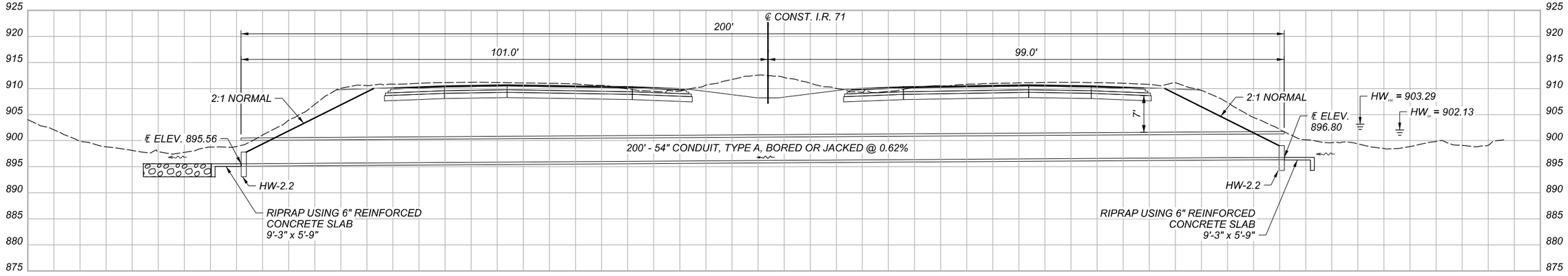

HORIZONTAL SCALE IN FEET
0 5 10 20

CULVERT DETAILS
I.R. 71 STA. 833+35

MAD/PIC-71-7.30/0.00

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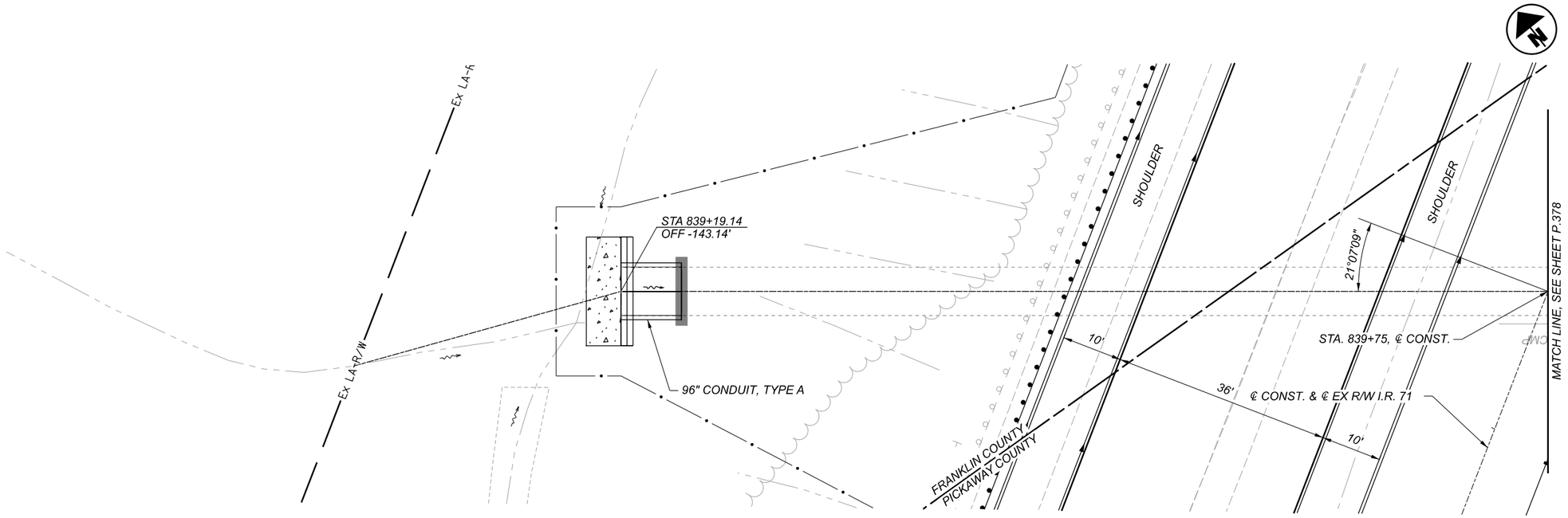
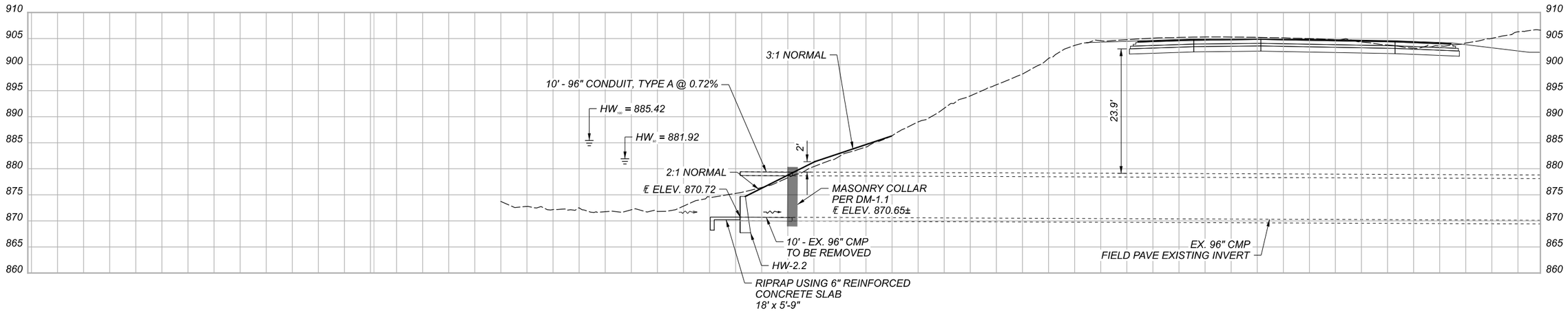
P:_OHDOT_Worksets\107630\400-Engineering\Drainage\Sheets\107630_DC604.dgn

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER	JAB
REVIEWER	ENB 06/25/21
PROJECT ID	107630
SHEET	P.508
TOTAL	882





EXISTING STRUCTURE	
TYPE:	42" RCP
LENGTH:	200' +/-
SKEW:	0°
WEARING SURFACE:	ASPHALT CONCRETE
YEAR BUILT:	_____
CONDITION:	_____
CFN:	1842893

HYDRAULIC DESIGN DATA			
DRAINAGE AREA:	=	77	AC
Q50	=	119	CFS
Q100	=	146	CFS
HW50	=	902.13	
HW100	=	903.29	
V50	=	9.96	FPS
V100	=	9.53	FPS
ORDINARY HIGH WATER MARK	=	896.72	FT
SERVICE LIFE	=	75	YR
pH	=	7.2	
ABRASION LEVEL	=	1	
CFN	=	_____	

I.R. 71 STA. 833+50 - ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
202	2	EACH	HEADWALL REMOVED
202	16	FT	PIPE REMOVED, OVER 24"
202	187	FT	SPECIAL - FILL AND PLUG EXISTING CONDUIT
209	100	FT	DITCH CLEANOUT
601	12	SY	RIPRAP
601	11	CY	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER
602	2.6	CY	CONCRETE MASONRY
611	200	FT	CONDUIT, BORED OR JACKED, 54", TYPE A

QUANTITIES CARRIED TO DRAINAGE SUBSUMMARY, SHEET X

HORIZONTAL SCALE IN FEET
0 5 10 20

CULVERT DETAILS
I.R. 71 STA. 839+75

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER JAB
REVIEWER ENB 06/25/21
PROJECT ID 107630
SHEET P.509 TOTAL 882

MAD/PIC-71-7.30/0.00

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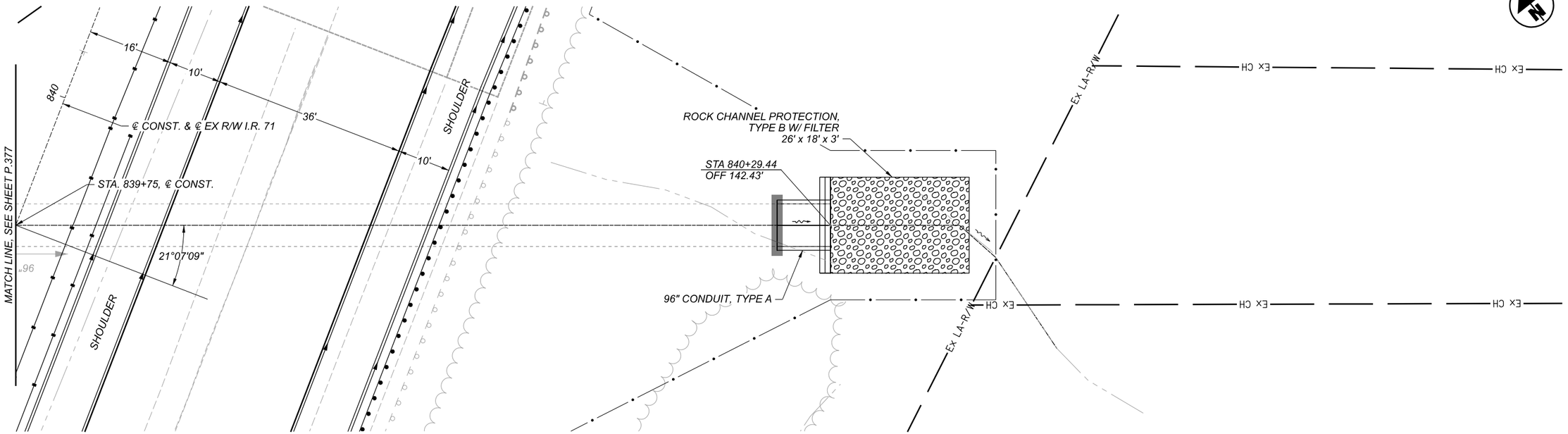

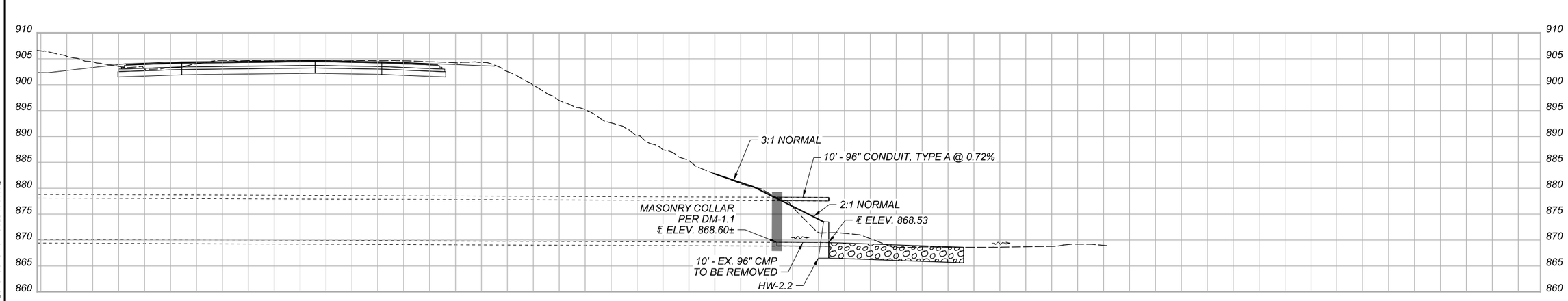

HORIZONTAL
SCALE IN FEET
0 5 10 20

CULVERT DETAILS
I.R. 71 STA. 839+75

MAD/PIC-71-7.30/0.00

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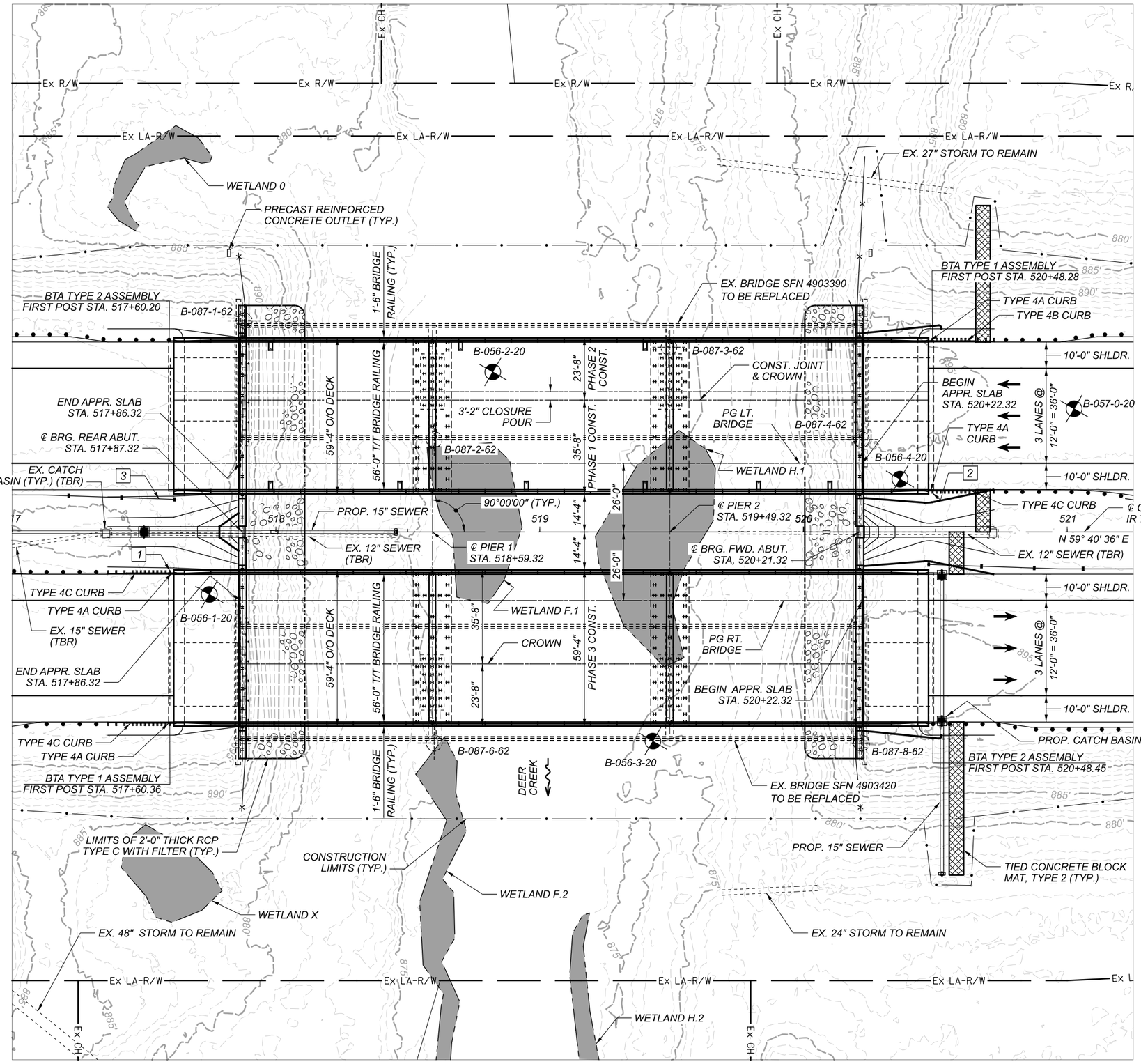
DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER	
JAB	
REVIEWER	
ENB	06/25/21
PROJECT ID	
107630	
SHEET	TOTAL
P.510	882



PLAN

TEMPORARY SHEET PILING NOT SHOWN FOR CLARITY. SEE SHEET 11/52 FOR MORE INFORMATION.

BENCHMARK DATA

BM #1 - I.P.F.	STA. 516+29.99	ELEV.	898.66	OFFSET	80.92' LT.
BM #2 - I.P.F.	STA. 523+98.31	ELEV.	892.28	OFFSET	81.46' LT.

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEETS.

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. A DATUM CORRECTION OF -0.87 WAS USED TO DETERMINE EXISTING ELEVATIONS.

DESIGN TRAFFIC:
2024 ADT = 55,000 2024 ADTT = 13,200
2044 ADT = 84,500 2044 ADTT = 20,280
DIRECTIONAL DISTRIBUTION = 0.53

LEGEND

BORING LOCATION — HISTORICAL BORING

1 - BTA TYPE 1 ASSEMBLY - FIRST POST STA. 517+60.36

2 - BTA TYPE 1 ASSEMBLY - FIRST POST STA. 520+48.28

3 - BTA TYPE 1 ASSEMBLY DURING PHASE 2 CONSTRUCTION. SEE MOT PLANS FOR MORE INFORMATION.

TBR - TO BE REMOVED

HYDRAULIC DATA

DRAINAGE AREA = 146 SQ. MILES
Q (50) = 11700 CFS V (50) = 6.5 FT/S
Q (100) = 13500 CFS V (100) = 6.9 FT/S
STRUCTURES CLEAR THE 50 YEAR DESIGN HW BY 6.8 FEET.

EXISTING STRUCTURES

TYPE: 3-SPAN CONTINUOUS NON-COMPOSITE ROLLED STEEL BEAM WITH REINFORCED CONCRETE DECK ON STUB ABUTMENTS AND HAMMERHEAD TYPE PIERS ON FRICTION PILES

SPANS: 72'-0"± - 90'-0"± - 72'-0"± C/C BEARINGS
ROADWAY: 41'-0"± TOE/TOE RAILING
LOADING: CF-2000 (57) AND AASHTO ALT. LOADING
SKEW: 00°00'00"
WEARING SURFACE: 1¼"± SDC OVERLAY
APPROACH SLABS: 25'-0"± AS-1-81
ALIGNMENT: TANGENT
CROWN: 3/16"±/FT
STRUCTURE FILE NUMBER: 4903390 & 4903420
DATE BUILT: 1964 REHABILITATED: 1994
DISPOSITION: STRUCTURES TO BE REPLACED IN PHASES

PROPOSED STRUCTURES

TYPE: 3-SPAN CONTINUOUS ROLLED STEEL BEAM WITH COMPOSITE REINFORCED CONCRETE DECK ON INTEGRAL ABUTMENTS AND WALL-TYPE PIERS SUPPORTED BY FRICTION PILES

SPANS: 72'-0" - 90'-0" - 72'-0" C/C BEARINGS
ROADWAY: 56'-0" TOE/TOE BRIDGE RAILING
LOADING: HL93 AND 60 PSF FUTURE WEARING SURFACE
SKEW: 00°00'00"
WEARING SURFACE: 1" MONOLITHIC CONCRETE
APPROACH SLABS: 25'-0" LONG (AS-1-15, AS-2-15)
ALIGNMENT: TANGENT
CROWN: 0.016± FT/FT
DECK AREA: 14003 SF (PER LEFT AND RIGHT BRIDGE)

COORDINATES: LATITUDE 39°45'47.20" N / LONGITUDE 83°17'32.01" W
LATITUDE 39°45'46.76" N / LONGITUDE 83°17'31.67" W

HORIZONTAL SCALE IN FEET
0 10 20 40

SITE PLAN (1 OF 2)
BRIDGE NO. MAD-00071-08.740L&R
IR 71 OVER DEER CREEK

SFN 4903391
SFN 4903421
DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio
DESIGNER MRV | CHECKER TAS
REVIEWER DFT 06/29/21
PROJECT ID 107630
SUBSET 1 | TOTAL 52
SHEET P.549 | TOTAL 882

MAD/PIC-71-7.30/0.00

MODEL: Plan Sheet PAPERSIZE: 17x11 (in.) DATE: 6/29/2021 TIME: 3:18:33 PM USER: tsheldon
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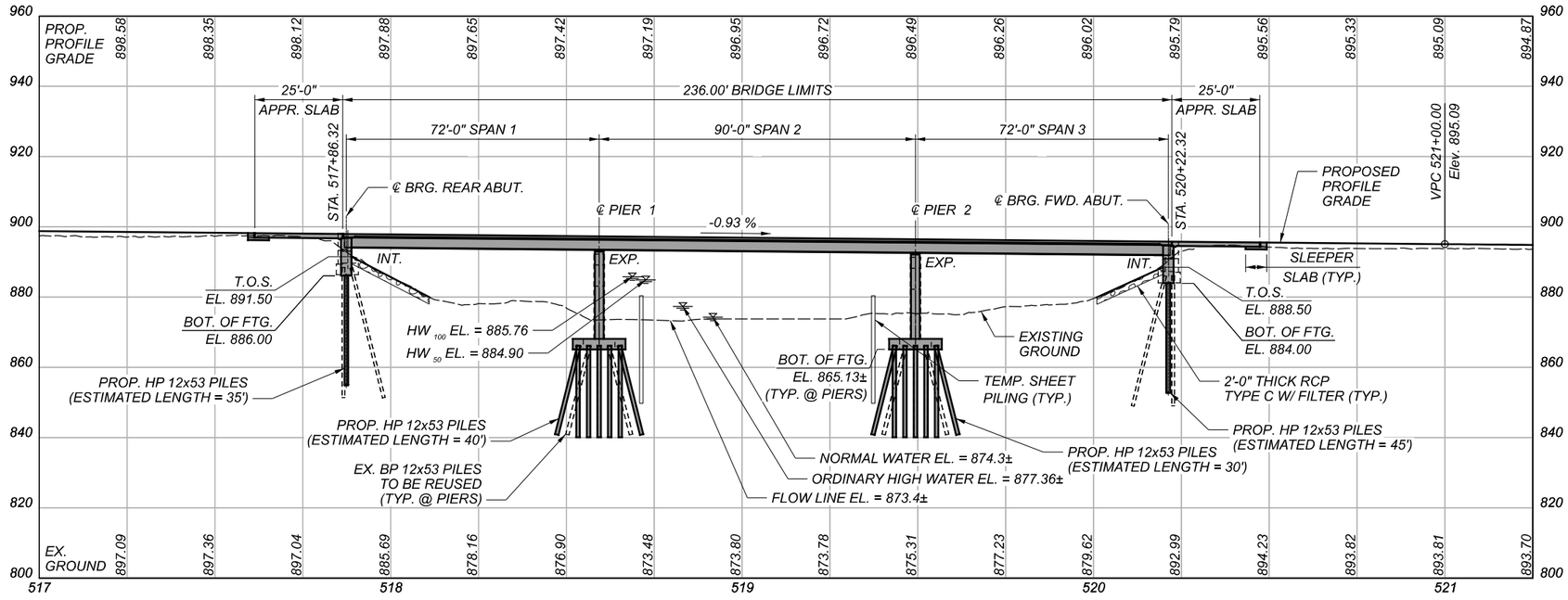
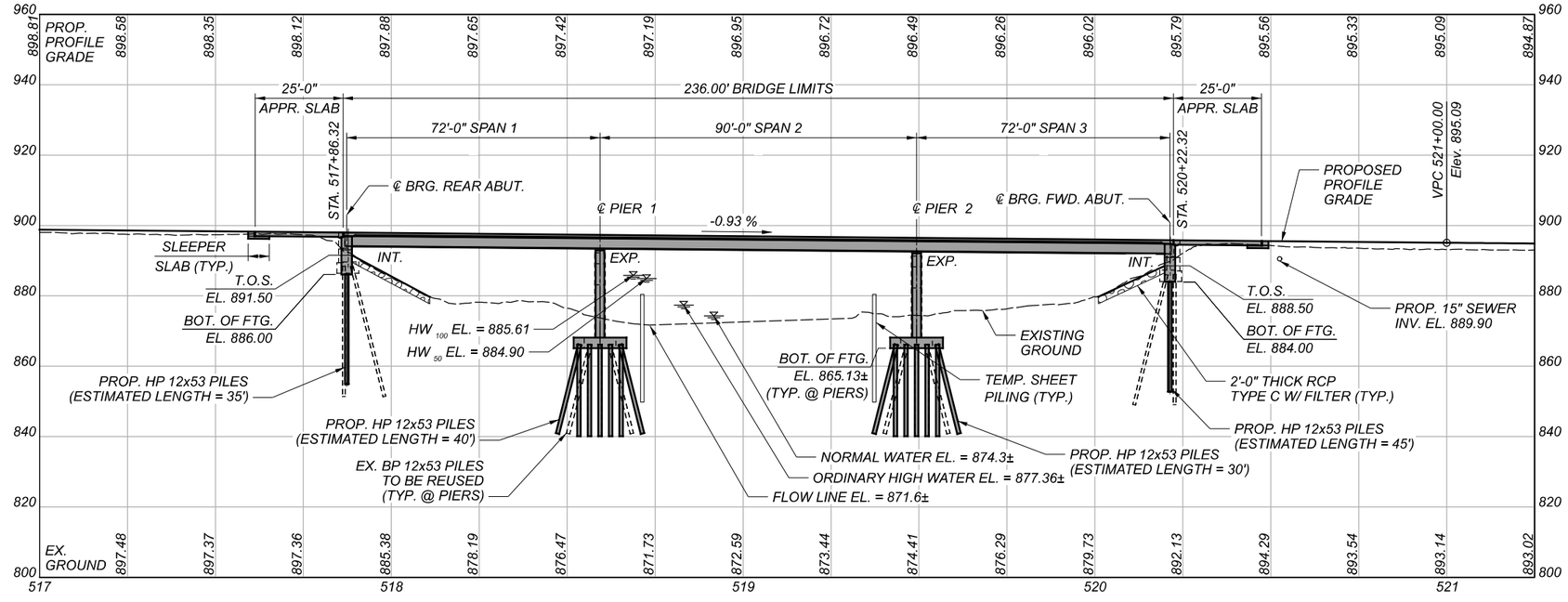


PROFILE ALONG PROFILE GRADE - LEFT BRIDGE



PROFILE ALONG PROFILE GRADE - RIGHT BRIDGE

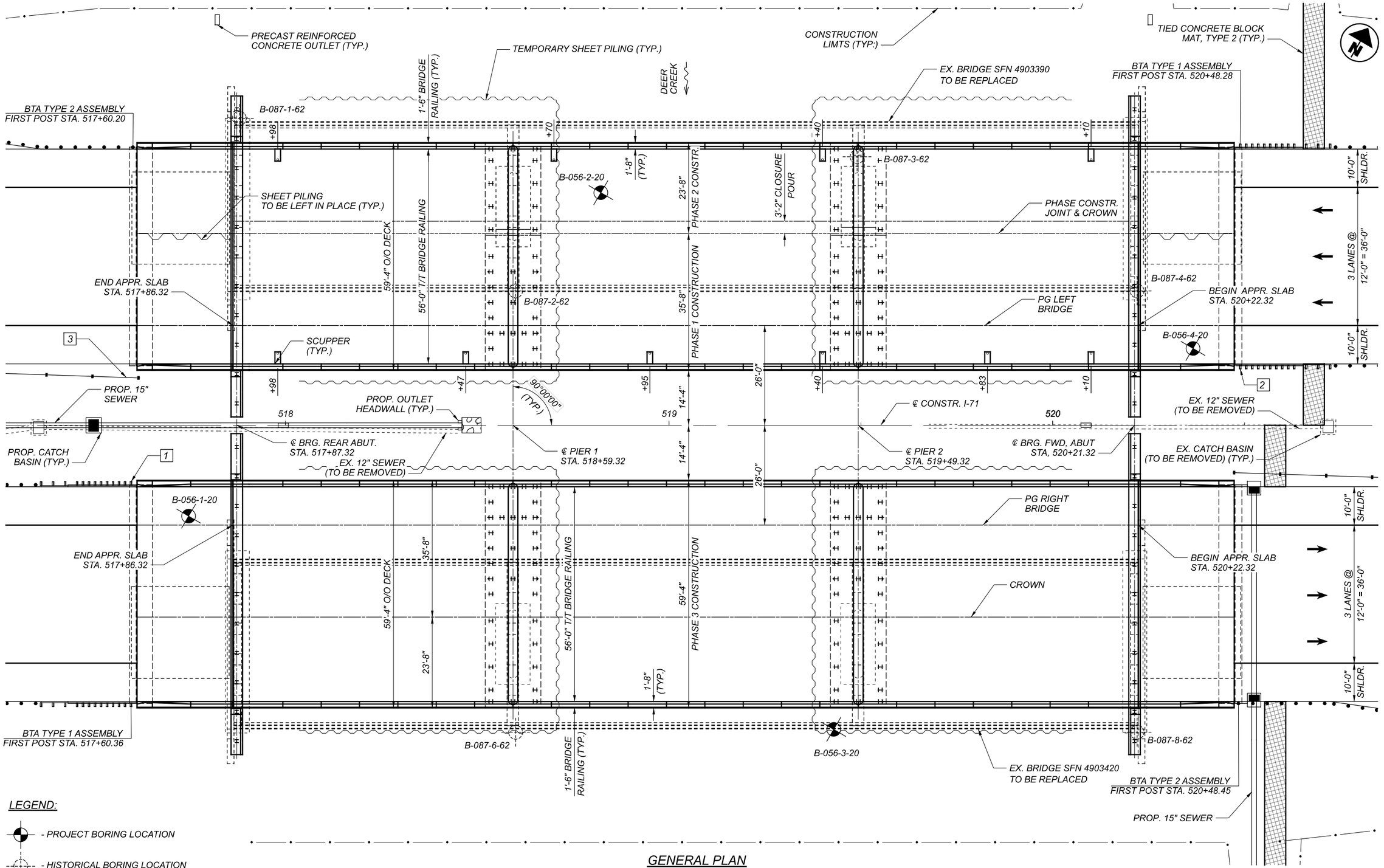
HORIZONTAL SCALE IN FEET
0 10 20 40

SITE PLAN (2 OF 2)
BRIDGE NO. MAD-00071-08.740L&R
IR 71 OVER DEER CREEK

SFN	4903391
SFN	4903421
DESIGN AGENCY	E.L. ROBINSON ENGINEERING 1468 West 9th St, Suite 800 Cleveland, Ohio 550 Goodale Blvd, Suite 180 Grandview Heights, Ohio
DESIGNER	MRV
CHECKER	TAS
REVIEWER	DFT 06/29/21
PROJECT ID	107630
SUBSET	2
TOTAL	52
SHEET	P.550
TOTAL	882

MAD/PIC-71-7.30/0.00

MODEL: Profile Sheets PAPERSIZE: 17x11 (in.) DATE: 6/29/2021 TIME: 3:19:08 PM USER: tsheldon
P:_OHDOT_Worksets\107630\400-Engineering\Structures\4903391\Sheets\107630_4903391_SP001.dgn



LEGEND:

- PROJECT BORING LOCATION
- HISTORICAL BORING LOCATION
- 1 - BTA TYPE 1 ASSEMBLY - FIRST POST STA. 517+60.36
- 2 - BTA TYPE 1 ASSEMBLY - FIRST POST STA. 520+48.28
- 3 - BTA TYPE 1 ASSEMBLY DURING PHASE 2 CONSTRUCTION. SEE MOT PLANS FOR MORE INFORMATION.

GENERAL PLAN

GENERAL PLAN
BRIDGE NO. MAD-00071-08.740L&R
IR 71 OVER DEER CREEK

MAD/PIC-71-7.30/0.00

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 6/29/2021 TIME: 3:21:04 PM USER: tshelton
P:_OHDOT_Worksets\107630\400=Engineering\Structures\4903391\Sheets\107630_4903391_SG001.dgn

SFN 4903391
SFN 4903421
DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER	CHECKER
MRV	TAS

REVIEWER
DFT 06/29/21

PROJECT ID
107630

SUBSET	TOTAL
3	52

SHEET	TOTAL
P.551	882

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-15	REVISED	7/17/2015
AS-2-15	REVISED	1/18/2019
BP-5.1	REVISED	1/18/2019
DM-1.1	REVISED	7/17/2020
GSD-1-19	DATED	1/15/2021
MGS-3.1	REVISED	1/19/2018
MGS-3.2	REVISED	1/18/2013
PCB-91	REVISED	7/17/2020
SBR-1-20	REVISED	7/17/2020

AND THE FOLLOWING SUPPLEMENTAL SPECFICATION(S):

800	DATED	1/15/2021

DESIGN SPECIFICATIONS:

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

VEHICULAR LIVE LOAD: HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KSF

DESIGN STRESSES:

DESIGN DATA :
CONCRETE CLASS QC2- COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI
STRUCTURAL STEEL - ASTM A709 GRADE 50W - YIELD STRENGTH 50 KSI
STEEL H-PILES - ASTM A572 - YIELD STRENGTH 50 KSI

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

EXISTING BRIDGE PLANS:

FOR INFORMATION NOT SHOWN, EXISTING BRIDGE PLANS MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE DISTRICT 6 OFFICE, 400 EAST WILLIAM STREET, DELAWARE, OHIO, 43015.

MAINTENANCE OF TRAFFIC:

FOR MAINTENANCE OF TRAFFIC PLANS, SEE ROADWAY SHEETS.

UTILITIES:

FOR UTILITY NOTES, SEE ROADWAY SHEETS.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURES AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS SECTIONS 102.05, 105.02 AND 513.04 FOR FURTHER INFORMATION.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE):

THE ULTIMATE BEARING VALUE IS 210 KIPS PER PILE FOR THE ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 169 KIPS PER PILE FOR THE PIER PILES. THE UBV FOR THE ABUTMENT PILES DOES NOT INCLUDE ANY ADDITIONAL VALUE FOR POSSIBLE LOSS OF FRICTIONAL RESISTANCE DUE TO THE ESTIMATED ZERO SCOUR AT THE ABUTMENTS. THE UBV FOR THE PIER PILES INCLUDES AN ADDITIONAL 11 KIPS FOR PIER 1 AND 9 KIPS FOR PIER 2 DUE TO THE POSSIBILITY OF LOSINGS 6.38 FEET AND 5.67 FEET OF FRICTIONAL RESISTANCE AT PIER 1 AND 2 DUE TO SCOUR, RESPECTIVELY. DRIVE ABUTMENT PILES TO THE UBV OR A TIP ELEVATION OF 851.10 FEET FOR THE REAR ABUTMENT AND 839.00 FEET FOR THE FORWARD ABUTMENT. DRIVE PIER PILES TO THE UBV OR A TIP ELEVATION OF 840.13 FEET FOR PIER 1 AND 835.13 FEET FOR PIER 2.

ABUTMENT PILES:
22 PILES 40 FEET LONG, ORDER LENGTH (REAR ABUTMENT)
22 PILES 50 FEET LONG, ORDER LENGTH (FORWARD ABUTMENT)
1 DYNAMIC LOAD TESTING ITEM

PIER PILES:
70 PILES 45 FEET LONG, ORDER LENGTH (PIER 1)
70 PILES 35 FEET LONG, ORDER LENGTH (PIER 2)
1 DYNAMIC LOAD TESTING ITEM

PILE DRIVING:

THE MINIMUM RATED ENERGY OF THE HAMMER USED TO INSTALL THE PILES SHALL BE 42,500 FT/LBS. ENSURE THAT STRESSES IN THE PILES DURING DRIVING DO NOT EXCEED 45,000 PSI.

PILE SPLICES:

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN C&MS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

DECK PLACEMENT ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.2 K FOR STRUCTURE 4903391 DURING PHASE 1 AND PHASE 2. AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.5 K FOR STRUCTURE 4903421 DURING PHASE 3.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48".

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN:

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING STEEL PILING TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH STEEL PILING THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05.

SUBSTRUCTURE (PIER) CONCRETE REMOVAL: REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH PILING THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

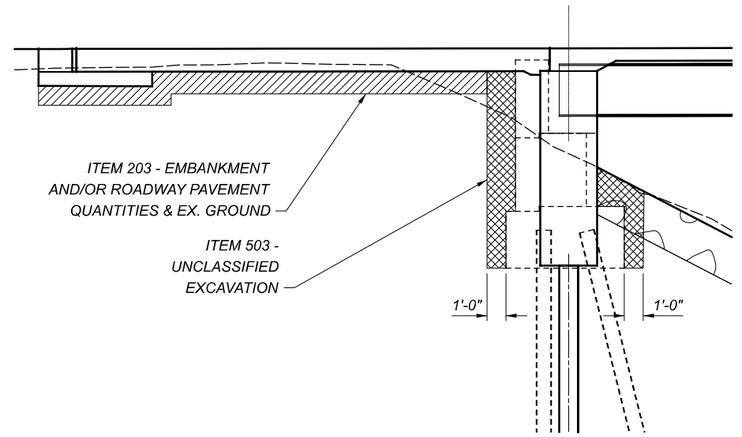
REMOVE REAR ABUTMENTS TO ELEV. 885.00.
REMOVE FORWARD ABUTMENTS TO ELEV. 883.00.

ITEM 203 - EMBANKMENT, AS PER PLAN

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT BETWEEN STATIONS 516+85.00 TO 517+86.32 AND BETWEEN STATIONS 520+22.32 TO 521+25.00. QUANTITY PAID FOR WITH ROADWAY ITEMS.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN:

THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN. THE DEPARTMENT WILL NOT MAKE ADDITIONAL PAYMENT FOR PROVIDING AN ALTERNATE DESIGN.



ITEM 503 PAY LIMITS DIAGRAM

GENERAL NOTES (1 OF 2)
BRIDGE NO. MAD-00071-08.740L&R
IR 71 OVER DEER CREEK

SFN 4903391
SFN 4903421

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER	CHECKER
TAS	MRV

REVIEWER DFT 06/29/21

PROJECT ID 107630

SUBSET	TOTAL
4	52

SHEET	TOTAL
P.552	882

MAD/PIC-71-7.30/0.00

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ITEM 514 - FIELD PAINTING OF STRUCTURAL STEEL, FINISH COAT:

THE COLOR OF THE FINISH COAT SHALL BE FEDERAL COLOR NO. 595B - 20045 OR 20059 (THE COLOR OF WEATHERING STEEL).

ABBREVIATIONS:

ABUT. - ABUTMENT
ADT - AVERAGE DAILY TRAFFIC
ADTT - AVERAGE DAILY TRUCK TRAFFIC
APPR. - APPROACH
B - BOTTOM
℄ - BASELINE
B.F. - BACK FACE
BM - BENCHMARK
BOT./BOTT. - BOTTOM
BRG. - BEARING
℄ - CENTERLINE
C/C - CENTER TO CENTER
C.I.P. - CAST-IN-PLACE
C.J. - CONSTRUCTION JOINT
CLR. - CLEAR
C&MS - CONSTRUCTION AND MATERIAL SPECIFICATIONS
CONC. - CONCRETE
CONSTR./CONST. - CONSTRUCTION
CVN - CHARPY V-NOTCH
DIA. - DIAMETER
DIM. - DIMENSION
DWG. - DRAWING
E - EAST
EB - EASTBOUND
E.F. - EACH FACE
EL. OR ELEV. - ELEVATION
EOP - EDGE OF PAVEMENT
EQ. - EQUAL
EST. - ESTIMATED
EX. - EXISTING
EXP. - EXPANSION
F.A. - FORWARD ABUTMENT
F/F - FACE TO FACE
F.F. - FRONT FACE
F.S. - FIELD SPLICE
FT. - FOOT OR FEET
FWD. - FORWARD
HMWM - HIGH MOLECULAR WEIGHT METHACRYLATE
HW - HIGH WATER
IN. - INCH
JT. - JOINT
LB - LEFT BRIDGE
LEOD - LEFT EDGE OF DECK
L.F. - LEFT FORWARD
LT. - LEFT
LTBR - LEFT TOE BRIDGE RAILING
MAX. - MAXIMUM
MIN. - MINIMUM
MISC. - MISCELLANEOUS
MSE - MECHANICALLY STABILIZED EARTH
N - NORTH
NB - NORTHBOUND
NO. - NUMBER
N.P.C.P.P. - NON-PERFORATED CORRUGATED PLASTIC PIPE
OHWM - ORDINARY HIGH WATER MARK
O/O - OUT TO OUT
P.C.P.P. - PERFORATED CORRUGATED PLASTIC PIPE
P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
PG - PROFILE GRADE
PROP. - PROPOSED
PSF - POUNDS PER SQUARE FOOT
P.V.I. - POINT OF VERTICAL INTERSECTION
Q - FLOW RATE
R - RADIUS
R.A. - REAR ABUTMENT
RB - RIGHT BRIDGE
RCP - ROCK CHANNEL PROTECTION
REOD - RIGHT EDGE OF DECK
REQD. - REQUIRED
R.F. - RIGHT FORWARD
R.R. - RAILROAD
RT. - RIGHT
RTBR - RIGHT TOE BRIDGE RAILING
R/W - RIGHT OF WAY
S - SOUTH
SB - SOUTHBOUND
SDC - SUPERPLASTICIZED DENSE CONCRETE
SER. - SERIES
SHLDR - SHOULDER
SLPR. - SLEEPER
SPA. - SPACE OR SPACES
STA. - STATION
STD. - STANDARD
STR - STRAIGHT
T - TOP
T&B - TOP & BOTTOM
TBR - TO BE REMOVED
TEMP. - TEMPORARY
T.O.S. OR T/S - TOP OF SLOPE
T/T - TOE TO TOE
TYP. - TYPICAL
U.N.O. - UNLESS NOTED OTHERWISE
VAR. - VARIES
V - VELOCITY
W - WEST
WB - WESTBOUND
WWR - WELDED WIRE REINFORCEMENT

PROPOSED WORK:

1. EXISTING LEFT AND RIGHT BRIDGE TO BE REMOVED EXCEPT PIER PILES THAT ARE TO BE INCORPORATED INTO THE NEW BRIDGE.
2. PROPOSED LEFT AND RIGHT BRIDGES TO BE CONSTRUCTED INCORPORATING EXISTING PILES INTO NEW PIERS.
3. TRAFFIC AND CONSTRUCTION TO BE PERFORMED IN PHASES.

GENERAL NOTES (2 OF 2)
BRIDGE NO. MAD-00071-08.740L&R
IR 71 OVER DEER CREEK

SFN 4903391
SFN 4903421

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER	CHECKER
TAS	MRV

REVIEWER DFT 06/29/21

PROJECT ID 107630

SUBSET	TOTAL
5	52

SHEET	TOTAL
P.553	882

MAD/PIC-71-7.30/0.00

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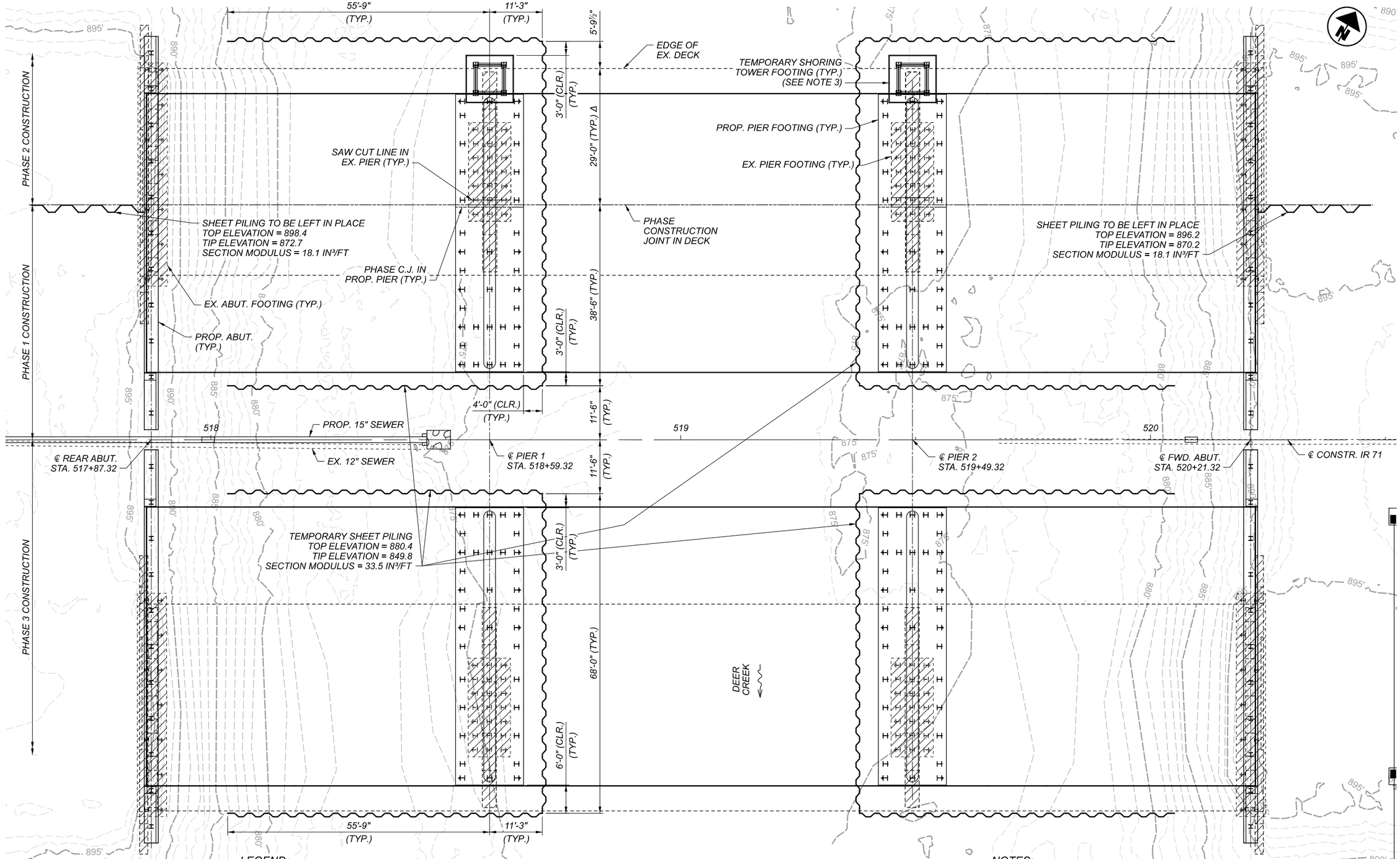

LEGEND:

▨ - ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

Δ - DUE TO LOW HEAD ROOM BELOW THE EXISTING BRIDGE DECK IN PHASE 1 CONSTRUCTION, FULL LENGTH SHEETING CANNOT BE INSTALLED. CONTRACTOR SHALL PROVIDE SHORTER SECTIONS OF SHEETING AND SPLICE THEM TOGETHER WITH FULL PENETRATION WELDS IN ORDER TO FACILITATE DRIVING OF THE SHEETING BELOW THE EXISTING BRIDGE DECK.

SHORING PLAN

NOTES:

1. TEMPORARY SHEET PILING AT THE PIERS SHALL BE PAID FOR UNDER ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN.
2. SHEET PILING TO BE LEFT IN PLACE AT THE ABUTMENTS SHALL BE PAID FOR UNDER ITEM 504 - STEEL SHEET PILING LEFT IN PLACE, AS PER PLAN (SECTION MODULUS = 18.1 IN³/FT)
3. FOR TEMPORARY SHORING TOWER DETAILS, SEE SHEET 15 / 52 .
4. THE CONTRACTOR MAY ELECT TO USE A DESIGN DIFFERENT THAN THE ONE SHOWN IN THESE PLANS, PROVIDED THE DESIGN IS PREPARED PER SECTION 501.05 OF THE C&MS.

EXCAVATION BRACING
BRIDGE NO. MAD-00071-08.740L&R
IR 71 OVER DEER CREEK

SFN 4903391
SFN 4903421
DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER	CHECKER
TAS	JOL

REVIEWER DFT 06/29/21
PROJECT ID 107630
SUBSET 11 TOTAL 52
SHEET P.559 TOTAL 882

MAD/PIC-71-7.30/0.00

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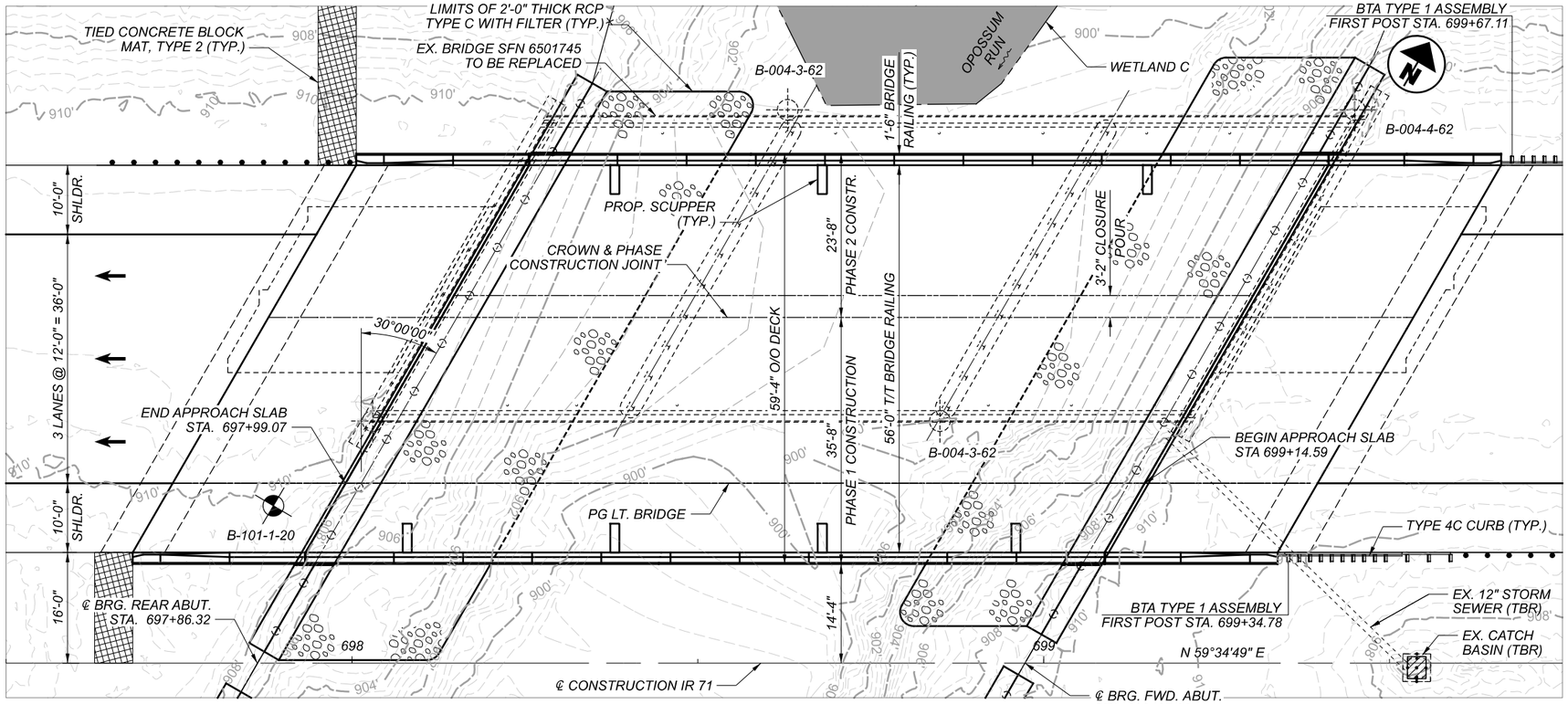
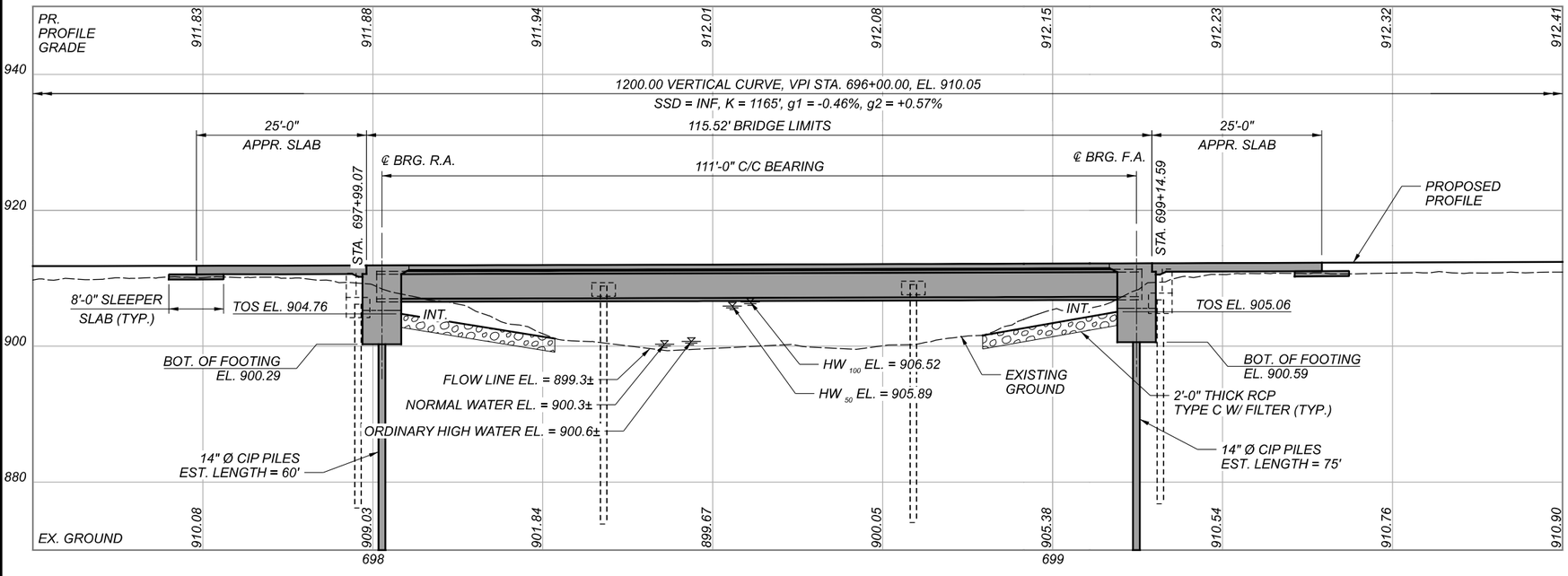


PLAN



PROFILE ALONG PROFILE GRADE IR 71 SOUTHBOUND

BENCHMARK DATA

BM #1 STA.	697+94.59	ELEV.	909.75	OFFSET	81.69' LT.
BM #2 STA.	708+36.03	ELEV.	914.03	OFFSET	108.88' LT.

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEETS .

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. A DATUM CORRECTION OF -0.70' WAS USED TO DETERMINE EXISTING ELEVATIONS.

DESIGN TRAFFIC:

2024 ADT = 55,000 2024 ADTT = 11,000
2044 ADT = 84,500 2044 ADTT = 16,900
DIRECTIONAL DISTRIBUTION = 0.53

LEGEND

BORING LOCATION — HISTORICAL BORING

TBR - TO BE REMOVED

HYDRAULIC DATA

DRAINAGE AREA = 9.87 SQ. MILES
Q (50) = 1880 CFS V (50) = 3.7 FT/S
Q (100) = 2230 CFS V (100) = 4.1 FT/S
STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 0.44 FEET.

EXISTING STRUCTURE

TYPE: 3-SPAN CONTINUOUS SLAB BRIDGE ON INTEGRAL ABUTMENTS AND CAPPED PILE PIERS

SPANS: 36'-0"± - 45'-0"± - 36'-0"± C/C BEARINGS
ROADWAY: 41'-0"± TOE/TOE RAILING
LOADING: CF-2000 (57) AND AASHTO ALTERNATE LOADING
SKEW: 30°00'00"
WEARING SURFACE: 1¾"± LATEX MODIFIED CONCRETE OVERLAY
APPROACH SLABS: 25'-0"± LONG (AS-1-15 & AS-2-15)
ALIGNMENT: TANGENT
CROWN: 0.016± FT/FT
STRUCTURE FILE NUMBER: 6501745
DATE BUILT: 1964 REHABILITATED: 2019
DISPOSITION: TO BE REPLACED

PROPOSED STRUCTURE

TYPE: SINGLE-SPAN PRESTRESSED CONCRETE I-BEAMS COMPOSITE WITH REINFORCED CONCRETE DECK ON INTEGRAL ABUTMENTS

SPANS: 111'-0" C/C BEARING
ROADWAY: 56'-0" TOE/TOE BRIDGE RAILING
LOADING: HL93 AND 60 PSF FUTURE WEARING SURFACE
SKEW: 30°00'00"
WEARING SURFACE: 1" MONOLITHIC
APPROACH SLABS: 25'-0" LONG, TYPE A INSTALLATION (AS-1-15 & AS-2-15)
ALIGNMENT: TANGENT
CROWN: 0.016 FT/FT
DECK AREA: 6,854 SF

COORDINATES: LATITUDE 39°47'22.69" N
LONGITUDE 83°14'17.43" W

HORIZONTAL SCALE IN FEET
0 5 10 20

SITE PLAN (SHEET 1 OF 2)
BRIDGE NO. PIC-00071-00.460L&R
IR 71 OVER OPOSSUM RUN

SFN	6501746
SFN	6501835

DESIGN AGENCY

E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER	CHECKER
FIB	JOL

REVIEWER: DFT 06/29/21

PROJECT ID: 107630

SUBSET	TOTAL
1	39

SHEET	TOTAL
P.601	882

MAD/PIC-71-7.30/0.00

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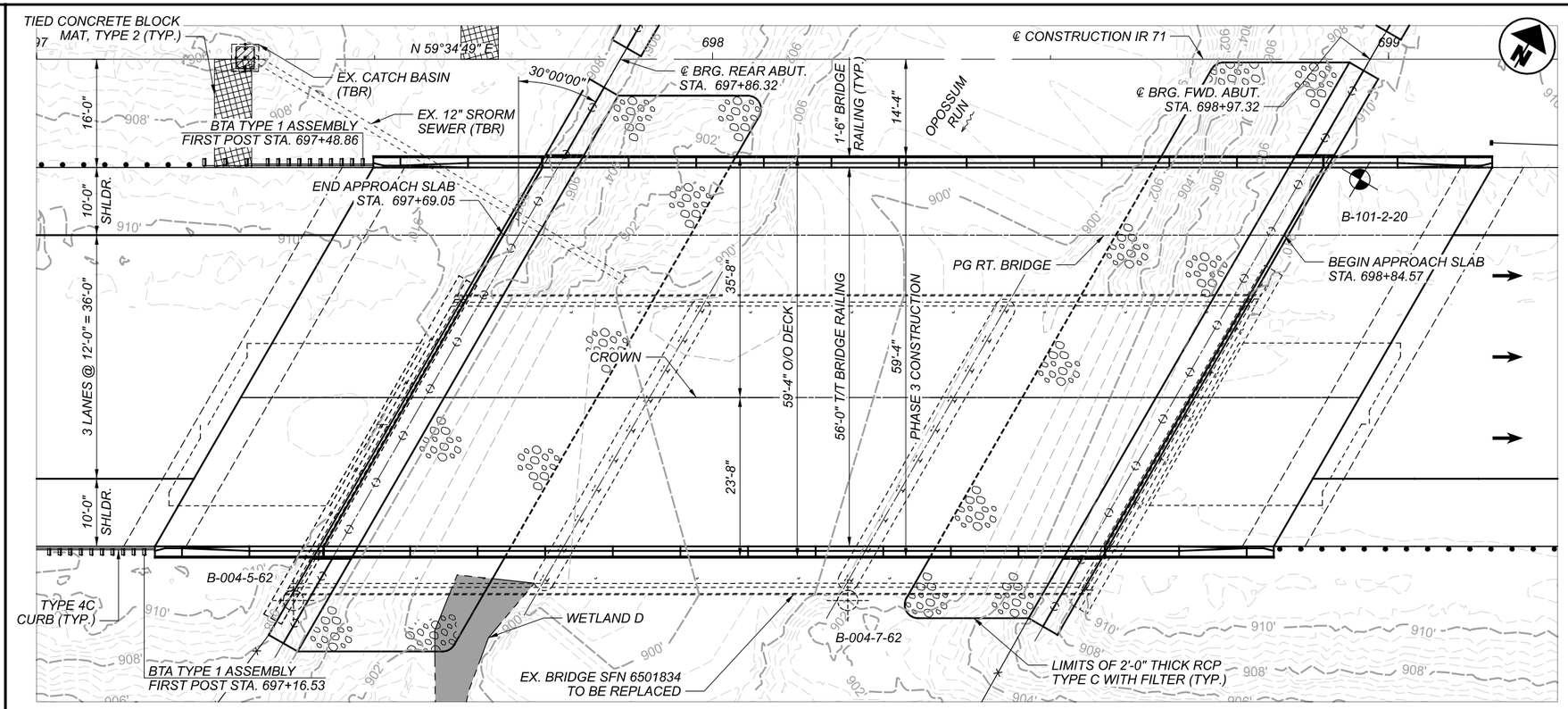

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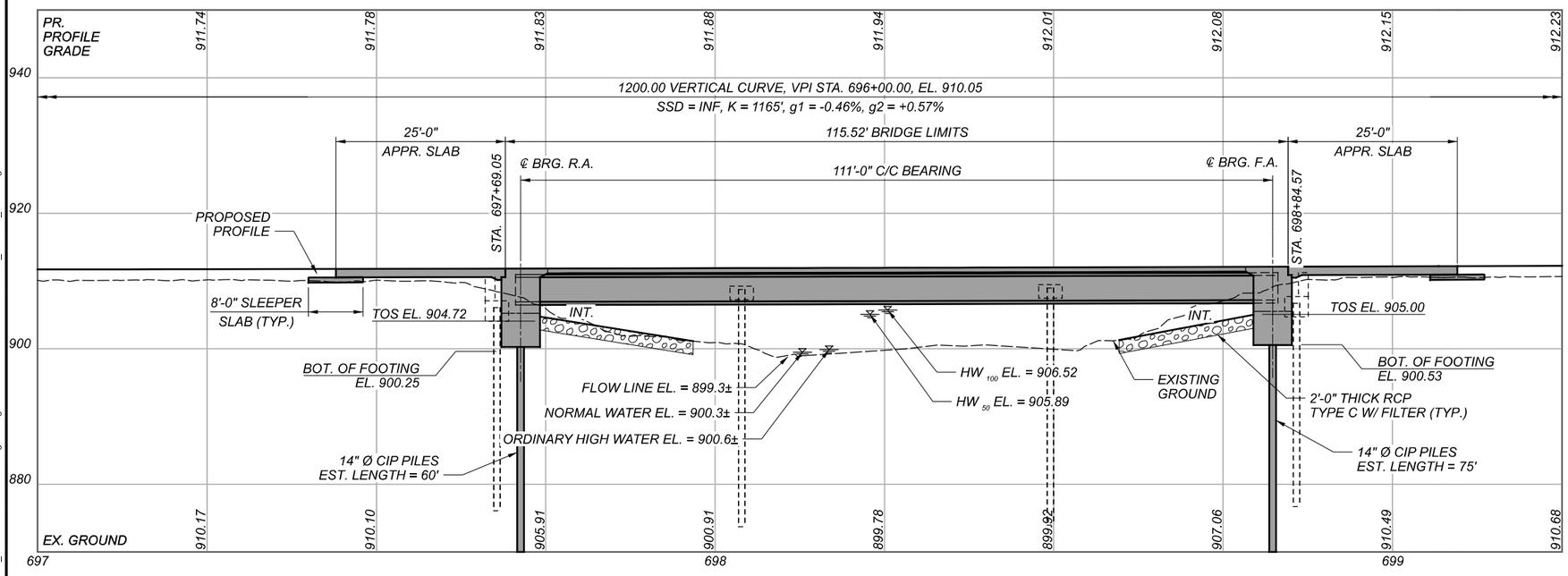

PROFILE ALONG PROFILE GRADE IR 71 NORTHBOUND

BENCHMARK DATA

BM #1 STA.	697+94.59	ELEV.	909.75	OFFSET	81.69' LT.
BM #2 STA.	708+36.03	ELEV.	914.03	OFFSET	108.88' LT.

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEETS .

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. A DATUM CORRECTION OF -0.70' WAS USED TO DETERMINE EXISTING ELEVATIONS.

DESIGN TRAFFIC:

2024 ADT = 55,000 2024 ADTT = 11,000
2044 ADT = 84,500 2044 ADTT = 16,900
DIRECTIONAL DISTRIBUTION = 0.53

LEGEND

BORING LOCATION — HISTORICAL BORING

TBR - TO BE REMOVED

HYDRAULIC DATA

DRAINAGE AREA = 9.87 SQ. MILES
Q (50) = 1880 CFS V (50) = 3.7 FT/S
Q (100) = 2230 CFS V (100) = 4.1 FT/S
STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 0.44 FEET.

EXISTING STRUCTURE

TYPE: 3-SPAN CONTINUOUS SLAB BRIDGE ON INTEGRAL ABUTMENTS AND CAPPED PILE PIERS

SPANS: 36'-0"± - 45'-0"± - 36'-0"± C/C BEARINGS
ROADWAY: 41'-0"± TOE/TOE RAILING
LOADING: CF-2000 (57) AND AASHTO ALTERNATE LOADING
SKEW: 30°00'00"
WEARING SURFACE: 1¾"± LATEX MODIFIED CONCRETE OVERLAY
APPROACH SLABS: 25'-0"± LONG (AS-1-15 & AS-2-15)
ALIGNMENT: TANGENT
CROWN: 0.016± FT/FT
STRUCTURE FILE NUMBER: 6501834
DATE BUILT: 1964 REHABILITATED: 2019
DISPOSITION: TO BE REPLACED

PROPOSED STRUCTURE

TYPE: SINGLE-SPAN PRESTRESSED CONCRETE I-BEAMS COMPOSITE WITH REINFORCED CONCRETE DECK ON INTEGRAL ABUTMENTS

SPANS: 111'-0" C/C BEARING
ROADWAY: 56'-0" TOE/TOE BRIDGE RAILING
LOADING: HL93 AND 60 PSF FUTURE WEARING SURFACE
SKEW: 30°00'00"
WEARING SURFACE: 1" MONOLITHIC
APPROACH SLABS: 25'-0" LONG, TYPE A INSTALLATION (AS-1-15 & AS-2-15)
ALIGNMENT: TANGENT
CROWN: 0.016 FT/FT
DECK AREA: 6,854 SF

COORDINATES: LATITUDE 39°47'22.10" N
LONGITUDE 83°14'17.43" W

HORIZONTAL SCALE IN FEET
0 5 10 20

SITE PLAN (2 OF 2)
BRIDGE NO. PIC-00071-00.460L&R
IR 71 OVER OPOSSUM RUN

SFN 6501746
SFN 6501835

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER	CHECKER
FIB	JOL

REVIEWER DFT 06/29/21
PROJECT ID 107630
SUBSET 2 TOTAL 39
SHEET P.602 TOTAL 882

MAD/PIC-71-7.30/0.00

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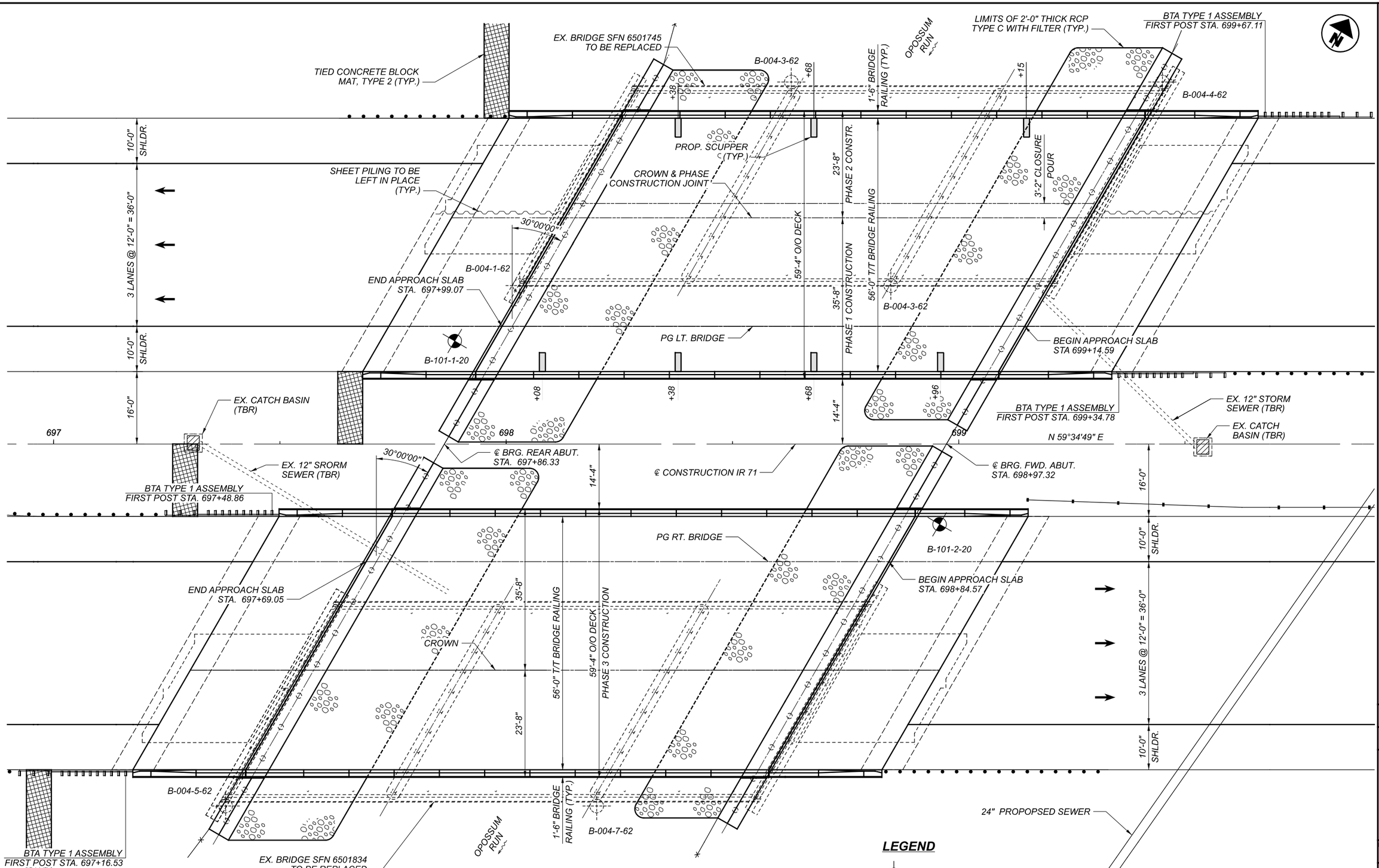

GENERAL PLAN

LEGEND

- PROJECT BORING LOCATION
- HISTORICAL BORING LOCATION

TBR - TO BE REMOVED

GENERAL PLAN
BRIDGE NO. PIC-00071-00.460L&R
IR 71 OVER OPOSSUM RUN

SFN	6501746
SFN	6501835
DESIGN AGENCY	E.L. ROBINSON ENGINEERING
	1468 West 9th St, Suite 800 Cleveland, Ohio
	950 Goodale Blvd, Suite 180 Grandview Heights, Ohio
DESIGNER	FIB
CHECKER	JOL
REVIEWER	DFT 06/29/21
PROJECT ID	107630
SUBSET	3
TOTAL	39
SHEET	P.603
TOTAL	882

MAD/PIC-71-7.30/0.00

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 6/29/2021 TIME: 2:53:47 PM USER: mdrockton
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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-15	REVISED	7/17/2015
AS-2-15	REVISED	1/18/2019
PCB-91	REVISED	7/17/2020
PSID-1-13	REVISED	1/15/2021
SBR-1-20	REVISED	7/17/2020

AND THE FOLLOWING SUPPLEMENTAL SPECFICATION(S):

800	DATED	1/21/2022

DESIGN SPECIFICATIONS:

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THI STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

VEHICULAR LIVE LOAD: HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KSF

DESIGN STRESSES:

DESIGN DATA :
CONCRETE CLASS QC2- COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

WELDED WIRE FABRIC - 70 KSI

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (RELEASE) - 5.5 KSI
COMPRESSIVE STRENGTH (FINAL) - 7.0 KSI

PRESTRESSING STRAND:
AREA - 0.217 SQ. IN.
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202.5 KSI (LOW RELAXATION STRANDS)

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

EXISTING BRIDGE PLANS:

FOR INFORMATION NOT SHOWN, EXISTING BRIDGE PLANS MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE DISTRICT 6 OFFICE, 400 EAST WILLIAM STREET, DELAWARE, OHIO, 43015.

MAINTENANCE OF TRAFFIC:

FOR MAINTENANCE OF TRAFFIC PLANS, SEE ROADWAY SHEETS.

UTILITIES:

FOR UTILITY NOTES, SEE ROADWAY SHEETS.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURES AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS SECTIONS 102.05, 105.022 AND 513.04 FOR FURTHER INFORMATION.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

PILE DRIVING:

THE MINIMUM RATED ENERGY OF THE HAMMER USED TO INSTALL THE PILES SHALL BE 42,500 FT/LBS. ENSURE THAT STRESSES IN THE PILES DURING DRIVING DO NOT EXCEED 31,500 PSI.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE):

THE ULTIMATE BEARING VALUE (UBV) IS 358 KIPS PER PILE FOR THE REAR AND FORWARD ABUTMENT PILES.

ABUTMENT PILES:
24 PILES 60' LONG, ORDER LENGTH 65' - REAR ABUTMENT
24 PILES 75' LONG, ORDER LENGTH 80' - FORWARD ABUTMENT
1 DYNAMIC LOAD TESTING ITEMS

DECK PLACEMENT ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.3 K FOR STRUCTURE 6501746 DURING PHASE 1 AND 2.2 K DURING PHASE 2. AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.7 K FOR STRUCTURE 6501835 DURING PHASE 3.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".
A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.
A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65"

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN:

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05.

SUBSTRUCTURE CONCRETE REMOVAL: REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER.

REMOVE REAR ABUTMENTS TO ELEV. 899.29 LEFT, 899.25 RIGHT.
REMOVE FORWARD ABUTMENTS TO ELEV. 899.59 LEFT, 899.53 RIGHT.

ITEM 203 - EMBANKMENT, AS PER PLAN

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT BETWEEN STATIONS 697+00.00 TO 697+99.07 AND BETWEEN STATIONS 699+14.59 TO 700+15.00.

ITEM 504 - STEEL SHEET PILING LEFT IN PLACE, AS PER PLAN:

THE DESIGN SHOWN IN THE TABLE BELOW FOR TEMPORARY SUPPORT OF EXCAVATION AT THE ABUTMENTS IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN IN THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE ABUTMENTS AT THE SQUARE FOOT PRICE FOR STEEL SHEET PILING LEFT IN PLACE, AS PER PLAN. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

THE STEEL SHEET PILING SHALL CONFORM TO ASTM A328 AND SHALL HAVE THE FOLLOWING:

LOCATION	REAR & FORWARD ABUTMENTS
SECTION MODULUS REQUIRED (CU. IN/FT.) (MIN.)	18.1
MINIMUM YIELD STRESS, Fy (KSI)	39
DESIGN EXCAVATION DEPTH (FT.)	12.0
DESIGN EMBEDMENT DEPTH (FT.)	12.0
DESIGN TOTAL DEPTH (FT.)	24.0

ABBREVIATIONS:

ABUT. - ABUTMENT
ADT - AVERAGE DAILY TRAFFIC
ADTT - AVERAGE DAILY TRUCK TRAFFIC
APPR. - APPROACH
B - BOTTOM
℄ - BASELINE
B.F. - BACK FACE
BM - BENCHMARK
BOT. OR BTM. - BOTTOM
BRG. - BEARING
℄ - CENTERLINE
C/C - CENTER TO CENTER
C.I.P. - CAST-IN-PLACE
C.J. - CONSTRUCTION JOINT
CLR. - CLEAR
C&MS - CONSTRUCTION AND MATERIAL SPECIFICATIONS
CONC. - CONCRETE
CONST./CONSTR. - CONSTRUCTION
CVN - CHARPY V-NOTCH
DIA. - DIAMETER
DIM. - DIMENSION
DWG. - DRAWING
E - EAST
EB - EASTBOUND
E.F. - EACH FACE
EL. OR ELEV. - ELEVATION
EOP - EDGE OF PAVEMENT
EQ. - EQUAL
EST. - ESTIMATED
EX. - EXISTING
EXP. - EXPANSION
F.A. - FORWARD ABUTMENT
F/F - FACE TO FACE
F.F. - FRONT FACE
F.S. - FIELD SPLICE
FT. - FOOT OR FEET
FWD. - FORWARD
HMWM - HIGH MOLECULAR WEIGHT METHACRYLATE
HW - HIGH WATER
IN. - INCH
JT. - JOINT
LB - LEFT BRIDGE
LEOD - LEFT EDGE OF DECK
L.F. - LEFT FORWARD
LT. - LEFT
LTBR - LEFT TOE BRIDGE RAILING
MAX. - MAXIMUM
MIN. - MINIMUM
MISC. - MISCELLANEOUS
MSE - MECHANICALLY STABILIZED EARTH
N - NORTH
NB - NORTHBOUND
NO. - NUMBER
N.P.C.P.P. - NON-PERFORATED CORRUGATED PLASTIC PIPE
OHWM - ORDINARY HIGH WATER MARK
O/O - OUT TO OUT
P.C.P.P. - PERFORATED CORRUGATED PLASTIC PIPE
P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
PG - PROFILE GRADE
PROP. - PROPOSED
PSF - POUNDS PER SQUARE FOOT
P.V.I. - POINT OF VERTICAL INTERSECTION
Q - FLOW RATE
R - RADIUS
R.A. - REAR ABUTMENT
RB - RIGHT BRIDGE
RCP - ROCK CHANNEL PROTECTION
REOD - RIGHT EDGE OF DECK
REQD. - REQUIRED
R.F. - RIGHT FORWARD
R.R. - RAILROAD
RT. - RIGHT
RTBR - RIGHT TOE BRIDGE RAILING
R/W - RIGHT OF WAY
S - SOUTH
SB - SOUTHBOUND
SDC - SUPERPLASTICIZED DENSE CONCRETE
SER. - SERIES
SHLDR - SHOULDER
SLPR. - SLEEPER
SPA. - SPACE OR SPACES
STA. - STATION
STD. - STANDARD
STR - STRAIGHT
T - TOP
T&B - TOP & BOTTOM
TBR - TO BE REMOVED
TEMP. - TEMPORARY
T.O.S. OR T/S - TOP OF SLOPE
T/T - TOE TO TOE
TYP. - TYPICAL
U.N.O. - UNLESS NOTED OTHERWISE
VAR. - VARIES
V - VELOCITY
W - WEST
WB - WESTBOUND
WWR - WELDED WIRE REINFORCEMENT

GENERAL NOTES

BRIDGE NO. PIC-00071-00.460L&R
IR 71 OVER OPOSSUM RUN

SFN 6501746
SFN 6501835

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER	CHECKER
JOL	MMD

REVIEWER DFT 06/29/21

PROJECT ID 107630

SUBSET	TOTAL
4	39

SHEET	TOTAL
P.604	882

MAD/PIC-71-7.30/0.00

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 6/29/2021 TIME: 2:54:02 PM USER: mdrockton
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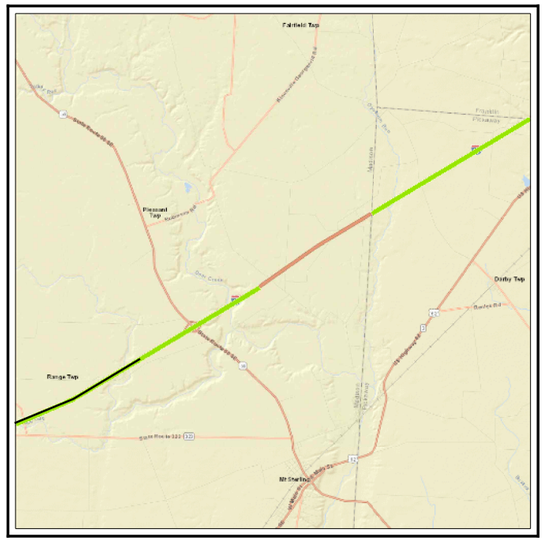
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

MAD-71-4.56
(PROJECT 2)

PLEASANT TOWNSHIP, RANGE TOWNSHIP

MADISON COUNTY



LOCATION MAP

LATITUDE: 39 °44'24" LONGITUDE: 83 °20'33"

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

DESIGN DESIGNATION

CURRENT ADT (2024)	51,000
DESIGN YEAR ADT (2044)	72,000
DESIGN HOURLY VOLUME (2044)	6,500
DIRECTIONAL DISTRIBUTION	52%
TRUCKS (24 HOUR B&C)	27%
DESIGN SPEED	75 MPH
LEGAL SPEED	70 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
RURAL INTERSTATE	
NHS PROJECT	YES

DESIGN EXCEPTIONS

STRUCTURAL CAPACITY, LANE WIDTH - SHEETS 65; 311-336

ADA DESIGN WAIVERS

NONE

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:

E.L. ROBINSON ENGINEERING
950 Goodale Blvd, Suite 180 • Grandview Heights, Ohio 43212
www.elrobinsonengineering.com

INDEX OF SHEETS:

ENGINEER'S SEAL:

SIGNED: _____
DATE: _____

ENGINEER'S SEAL:

SIGNED: _____
DATE: _____

STANDARD CONSTRUCTION DRAWINGS					SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS

FEDERAL PROJECT NUMBER

E 190542

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

MAJOR REHABILITATION OF 2.7 MI OF IR-71 INCLUDING PAVEMENT REPLACEMENT AND WIDENING TO SIX LANES, I-71 STRUCTURE REPLACEMENT, AND OVERHEAD BRIDGE REHAB. PROJECT INCLUDES UPGRADES TO GUARDRAIL, DRAINAGE, AND SIGNING.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	ACRES

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 EXCEPT FOR THE SIDE ROADS AS DESCRIBED ON SHEETS P.16-P.17 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

SHEET TITLE

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER: MLL
REVIEWER: MJC 06/25/21
PROJECT ID: 107630
SHEET: P.1 TOTAL: 393

MAD-71-4.56

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 6/29/2021 TIME: 12:40:47 AM USER: mconnett
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SCHEMATIC PLAN

HORIZONTAL SCALE IN FEET
0 200 400 800

BEGIN WORK STA. 275+50.00
PC 265+86.11
PT 277+12.53
WETLAND R.1
WETLAND R.2
WETLAND S.1
MUD RUN
STRUCTURE NO. MAD-71-0456 L&R
STRUCTURE NO. MAD-71-0470
WETLAND S.2
WETLAND T.1
WETLAND T.2
E190 (542)
BEGIN PROJECT 2 STA. 293+93.00 S.L.M. = 4.50
CR 9 (YANKEETOWN-CHENOWETH RD)
N67°09'12"E
EX GAS TRANSMISSION
℄ CONST IR 71
PI 331+89.28
PC 346+34.69
PT 362+30.86
CP #1
CP #2
N67°07'32"E
WETLAND U
MATCH LINE STA. 375+00 SEE BELOW LEFT
MATCH LINE STA. 375+00 SEE ABOVE RIGHT
WETLAND L.3
WETLAND L.4
STREAM 3
WETLAND L.2
WETLAND K
WETLAND L.1
WETLAND I
STRUCTURE NO. MAD-71-0668 L&R
TR 66 (DYER RD)
WETLAND Q.2
WETLAND Q.1
STRUCTURE NO. MAD-71-0631 L&R
PR. 97"X151" CONDUIT, TYPE A
EX. 8'-5"X13'-5" CMP ARCH
PR. 36" CONDUIT, TYPE A
EX. 36" CMP
WETLAND V.3
WETLAND V.1
WETLAND V.2
GALLBREATH DITCH
WETLAND J
STREAM 2
BRADFORD CREEK
WETLAND P.1
WETLAND P.2
WETLAND P.4
WETLAND P.3
END PROJECT 2 STA. 444+85.00 S.L.M. = 7.36
BEGIN PROJECT 1 STA. 441+85.00 S.L.M. = 7.30
℄ CONST IR 71
CP #3
EX. 19"X30" ELLIPTICAL RCP
N59°40'36"E
STRUCTURE NO. MAD-56-2001
SEE SHEET P.3 FOR SR 56 INTERCHANGE SCHEMATIC
STREAM 4
MATCH LINE STA. 490+00 SEE BELOW LEFT
MATCH LINE STA. 490+00 SEE ABOVE RIGHT
WETLAND G.2
WETLAND G.1
DEER CREEK
STRUCTURE NO. MAD-71-0874 L&R
WETLAND M
POTENTIAL JURISDICTIONAL DITCH 2
WETLAND O
WETLAND F.1
WETLAND H.1
℄ CONST IR 71
CP #4
PC 541+98.70
PT 552+53.73
CP #5
WETLAND E
CR 54 (KIOUSVILLE-PALESTINE RD)
STRUCTURE NO. MAD-71-0959
ROBINSON DITCH
N55°27'24"E
PR. 63"X98" CONDUIT, TYPE A
EX. 58"X91" ELLIPTICAL RCP
WETLAND Y
CP #11
EX ELECTRIC TRANSMISSION
WETLAND C
EX. 42" RCP
STREAM 1
WETLAND X
WETLAND F.2
WETLAND H.2
WETLAND F.3
WETLAND W
STREAM 5
STREAM 4
STRUCTURE NO. MAD-71-1145
STRUCTURE NO. PIC-71-0046 L&R
STA. 673+36.05
CHILDERS DITCH
MADISON COUNTY
PICKAWAY COUNTY
WETLAND B
WETLAND D
OPOSSUM RUN
N59°34'49"E
CP #6
CP #7
CP #8
CP #12
PC 610+62.38
PT 620+93.32
EX. 54" RCP
CR 56 (WOODS OPOSSUM RUN RD)
WETLAND N.1
WETLAND N.2
PR. 106"X166" CONDUIT, TYPE A
EX. 10'-1"X16'-7" CMP ARCH
PI 790+47.12
STRUCTURE NO. PIC-71-0278
TR 160 (CARSON RD)
STRUCTURE NO. PIC-71-0099
℄ CONST IR 71
EX. 42" RCP
WETLAND A
CP #9
CP #13
CR 3 (LONDON RD)
GREENBRIAR CREEK
PR. 54" CONDUIT, TYPE A
EX. 38"X60" ELLIPTICAL RCP
EX. 42" RCP
POTENTIAL JURISDICTIONAL DITCH 1
PR. 54" CONDUIT, TYPE A
EX. 42" RCP
END PROJECT 1 STA. 841+80.00 S.L.M. = 0.03
E190 (542)
FRANKLIN COUNTY
PICKAWAY COUNTY
CP #10
N59°36'50"E
PR. 96" COND., TYPE A
EX. 96" CMP
END WORK STA. 841+80.00
SPRINGWATER RUN

(1)
CURVE DATA
P.I. = Sta. 271+49.61
Δ = 04°30'20" LT
Dc = 00°24'00"
R = 14,323.94'
T = 563.50'
L = 1,126.42'
E = 11.08'
eMAX = EX.

(2)
CURVE DATA
P.I. = Sta. 354+33.90
Δ = 07°26'56" LT
Dc = 00°28'00"
R = 12,277.67'
T = 799.21'
L = 1,596.17'
E = 25.98'
eMAX = 0.021

(3)
CURVE DATA
P.I. = Sta. 547+26.45
Δ = 04°13'12" LT
Dc = 00°24'00"
R = 14,323.94'
T = 527.75'
L = 1,055.03'
E = 9.72'
eMAX = 0.021

(4)
CURVE DATA
P.I. = Sta. 615+78.07
Δ = 04°07'26" RT
Dc = 00°24'00"
R = 14,323.94'
T = 515.69'
L = 1,030.94'
E = 9.28'
eMAX = 0.021

NOTE: FOR CP POINT INFORMATION, SEE SHEET P.3

DESIGN AGENCY	E.L. ROBINSON ENGINEERING
	1468 West 9th St, Suite 800 Cleveland, Ohio 950 Goodale Blvd, Suite 180 Grandview Heights, Ohio
DESIGNER	SMB
REVIEWER	MJC 06/25/21
PROJECT ID	107630
SHEET	P.2
TOTAL	393

MAD-71-4.56

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 6/29/2021 TIME: 12:41:41 AM USER: mconnett
P:_OHDOT_Worksets\107630\400-Engineering\Roadway\Sheets\107630_GB201.dgn

POINT NAME	STATION	OFFSET	DIRECTION	ELEVATION	NORTHING (GRID)	EASTING (GRID)	NORTHING (GROUND)	EASTING (GROUND)
CP #1	346+35.57	99.58	LT	943.45	634640.6905	1730916.9012	634640.6905	1730916.9012
CP #2	362+29.90	99.96	LT	948.24	635348.5773	1732329.7506	635348.5773	1732329.7506
CP #3	440+00.92	100.11	LT	941.57	639272.1281	1739037.5302	639272.1281	1739037.5302
CP #4	541+97.57	100.03	LT	907.44	644420.1307	1747839.2165	644420.1307	1747839.2165
CP #5	552+52.74	99.82	LT	910.67	644981.7295	1748723.5432	644981.7295	1748723.5432
CP #6	610+63.14	99.93	RT	925.75	648111.8654	1753622.8106	648111.8654	1753622.8106
CP #7	620+93.88	99.88	RT	926.59	648661.4291	1754486.0470	648661.4291	1754486.0470
CP #8	673+36.83	100.13	RT	917.19	651315.8758	1759007.3798	651315.8758	1759007.3798
CP #9	790+46.47	100.04	LT	929.79	657417.4308	1769003.7247	657417.4308	1769003.7247
CP #10	843+41.52	97.41	LT	898.94	660093.5530	1773572.8024	660093.5530	1773572.8024
CP #11	562+00.87	100.44	LT	914.86	645519.8540	1749504.1563	645519.8540	1749504.1563
CP #12	662+00.70	99.89	RT	917.43	650740.8201	1758027.5305	650740.8201	1758027.5305
CP #13	796+01.30	99.82	LT	931.31	657697.9224	1769482.4956	657697.9224	1769482.4956

HORIZONTAL SCALE IN FEET
0 50 100 200

SCHEMATIC PLAN - SR 56 INTERCHANGE

(5)
CURVE DATA
P.I. = Sta. 474+01.56
Δ = 23°43'09" LT
Dc = 03°00'00"
R = 1,909.86'
Ls1 = 300.00'
Ls2 = 0.00'
θs1 = 04°30'00"
LT1 = 200.06'
ST1 = 100.06'
x1 = 299.81'
y1 = 7.85'
k1 = 45.71'
p1 = 0.60'
Lc = 640.64'
Ts = 546.56'
Es = 42.67'
Emax = 0.060

(6)
CURVE DATA
P.I. = Sta. 482+08.89
Δ = 25°30'01" RT
Dc = 17°00'00"
R = 337.03'
T = 76.26'
L = 150'
E = 8.52'
Emax = 0.060

(7)
CURVE DATA
P.I. = Sta. 486+86.55
Δ = 23°32'04" LT
Dc = 06°00'00"
R = 954.93'
T = 198.92'
L = 392.24'
E = 20.50'
Emax = 0.080

(8)
CURVE DATA
P.I. = Sta. 491+55.63
Δ = 06°42'10" LT
Dc = 01°13'00"
R = 4,709.24'
T = 275.77'
L = 550.91'
E = 8.07'
Emax = 0.039

(9)
CURVE DATA
P.I. = Sta. 471+17.62
Δ = 07°01'49" RT
Dc = 01°13'00"
R = 4,709.24'
T = 289.28'
L = 577.83'
E = 8.88'
Emax = 0.039

(10)
CURVE DATA
P.I. = Sta. 476+02.25
Δ = 23°12'23" RT
Dc = 06°00'00"
R = 954.93'
T = 196.08'
L = 386.77'
E = 19.92'
Emax = 0.080

(11)
CURVE DATA
P.I. = Sta. 480+74.21
Δ = 25°30'00" LT
Dc = 17°00'00"
R = 337.03'
T = 76.26'
L = 150.00'
E = 8.52'
Emax = 0.060

(12)
CURVE DATA
P.I. = Sta. 488+90.54
Δ = 23°55'19" RT
Dc = 03°00'00"
R = 1,909.86'
Ls1 = 0.00'
Ls2 = 300.00'
θs2 = 04°30'00"
LT2 = 200.06'
ST2 = 100.06'
x2 = 299.51'
y2 = 15.70'
k2 = 91.29'
p2 = 4.78'
Lc = 647.39'
Ts = 409.43'
Es = 43.39'
Emax = 0.060

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DESIGNER SMB
REVIEWER MJC 06/25/21
PROJECT ID 107630
SHEET P.3 TOTAL 393

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ROUNDING

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

UTILITIES

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

COLUMBIA GAS OF OHIO
(DISTRIBUTION)
3550 JOHNNY APPLESEED COURT
COLUMBUS, OH 43231
(614) 818-2107
ATTN: ROB CALDWELL
rcaldwell@nisource.com

COLUMBIA PIPELINE GROUP
(COLUMBIA GAS TRANSMISSION)
SUGAR GROVE OH, 43155
301 MAPLE ST PO BOX 330
(330) 721-4163
ATTN: JIM SCOTT
James.scott@transcanada.com

AMERICAN ELECTRIC POWER
700 MORRISON RD
GAHANNA, OH 43230
(614) 522-1893
ATTN: MIKE CARR
TI_PublicProjects@aep.com

DAYTON POWER & LIGHT
DISTRIBUTION
1900 DRYDEN RD
DAYTON, OH 45439
(937) 331-4497
ATTN: BILL WARD
William.ward@dplinc.com

SOUTH CENTRAL POWER
2780 COONPATH RD
LANCASTER, OH 43130
ATTN: MIKE CHALFAN
(740) 689-6119
chalfan@southcentralpower.com

CENTURYLINK
441 WEST BROAD ST
PATASKALA, OH 43062
(740) 927-8282
ATTN: DEE REED
delores.a.reed@centurylink.com

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

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 3 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: ODOT STATIC
MONUMENT TYPE: TYPE A

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 18 (ADJUSTED TO PRIOR ODOT CONTROL)

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83 (2011)
ELLIPSOID: GRS-80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO STATE PLANE SOUTH ZONE
COMBINED SCALE FACTOR: 1.0000000000
ORIGIN OF COORDINATE
SYSTEM: 0,0,0

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.

GENERAL NOTES

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DESIGNER
MLL

REVIEWER
MJC 06/25/21

PROJECT ID
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SHEET P.7 | TOTAL 393

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ITEM 614 - MAINTAINING TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS AND RAMPS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS, AND TEH FOLLOWING:

1. A MINIMUM OF TWO ELEVEN FOOT LANES OF TRAFFIC IN EACH DIRECTION ON I-71 SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC.

2. A MINIMUM OF ONE EIGHT FOOT LANE OF TRAFFIC IN EACH DIRECTION ON TR 66 (DYER ROAD) SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT & THE COMPLETED PAVEMENT EXCEPT FOR THE DURATION OF PHASE 1 AND 2 WHILE WORK IS PERFORMED ON THE SOUTHBOUND DYER RD STRUCTURE. THE ROAD SHALL BE OPENED TO TRAFFIC OVER THE WINTER IN ORIGINAL CONFIGURATION. THE ROAD MAY BE CLOSED AGAIN FOR THE DURATION OF PHASE 3 WHILE WORK IS PERFORMED ON THE NORTHBOUND DYER RD STRUCTURE. DETOUR TRAFFIC AS SHOWN ON SHEETS P.16 & P.17.

3. A MINIMUM OF ONE ELEVEN FOOT LANE OF TRAFFIC IN EACH DIRECTION ON ALL SIDE ROADS OVER I-71 SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 60 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEETS P.16-P.17. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF $_____ PER DAY FOR EACH CALENDAR DAY THE ROADWAY REMAIN CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

4. ALL EXISTING LANES, INCLUDING RAMPS, SHALL BE OPEN AND AVAILABLE TO TRAFFIC IN THE ORIGINAL OR PROPOSED FINAL ALIGNMENT BETWEEN OCTOBER 15 AND APRIL 1. SHOULD THE CONTRACTOR FAIL TO MEET THESE REQUIREMENTS, A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF $_____ PER CALENDAR DAY.

5. 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*

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	*TIMES ALL LANES MUST BE OPEN TO TRAFFIC*
SUNDAY	*12:00 NOON FRIDAY THROUGH 6:00 AM MONDAY*
MONDAY	*12:00 NOON FRIDAY THROUGH 6:00 AM TUESDAY*
TUESDAY	*12:00 NOON MONDAY THROUGH 6:00 AM WEDNESDAY*
WEDNESDAY	*12:00 NOON TUESDAY THROUGH 6:00 AM THURSDAY*
THURSDAY	*12:00 NOON WEDNESDAY THROUGH 6:00 AM FRIDAY*
THANKSGIVING	*5:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY*
FRIDAY	*12:00 NOON THURSDAY THROUGH 6:00 AM MONDAY*
SATURDAY	*12:00 NOON FRIDAY THROUGH 6:00 AM 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).

6. NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW. [AT THE APPROVAL OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS MAY BE USED IN LIEU OF THE STANDARD FLATSHEET SIGN FOR CLOSURE DURATIONS OF LESS THAN 1 WEEK.]

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS

NOTIFICATION TIME FRAME TABLE			
ITEM	*DURATION OF CLOSURE*	*SIGN DISPLAY TO PUBLIC*	*NOTIFICATION DUE TO DISTRICT 6 COMMUNICATIONS OFFICE*
RAMP & ROAD CLOSURES	*>=2 WEEKS*	*14 CALENDAR DAYS PRIOR TO CLOSURE*	*21 CALENDAR DAYS PRIOR TO CLOSURE*
	>12 HOURS & <2 WEEKS	*7 CALENDAR DAYS PRIOR TO CLOSURE*	*14 CALENDAR DAYS PRIOR TO CLOSURE*
	<12 HOURS	*2 BUSINESS DAYS PRIOR TO CLOSURE*	*4 BUSINESS DAYS PRIOR TO CLOSURE*

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.

7. 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.

PHASES 1, 2 & 3						
LANE VALUE CONTRACT						
MAD-71						
SECTION	*EXISTING NUMBER OF LANES PER DIRECTION*	*LANE CLOSURES ARE NOT PERMITTED:*				*DISINCENTIVE AMOUNTS PER MINUTE PER LANE*
		LANE REDUCTION	*MON TO THUR*	*FRI TO SAT*	*SUN*	
FAYETTE COUNTY LINE (0.00) TO PICKAWAY COUNTY LINE (11.68) NORTHBOUND	*2*	*2 TO 1*	*7AM-7PM*	*7AM-7PM*	*9AM-10PM*	*$75*
FAYETTE COUNTY LINE (0.00) TO PICKAWAY COUNTY LINE (11.68) SOUTHBOUND	*2*	*2 TO 1*	*7AM-7PM*	*7AM-10PM*	*9AM-7PM*	*$75*
SHORT TERM SHOULDER CLOSURES ARE NOT PERMITTED 7AM-9AM AND 3PM-6PM MONDAY-FRIDAY						

MAINTENANCE OF TRAFFIC GENERAL NOTES

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REVIEWER MJC 06/25/21
PROJECT ID 107630
SHEET P.8 TOTAL 393

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TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

DRUM REQUIREMENTS

IN ADDITION TO THE REQUIREMENTS OF THE PLANS, SPECIFICATION AND PROPOSAL, DRUMS FURNISHED BY THE CONTRACTOR SHALL BE NEW AND UNUSED AT THE TIME OF ARRIVAL ON THE PROJECT. ANY DRUMS BROUGHT ON THE PROJECT, WHICH HAVE PREVIOUSLY BEEN USED ELSEWHERE, WILL NOT BE ACCEPTED.

PAYMENT FOR DRUMS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR MAINTAINING TRAFFIC UNLESS SEPARATELY ITEMIZED.

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 _____ M. GAL.

FLOODLIGHTING

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.

WORK ZONE INCREASED PENALTIES SIGN (R11-H5A)

R11-H5A-48 SIGNS SHALL BE FURNISHED, ERECTED, AND MAINTAINED IN GOOD CONDITION AND/OR REPLACED AS NECESSARY AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. SIGNS SHALL BE MOUNTED AT THE APPROPRIATE OFFSETS AND ELEVATIONS AS PRESCRIBED BY THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THEY SHALL BE MAINTAINED ON SUPPORTS MEETING CURRENT SAFETY CRITERIA.

THE SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN FOUR HOURS FOLLOWING RESTORATION OF ALL LANES TO TRAFFIC WITH NO RESTRICTIONS, OR SOONER AS DIRECTED BY THE ENGINEER. TEMPORARY SIGN COVERING AND UNCOVERING DUE TO TEMPORARY LANE RESTORATIONS SHALL BE GUIDED BY THE FOUR-HOUR LIMITATIONS STATED ABOVE. SUCH LANE RESTORATIONS SHOULD BE EXPECTED TO REMAIN IN EFFECT FOR 30 OR MORE CONSECUTIVE CALENDAR DAYS, SUCH AS DURING WINTER SHUT-DOWNS.

THE R11-H5A-48 SIGNS SHALL BE MOUNTED ON 2 NO. 3 POSTS WHEN LOCATED WITHIN CLEAR ZONES.

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED, BUT GOOD, CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE RETROREFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF C&MS 730.19.

WORK ZONE INCREASED PENALTIES SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGN AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION AS DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE, IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVAL OF THE SIGN AND SUPPORT.

ITEM 614, WORK ZONE INCREASED PENALTIES SIGN _____ EACH

WORK ZONE INCREASED PENALTIES SIGNS WILL BE PLACED AT THE LOCATIONS SHOWN IN THE PLANS.

WORK ZONE SPEED ZONES (WZSZS)

THE FOLLOWING WORK ZONE SPEED ZONE (WZSZ) SPEED LIMIT REVISION(S) HAVE BEEN APPROVED FOR USE ON THIS PROJECT WHEN WORK ZONE CONDITIONS AND FACTORS ARE MET AS DESCRIBED BELOW:

WZSZ REVISION NUMBER(S) COUNTY-ROUTE-SECTION(S) DIRECTION(S)
WZ-
WZ-
WZ-

POTENTIAL WZSZ LOCATIONS SHALL HAVE AN ORIGINAL (PRE-CONSTRUCTION) POSTED SPEED LIMIT OF 55 MPH OR GREATER, A QUALIFYING WORK ZONE CONDITION OF AT LEAST 0.5 MILE IN LENGTH, AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS, AND A WORK ZONE CONDITION IN PLACE THAT REDUCES THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS (I.E., LANE CLOSURE, LANE SHIFT, CROSSOVER, CONTRAFLOW AND/OR SHOULDER CLOSURE). THE LENGTH OF THE WORK ZONE CONDITION IS MEASURED FROM THE BEGINNING OF THE TAPER FOR THE SUBJECT WORK ZONE CONDITION IMPACTING THE TRAVEL LANES AND/OR SHOULDER TO THE END OF THE DOWNSTREAM TAPER, WHERE DRIVERS ARE RETURNED TO TYPICAL ALIGNMENT. AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS IS REQUIRED TO BALANCE THE ADDITIONAL EXPOSURE CREATED BY INSTALLING AND REMOVING WZSZ SIGNING WITH THE TIME NEEDED TO COMPLETE THE WORK.

IF THE WORK ZONE MEETS THESE MINIMUM CRITERIA, IT SHALL BE ANALYZED FURTHER USING TABLE 1 BELOW TO DETERMINE IF AND WHEN IT QUALIFIES FOR A SPEED LIMIT REDUCTION. DEPENDING ON THE ORIGINAL POSTED SPEED LIMIT, THE TYPE OF TEMPORARY TRAFFIC CONTROL USED, AND WHETHER OR NOT WORKERS ARE PRESENT, A WARRANTED WZSZ WILL VARY IN THE APPROVED SPEED LIMIT TO BE POSTED OVER TIME.

C&MS ITEM 614, PARAGRAPH 614.02(B), INDICATES THAT TWO DIRECTIONS OF A DIVIDED HIGHWAY ARE CONSIDERED SEPARATE HIGHWAY SECTIONS. THEREFORE, IF THE WORK ON A MULTI-LANE DIVIDED HIGHWAY IS LIMITED TO ONLY ONE DIRECTION, A SPEED LIMIT REDUCTION IN THE DIRECTION OF THE WORK DOES NOT AUTOMATICALLY CONSTITUTE A SPEED LIMIT REDUCTION IN THE OPPOSITE DIRECTION. EACH DIRECTION SHALL BE ANALYZED INDEPENDENTLY FROM EACH OTHER.

ALL WZSZS FLUCTUATE BETWEEN TWO APPROVED REDUCED SPEED LIMITS OR BETWEEN AN APPROVED REDUCED SPEED LIMIT AND THE ORIGINAL POSTED SPEED LIMIT. ONLY ONE OF TWO SIGNING STRATEGIES SHALL BE USED TO IMPLEMENT A WZSZ.

WZSZS USING DSL SIGN ASSEMBLIES SHALL BE IN ACCORDANCE WITH THIS NOTE, APPROVED LIST, SUPPLEMENTAL SPECIFICATIONS (SS) 808 AND 908, AND TRAFFIC SCD MT-104.10.

ONLY ONE WARRANTED SPEED LIMIT APPLIES AT ANY ONE TIME; SPEED LIMIT REDUCTIONS ARE NOT CUMULATIVE. WZSZS SHALL NOT BE USED FOR MOVING/MOBILE ACTIVITIES, AS DEFINED IN OMUTCD PART 6.

WHEN LOOKING UP THE WARRANTED WORK ZONE SPEED LIMITS, ALWAYS USE THE ORIGINAL, PRECONSTRUCTION, POSTED SPEED LIMIT. DO NOT USE A PRIOR OR CURRENT WORK ZONE SPEED LIMIT AS A LOOK UP VALUE IN THE TABLE. POSITIVE PROTECTION IS GENERALLY REGARDED AS PORTABLE BARRIER OR OTHER RIGID BARRIER IN USE ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WITHOUT POSITIVE PROTECTION IS GENERALLY REGARDED AS USING DRUMS, CONES, SHADOW VEHICLE, ETC., ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WORKERS ARE CONSIDERED AS BEING PRESENT WHEN ON-SITE, WORKING WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WHEN THE WORK ZONE CONDITION REDUCING THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS IS REMOVED, THE SPEED LIMIT DISPLAYED SHALL RETURN TO THE ORIGINAL POSTED SPEED LIMIT.

TABLE 1: WARRANTED WORK ZONE SPEED LIMITS (MPH) FOR WORK ZONES ON HIGH-SPEED (55 MPH OR GREATER) MULTI-LANE HIGHWAYS

ORIGINAL POSTED SPEED LIMIT	WITH POSITIVE PROTECTION		WITHOUT POSITIVE PROTECTION	
	WORKERS PRESENT	WORKERS NOT PRESENT	WORKERS PRESENT	WORKERS NOT PRESENT
70	60	65	55	65
65	55	60	50	60
60	55	60	50	60
55	50	55	45	55

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, WORK ZONE SPEED LIMIT SIGN
_____ EACH
ITEM 808, DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY
_____ SIGN MNTH
ASSUMING _____ DSL SIGN ASSEMBLY(IES) FOR
_____ MONTH(S)

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 614, WORK ZONE CROSSOVER LIGHTING SYSTEM

THIS WORK SHALL CONSIST OF FURNISHING, ERECTING, OPERATING, MAINTAINING AND REMOVING A WORK ZONE LIGHTING SYSTEM FOR A SINGLE CROSSOVER, OR OVERLAPPING A PAIR OF CROSSOVERS. THE SYSTEM SHALL BE AS SHOWN ON TRAFFIC SCD MT-100.00. THE CONTRACTOR SHALL ARRANGE FOR AND PAY FOR POWER. ALL MATERIALS AND CONSTRUCTION SHALL COMPLY WITH APPLICABLE PORTIONS OF 625 AND 725 EXCEPT: THE PERFORMANCE TEST OF 625.19F, AND CERTIFIED DRAWING REQUIREMENT OF 625.04, ARE WAIVED AND USED MATERIALS IN GOOD CONDITION ARE ACCEPTABLE.

POLES WHICH ARE NOT PROTECTED BY GUARDRAIL OR PORTABLE BARRIER SHALL BE LOCATED OUTSIDE THE CLEAR ZONE, AND SHOULD BE LOCATED AT LEAST 30 FEET (PREFERABLY 40 FEET) FROM THE EDGE OF PAVEMENT WHEN POSSIBLE. ADDITIONAL POLE LINES, CABLES AND APPURTENANCES NECESSARY TO FURNISH POWER TO THE LIGHTING SYSTEM SHALL BE INCLUDED IN THIS ITEM. SERVICE POLES SHALL BE POSITIONED WITH THE SAME CONSTRAINTS AS THE LIGHTING POLES AS A MINIMUM.

PAYMENT WILL BE MADE AT THE UNIT PRICE PER EACH FOR ITEM 614, WORK ZONE CROSSOVER LIGHTING SYSTEM THROUGHOUT ALL PHASES OF WORK WHEN THE CROSSOVER ROADWAYS ARE

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PROJECT ID 107630
SHEET P.9 TOTAL 393

ITEM 614, REPLACEMENT SIGN

FLATSHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT SIGNS SHALL BE NEW. OTHER MATERIALS MAY BE IN USED, BUT GOOD, CONDITION SUBJECT TO APPROVAL BY THE ENGINEER.

PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT SIGN, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED SIGNS, HARDWARE AND SUPPORTS, AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC.

AN ESTIMATED QUANTITY OF _____ EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM 614, REPLACEMENT DRUM

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT DRUM, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF _____ EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON SHEET(S) _____ OF THE PLAN. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN _____ HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT. THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN _____ SIGN MONTH ASSUMING _____ PCMS SIGN(S) FOR _____ MONTH(S)

ITEM 614, WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN

WORK ZONE RAISED PAVEMENT MARKERS, AS PER PLAN, AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614 OR C&MS 621 AS SPECIFIED HEREIN.

RAISED PAVEMENT MARKERS IN USE DURING THE SNOW-PLOWING SEASON SHALL CONFORM TO 621.

RAISED PAVEMENT MARKERS IN USE DURING THE NON-SNOW-PLOW SEASON SHALL CONFORM TO EITHER 614 OR TO 621.

THE SNOW-PLOWING SEASON SHALL RUN FROM _____ THROUGH _____.

IF PROJECT DELAYS, NOT THE FAULT OF ODOT, CAUSE THE WORK TO EXTEND INTO THE SNOW-PLOWING SEASON, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING WORK ZONE RAISED PAVEMENT MARKERS (WZRPMS) CONFORMING TO C&MS 614, WITH RAISED PAVEMENT MARKERS CONFORMING TO 621, AS DETERMINED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

THIS ITEM SHALL INCLUDE PURCHASE, INSTALLATION AND REMOVAL OF ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN, INCLUDING FILLING OF ANY DEPRESSIONS CREATED IN THE PAVEMENT AS PER C&MS 621.08.

RESURFACING OF THE TRANSITION AREAS SHALL BE PERFORMED AT THE TIME THAT THE SURFACE COURSE IS BEING APPLIED TO THE ENTIRE PROJECT. PRIOR TO APPLICATION OF THE SURFACE COURSE ON THE PROJECT, THE EXISTING PAVEMENT WITHIN THE TRANSITION AREA SHALL BE REMOVED TO A DEPTH NECESSARY TO REACH THE LEVEL OF THE INTERMEDIATE COURSE OF THE PAVEMENT, AS DETERMINED BY THE ENGINEER.

THE FOLLOWING BID ITEMS SHOULD BE INCLUDED IN THE PLANS:

ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE _____ SQUARE YARDS

ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN _____ EACH

PAYMENT FOR RESURFACING WITHIN THE TRANSITION AREA SHALL BE PAID FOR UNDER THE APPROPRIATE BID ITEMS FOR THE WORK REQUIRED, AS PROVIDED FOR IN THE PLANS.

DELINEATION OF TEMPORARY AND PERMANENT GUARDRAIL

BARRIER REFLECTORS SHALL BE INSTALLED ON ALL TEMPORARY GUARDRAIL USED FOR TRAFFIC CONTROL; AND, ON ALL PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. BARRIER REFLECTORS SHALL CONFORM TO C&MS 626 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET.

[OBJECT MARKERS SHALL BE INSTALLED ON ALL TEMPORARY AND PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. GUARDRAIL-MOUNTING OF OBJECT MARKERS SHALL BE MADE BY INSTALLING THE OBJECT MARKERS ON THE EXTENSION BLOCKS RATHER THAN DIRECTLY ONTO THE GUARDRAIL ITSELF. OBJECT MARKERS SHALL CONFORM TO C&MS 614.03 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET WITH A 25 FOOT OFFSET FROM THE BARRIER REFLECTORS.]

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE (2, 3, 4, OR 5) (ONE-WAY OR BIDIRECTIONAL) _____ EACH

ITEM 614, OBJECT MARKER, _____-WAY _____ EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING THE ABOVE ITEM(S).

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 FRAME TABLE

ITEM	DURATION OF CLOSURE	NOTIFICATION DUE TO DISTRICT 6 COMMUNICATIONS OFFICE
RAMP & ROAD CLOSURES	>=2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	>12 HOURS & <2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	<12 HOURS	4 BUSINESS 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 IMPEMENTAION

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

MAINTENANCE OF TRAFFIC GENERAL NOTES

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REVIEWER	MJC 06/25/21
PROJECT ID	107630
SHEET	P.10
TOTAL	393

DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL; AND, ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND PERMANENT CONCRETE BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE UNDER EITHER OF THE FOLLOWING CONDITIONS: ALONG TAPERS AND TRANSITION AREAS; OR ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES.

THE INCREASED BARRIER DELINEATION SHALL CONSIST OF EITHER DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.

DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6 INCHES WIDE AND SHALL BE "CRIMPED." PANELS SHALL BE INSTALLED AND SPACED PER TRAFFIC SCD MT-101.70.

TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 1 (ONE-WAY OR BI-DIRECTIONAL) _____ EACH

ITEM 614, OBJECT MARKER, _____-WAY _____ EACH

ITEM 614, INCREASED BARRIER BELINEATION _____FEET

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

ALONG RUNS OF INCREASED BARRIER DELINEATION WHERE THIS ITEM IS PROVIDED, THE QUANTITY SHALL BE MEASURED AS THE ENTIRE LENGTH OF THE RUN OF INCREASED BARRIER DELINEATION, INCLUDING THE SPACES BETWEEN THE INDIVIDUAL DELINEATION PANELS OR STACKS OF BARRIER REFLECTORS.

WORKSITE TRAFFIC SUPERVISOR

SUBJECT TO APPROVAL OF THE ENGINEER, THE CONTRACTOR SHALL EMPLOY AND IDENTIFY (SOMEONE OTHER THAN THE SUPERINTENDENT) A PREQUALIFIED WORKSITE TRAFFIC SUPERVISOR (WTS) BEFORE STARTING WORK IN THE FIELD. THE WTS SHALL BE TRAINED IN ACCORDANCE WITH CMS 614.03, SHALL HAVE SUCCESSFULLY COMPLETED ODOT ADMINISTERED WTS TESTING (AND RE-TESTING WHEN APPLICABLE) AND BE LISTED ON THE ODOT PREQUALIFIED WTS ROSTER. PREQUALIFICATION EXPIRES EVERY 5 YEARS. RE-TESTING SHALL BE SUCCESSFULLY REPEATED EVERY 5 YEARS TO REMAIN PREQUALIFIED.

THE NAME OF THE PREQUALIFIED WTS AND RELATED 24-HOUR CONTACT INFORMATION SHALL BE PROVIDED TO THE ENGINEER AT THE PRECONSTRUCTION CONFERENCE. IF THE DESIGNATED WTS WILL NOT BE AVAILABLE FULL TIME (24/7), THE CON-RACTOR MAY DESIGNATE AN ALTERNATE (SECONDARY) WTS TO BE AVAILABLE WHEN THE PRIMARY IS OFF DUTY; HOWEVER THE PRIMARY WTS SHALL REMAIN THE POINT OF CONTACT AT ALL TIMES. ANY ALTERNATE (SECONDARY) WTS IS SUBJECT TO THE SAME TRAINING, PREQUALIFICATION AND OTHER REQUIREMENTS OUTLINED WITHIN THIS PLAN NOTE. AT ALL TIMES THE ENGINEER, OR ENGINEER'S REPRESENTATIVES, MUST BE INFORMED OF WHO THE PRIMARY WTS (AND SECONDARY WTS, IF APPLICABLE) IS AT THE CURRENT TIME.

THE WTS POSITION HAS THE PRIMARY RESPONSIBILITY OF IMPLEMENTING THE TRAFFIC MANAGEMENT PLAN (TMP), MONITORING THE SAFETY AND MOBILITY OF THE ENTIRE WORK ZONE, AND CORRECTING TEMPORARY TRAFFIC CONTROL (TTC) DEFICIENCIES FOR THE ENTIRE WORK ZONE. THE WTS, AND ALTERNATE WTS WHEN ON DUTY, SHALL HAVE SUFFICIENT AUTHORITY TO EFFECTIVELY CARRY OUT THE IDENTIFIED WTS RESPONSIBILITIES AND DUTIES. THE DUTIES OF THE WTS ARE AS FOLLOWS:

1. BE AVAILABLE ON A 24-HOUR PER DAY BASIS.

2. BE ON SITE FOR ALL EMERGENCY TTC NEEDS WITHIN ONE HOUR OF NOTIFICATION BY POLICE OR PROJECT STAFF, AND EFFECT CORRECTIVE MEASURES IMMEDIATELY ON EXISTING WORK ZONE TTC DEVICES.

3. ATTEND PRECONSTRUCTION MEETING AND ALL PROJECT MEETINGS WHERE TTC MANAGEMENT IS DISCUSSED.

4. BE AVAILABLE ON SITE FOR OTHER MEETINGS OR DISCUSSIONS WITH THE ENGINEER UPON REQUEST.

5. BE AWARE OF ALL EXISTING AND PROPOSED TTC OPERATIONS OF THE CONTRACTOR, SUBCONTRACTORS AND SUPPLIERS, AND ENSURE COORDINATION OCCURS BETWEEN THEM TO ELIMINATE CONFLICTING TEMPORARY AND/OR PERMANENT TRAFFIC CONTROL.

6. COORDINATE PROJECT ACTIVITIES WITH ALL LAW ENFORCEMENT OFFICERS (LEOS). THE WTS SHALL ALSO BE THE MAIN CONTACT PERSON WITH THE LEOS WHILE LEOS ARE ON THE PROJECT.

7. COORDINATE AND FACILITATE MEETINGS WITH ODOT PERSONNEL, LEOS AND OTHER APPLICABLE ENTITIES BEFORE EACH PLAN PHASE SWITCH TO DISCUSS THE WORK ZONE TTC FOR IMPLEMENTING THE PHASE SWITCH. SUBMIT A WRITTEN DETAIL OF MOT OPERATIONS AND SCHEDULE OF EVENTS TO IMPLEMENT THE SWITCH BETWEEN PHASE PLANS TO THE ENGINEER 5 CALENDAR DAYS PRIOR TO THIS MEETING.

8. BE PRESENT, ON SITE FOR, AND INVOLVED WITH, EACH TTC SET UP/TAKE DOWN AND EACH PHASE CHANGE IN ACCORDANCE WITH CMS 614.03.

9. ON A CONTINUAL BASIS ENSURE THAT THE TTC ZONE AND ALL RELATED DEVICES ARE INSTALLED, MAINTAINED AND REMOVED IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.

10. ON A CONTINUAL BASIS FACILITATE CORRECTIVE ACTION(S) NECESSARY TO BRING DEFICIENT TTC ZONES AND ALL RELATED DEVICES INTO COMPLIANCE WITH CONTRACT DOCUMENTS IN THE TIMEFRAME DETERMINED BY THE ENGINEER.

11. INSPECT, EVALUATE, PROPOSE NECESSARY MODIFICATIONS TO, AND DOCUMENT THE EFFECTIVENESS OF, THE TTC DEVICES AND TRAFFIC OPERATIONS ON A DAILY BASIS (7 DAYS A WEEK). IN ADDITION, PERFORM ONE WEEKLY NIGHT INSPECTION OF THE WORK ZONE SETUP FOR DAYTIME WORK OPERATIONS; AND ONE DAYTIME INSPECTION PER WEEK FOR NIGHTTIME PROJECTS. THIS SHALL INCLUDE (BUT NOT BE LIMITED TO) DOCUMENTATION ON THE FOLLOWING PROJECT EVENTS:

   A. INITIAL TTC SETUP (DAY AND NIGHT REVIEW).

   B. DAILY TTC SETUP AND REMOVAL.

   C. WHEN CONSTRUCTION STAGING CAUSES A CHANGE IN THE TTC SETUP.

   D. CRASH OCCURRENCES WITHIN THE CONSTRUCTION AREA AND WITHIN THE INFLUENCE AREA(S) APPROACHING THE WORK ZONE.

   E. REMOVAL OF TTC DEVICES AT THE END OF A PHASE OR PROJECT.

   F. ALL OTHER EMERGENCY TTC NEEDS.

12. COMPLETE THE DEPARTMENT APPROVED LONG TERM INSPECTION FORM (CA-D-8) AFTER EACH INSPECTION AS REQUIRED IN # 11 AND SUBMIT IT TO THE ENGINEER THE FOLLOWING WORKDAY. THESE REPORTS SHALL INCLUDE A CHECKLIST OF ALL TTC MAINTENANCE ITEMS TO BE REVIEWED. A COPY OF THE FORM WILL BE PROVIDED AT THE PRE-CONSTRUCTION MEETING. ANY DEFICIENCIES OBSERVED SHALL BE NOTED, ALONG WITH RECOMMENDED OR COMPLETED CORRECTIVE ACTIONS AND THE DATES BY WHICH SUCH CORRECTIONS WERE, OR WILL BE, COMPLETED. A COPY OF THE CURRENT CA-D-8 DOCUMENT CAN BE FOUND ON THE OFFICE OF CONSTRUCTION ADMINISTRATION'S INSPECTION FORMS WEBSITE.

13. HAVE COPIES OF THE ODOT TEMPORARY TRAFFIC CONTROL MANUAL AND CONTRACT DOCUMENTS AVAILABLE AT ALL TIMES ON THE PROJECT.

THE DEPARTMENT WILL DEDUCT:

A. THE PRORATED DAILY AMOUNT OF ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY IN WHICH THE WTS FAILS TO PERFORM THE DUTIES SET FORTH ABOVE. THE PRORATED DAILY AMOUNT WILL BE EQUAL TO THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC DIVIDED BY THE DIFFERENCE BETWEEN THE ORIGINAL COMPLETION DATE AND THE FIRST DAY OF WORK, IN CALENDAR DAYS.

B. 1% OF THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY THAT A TTC ISSUE IS IDENTIFIED IN THE FIELD AND IS NOT CORRECTED IN THE GIVEN TIMEFRAME PER THE ENGINEER. DEDUCTION B SHALL NOT APPLY TO SITUATIONS COVERED BY DEDUCTION C.

C. 1% OF THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY THAT A LANE OR RAMP IS BLOCKED (FULLY OR PARTIALLY) WITHOUT TTC, AS DETERMINED BY THE ENGINEER. THIS DEDUCTION SHALL BE IN ADDITION TO ANY OTHER DISINCENTIVES ESTABLISHED FOR UNAUTHORIZED LANE USE.

FOR DAYS IN WHICH MORE THAN ONE DEDUCTION LISTED ABOVE OCCUR, THE HIGHEST DEDUCTION AMOUNT WILL APPLY.

IF THREE OR MORE TOTAL DAYS RESULT IN TTC ISSUES DESCRIBED IN DEDUCTION B OR C ABOVE, THE PRIMARY WTS SHALL BE IMMEDIATELY REMOVED FROM THE WORK IN ACCORDANCE WITH C&MS 108.05. UPON REMOVAL THE ENGINEER SHALL NOTIFY ODOT CENTRAL OFFICE (WTSPREQUALIFICATION@DOT.OHIO.GOV) TO REGISTER A REMOVAL AGAINST THE STATEWIDE PREQUALIFICATION FOR THE PRIMARY WTS. THREE REMOVALS SHALL CAUSE STATEWIDE DISQUALIFICATION FOR ANY PREVIOUSLY PREQUALIFIED WTS.

PAYMENT FOR THE ABOVE REQUIREMENTS, RESPONSIBILITIES AND DUTIES SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

MAINTENANCE OF TRAFFIC GENERAL NOTES

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REVIEWER MJC 06/25/21

PROJECT ID 107630

SHEET P.11 TOTAL 393

TRAFFIC INCIDENT MANAGEMENT (TIM) DURING MOT

OHIO TIM IS OHIO'S TRAFFIC INCIDENT MANAGEMENT PROGRAM WHICH IS COMMITTED TO MAINTAINING THE SAFE AND EFFECTIVE FLOW OF TRAFFIC DURING EMERGENCIES AS TO PREVENT FURTHER DAMAGE, INJURY OR UNDUE DELAY OF THE MOTORING PUBLIC. IN ADDITION TO COMPLYING WITH THE PROVISION OF OMUTCD CHAPTER 6I, CONTROL OF TRAFFIC THROUGH TRAFFIC INCIDENT MANAGEMENT AREAS, THE CONTRACTOR SHALL ACTIVELY PARTICIPATE IN TIM PLANNING AND IMPLEMENTATION AS OUTLINED BELOW.

1. *SUPERINTENDENT SHALL IDENTIFY THE INDIVIDUAL PERSONS ON THE PROJECT WHO WILL, OR MAY NEED TO, PERFORM THE DUTIES HEREIN. AT A MINIMUM, INCLUDE THE SUPERINTENDENT, FOREMEN AND SUPERVISORS (OR EQUIVALENT) AS WELL AS THE WORKSITE TRAFFIC SUPERVISOR (WTS; IF APPLICABLE TO THE PROJECT). THESE INDIVIDUALLY IDENTIFIED PERSONS SHALL COLLECTIVELY BE KNOWN AS CONTRACTOR TRAFFIC INCIDENT MANAGEMENT (TIM) CONTACTS. NOTIFY THE PROJECT ENGINEER OF THE CONTRACTOR TIM CONTACTS (ALONG WITH CONTACT INFORMATION FOR EACH) AT OR BEFORE THE PRECONSTRUCTION MEETING.*

2. *SUPERINTENDENT SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY CONTRACTOR TIM CONTACT IS ADDED, REMOVED OR THE CONTACT INFORMATION CHANGES OVER THE COURSE OF THE PROJECT.*

3. *PRIOR THE FIRST DAY OF WORK IN THE FIELD, EACH CONTRACTOR TIM CONTACT ON THE PROJECT SHALL HAVE ATTENDED AND SUCCESSFULLY COMPLETED OHIO TIM TRAINING PROVIDED BY THE DEPARTMENT OR DESIGNEE. TRAINING INFORMATION CAN BE FOUND AT WWW.OHIOTIM.COM.*

4. *SUPERINTENDENT, AT A MINIMUM, SHALL ATTEND AND ACTIVELY PARTICIPATE IN A DEPARTMENT SCHEDULED TIM MEETING BEFORE CONSTRUCTION WORK BEGINS AND BEFORE EACH PHASE CHANGE. THESE MEETINGS WILL RESULT IN A DEPARTMENT ISSUED PROJECT SPECIFIC TRAFFIC INCIDENT MANAGEMENT PLAN (TIMP). AT THE TIM MEETINGS THE ATTENDING CONTRACTOR TIM CONTACTS SHALL:*

   A. *COLLABORATE WITH ODOT AND SAFETY FORCES;*

   B. *SHARE PROJECT SPECIFIC DETAILS THAT IMPACT TIM RESPONDERS; AND*

   C. *RECOMMEND WAYS TO INCORPORATE NECESSARY EMERGENCY ACCESS AND OTHER TIM ELEMENTS FOR TIM RESPONDERS GIVEN PROJECT SPECIFIC WORK BEING COMPLETED AND PROJECT SPECIFIC PHASING.*

5. *CONTRACTOR TIM CONTACTS SHALL IMPLEMENT COMPONENTS OF THE RESULTING TIMP (SUCH AS APPROVED EMERGENCY INGRESS/EGRESS POINTS, ETC), AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.*

6. *CONTRACTOR TIM CONTACTS SHALL PERFORM, AT A MINIMUM, THE FOLLOWING FUNCTIONS WHEN AN INCIDENT/CRASH OCCURS:*

   A. *IF OBSERVED OR PRESENT WHEN OCCURS, CALL 911 AND THEN NOTIFY THE TRAFFIC MANAGEMENT CENTER (TMC) TO PROVIDE THE FOLLOWING:*

      I. *LOCATION, INCLUDING MILEPOST NUMBER AND DIRECTION OF TRAVEL*

      II. *NUMBER AND TYPE OF VEHICLES INVOLVED, IF KNOWN*

      III. *ESTIMATED EXTENT OF DAMAGE OR INJURY, IF KNOWN*

      IV. *ESTIMATED NUMBER OF PATIENTS INVOLVED, IF KNOWN*

      V. *ANY POTENTIAL HAZARDOUS CONDITIONS, IF KNOWN*

      VI. *THE PLACARD NUMBER ON ANY HAZARDOUS MATERIALS PLACARD FROM A SAFE DISTANCE, IF APPLICABLE AND VISIBLE*

   B. *FOLLOWING AN INCIDENT/CRASH:*

      I. *INITIATE TRAFFIC MANAGEMENT/PROVIDE TEMPORARY TRAFFIC CONTROL AS INDICATED IN THE TIMP, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.*

      II. *RECOMMEND ROADWAY REPAIR NEEDS.*

      III. *PROVIDE REPAIR RESOURCES AND INITIATE REPAIRS, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.*

      IV. *ATTEND AND PARTICIPATE IN AN AFTER ACTION REVIEW (AAR).*

ALL COSTS, UNLESS OTHERWISE SPECIFIED, RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 614, MAINTAINING TRAFFIC. FAILURE TO PERFORM THE REQUIREMENTS OF THIS PLAN NOTE WILL RESULT IN A DAILY FINE OF 2% OF ITEM 614, MAINTAINING TRAFFIC AND MAY RESULT IN ONE OR MORE CONTRACTOR TIM CONTACTS BEING REMOVED FROM THE LIST OF OHIO TIM TRAINED INDIVIDUALS (AT THE SOLE DISCRETION OF THE OHIO TIM EXECUTIVE COMMITTEE). IN THE EVENT AN INDIVIDUAL IS REMOVED FROM THE OHIO TIM TRAINED LIST, THE INDIVIDUAL WILL BE REMOVED FROM CONTRACTOR TIM CONTACT RESPONSIBILITIES ON ALL PROJECTS.

MAINTENANCE OF TRAFFIC GENERAL NOTES

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 6/29/2021 TIME: 12:42:50 AM USER: mconnett
P:_OHDOT_Worksets\107630\400-Engineering\MOT\Sheets\107630_MN205.dgn

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio
DESIGNER
TDP
REVIEWER
MJC 06/25/21
PROJECT ID
107630
SHEET P.12 TOTAL 393

SEQUENCE OF CONSTRUCTION

PRE-PHASE:

PRIOR TO THE START OF PHASE 1, THE SOUTHTHBOUND OUTSIDE SHOULDER AND PORTIONS OF THE NORTHBOUND AND SOUTHBOUND INSIDE SHOULDERS MUST BE RECONSTRUCTED IN ORDER TO CARRY SHIFTED PHASE 1 TRAFFIC.

ALL CROSSOVERS SHALL BE CONSTRUCTED IN CONJUNCTION WITH THE SHOULDER REPLACEMENT. ANY PRE-PHASE 1 WORK THAT IMPACTS TRAVEL LANES SHALL BE COMPLETED BY UTILIZING NIGHTTIME LANE CLOSURES PER ODOT SCD MT-95.30. THE LANE CLOSURES MAY ONLY BE IMPLEMENTED DURING HOURS ALLOWED AS LISTED IN THIS PLAN.

PHASE 1:

CLOSE THE INSIDE LANE OF THE THREE LANE SECTION OF I-71 SOUTHBOUND. LANE CLOSURE CONFIGURATION SHALL REMAIN FOR THE DURATION OF PHASE 1 AND PHASES 2. SHIFT SOUTHBOUND LANES ONTO OUTSIDE SHOULDER AND OUTSIDE LANE.

I-71 NORTHBOUND SHALL REMAIN IN EXISTING CONFIGURATION.

CONSTRUCT PROPOSED AREA OF SOUTHBOUND I-71 AS SHOWN IN THE PLANS.

PHASE 2:

CROSSOVER I-71 SOUTHBOUND LANES ONTO COMPLETED INSIDE LANE AND SHOULDER OF SOUTHBOUND I-71 CONSTRUCTED DURING PHASE 1.

DYER ROAD SHALL BE CLOSED TO TRAFFIC AND DETOURED AS SHOWN IN THE PLANS FOR THE DURATION OF PHASES 1 AND 2.

I-71 NORTHBOUND SHALL REMAIN IN EXISTING CONFIGURATION.

CONSTRUCT PROPOSED AREA OF I-71 SOUTHBOUND AS SHOWN IN THE PLANS.

WINTER PHASE:

AT THE CONCLUSION OF PHASE 2, THE PROJECT SHALL ENTER A WINTERIZATION PHASE. NORTHBOUND TRAFFIC SHALL REMAIN IN EXISTING CONFIGURATION. SOUTHBOUND TRAFFIC SHALL BE RECONFIGURED TO EXISTING TWO LANE CONFIGURATION. THE WINTERIZATION CONFIGURATION SHALL BE IN PLACE BY 10/13/2023.

PHASE 3:

CLOSE INSIDE LANE OF I-71 SOUTHBOUND. SHIFT SOUTHBOUND LANES ONTO OUTSIDE SHOULDER AND OUTSIDE LANE.

CROSSOVER EXISTING I-71 NORTHBOUND LANES ONTO CONSTRUCTED I-71 SOUTHBOUND INSIDE SHOULDER AND LANES.

DYER ROAD SHALL BE CLOSED TO TRAFFIC AND DETOURED AS SHOWN IN THE PLANS FOR THE DURATION OF PHASE 3.

CONSTRUCT PROPOSED AREAS OF I-71 NORTHBOUND AS SHOWN IN THE PLANS.

PHASE 4:

AT THE CONCLUSION OF PHASE 3 TRAFFIC SHALL BE MAINTAINED IN THE FINAL CONDITION ON INTERMEDIATE COURSE FOR THE WINTER OF 2024-2025. PAVEMENT MARKINGS SHALL BE PLACED IN THEIR FINAL LOCATIONS PER THE TRAFFIC CONTROL PLAN.

AT THE CONCLUSION OF THE 2024-2025 WINTER, THE REMAINING EXISTING I-71 PAVEMENT THAT IS TO BE RESURFACED (OUTSIDE THE FULL DEPTH LIMITS) SHALL BE MILLED TO THE DEPTH SPECIFIED IN THE PLANS. THE FINAL WEARING COURSE OF BOTH NEWLY CONSTRUCTED AND EXISTING MILLED PAVEMENTS SHALL THEN BE INSTALLED UNLESS PREVIOUSLY CONSTRUCTED. ONCE COMPLETED, FINAL PAVEMENT MARKINGS SHALL BE APPLIED PER THE TRAFFIC CONTROL PLANS. THIS WORK SHALL BE COMPLETED BY UTILIZING ODOT SCD MT-97.11. IN ADDITION TO THIS WORK, THE MEDIAN CABLE BARRIER SHALL BE INSTALLED PER THE ROADWAY PLANS AND TEMPORARY PAVEMENT SHALL BE REMOVED BY UTILIZING ODOT SCD 95.45 EXCEPT DRUMS MAY BE USED IN THE PLACE OF PCB AS LONG AS DROP-OFF REQUIREMENTS ARE MET (PER ODOT SCD MT-101.90).

OVERHEAD STRUCTURE CONSTRUCTION:

OVERHEAD BRIDGE CONSTRUCTION SHALL OCCUR AT ANY TIME DURING THE PROJECT. SIDE ROADS SHALL BE CLOSED AND DETOURED AS SHOWN IN THE PLANS. THE CONTRACTOR SHALL COORDINATE MAINTENANCE OF TRAFFIC NEEDS ALONG I-71 WITH THE RESPECTIVE PHASE OF I-71 MAINTENANCE OF TRAFFIC.

MAINTENANCE OF TRAFFIC GENERAL NOTES

DESIGN AGENCY
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DESIGNER
TDP

REVIEWER
MJC 06/25/21

PROJECT ID
107630

SHEET P.13 | TOTAL 393

MAD-71-4.56

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 6/29/2021 TIME: 12:42:55 AM USER: mcornett
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MAD-71-4.56

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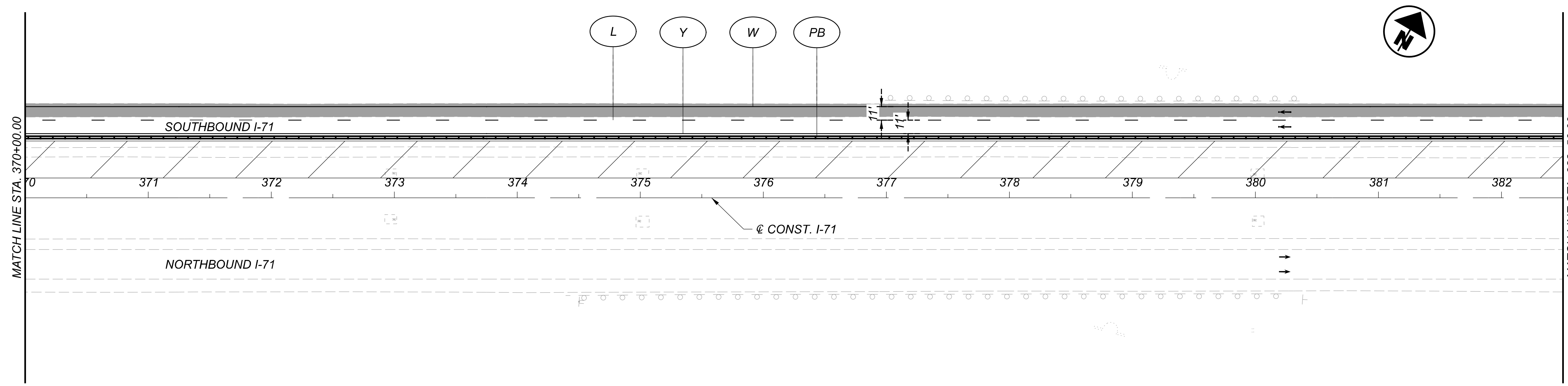

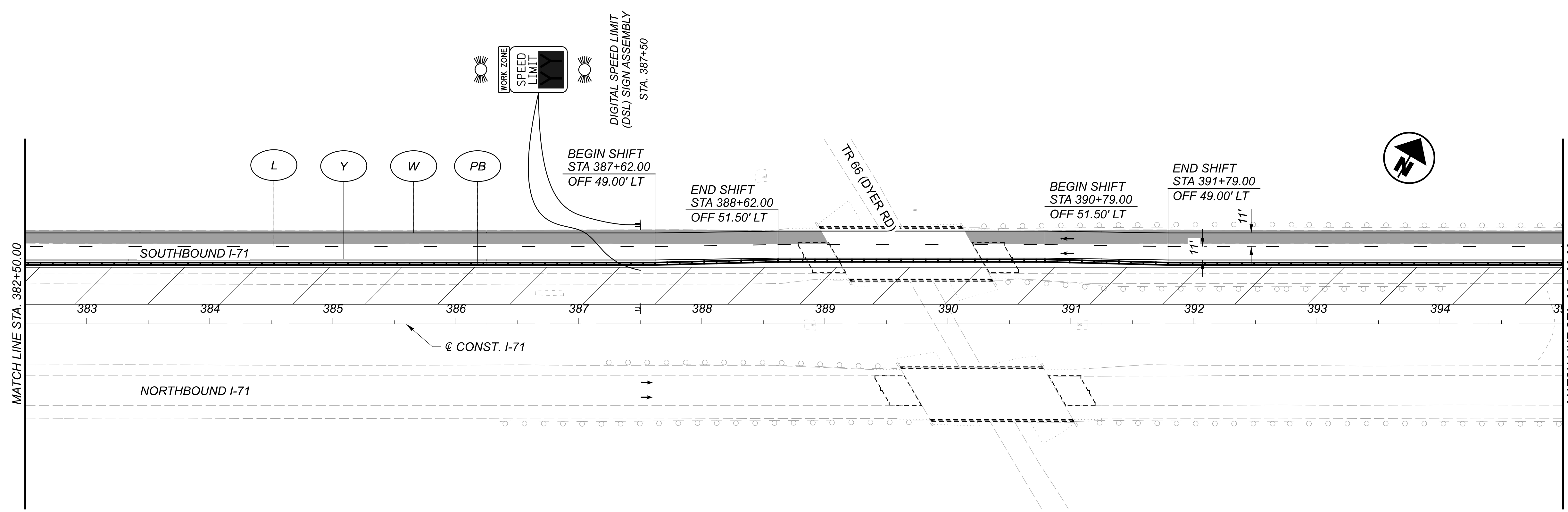

HORIZONTAL SCALE IN FEET

0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 1
STA. 370+00 TO STA. 395+00

DESIGN AGENCY

E.L. ROBINSON ENGINEERING

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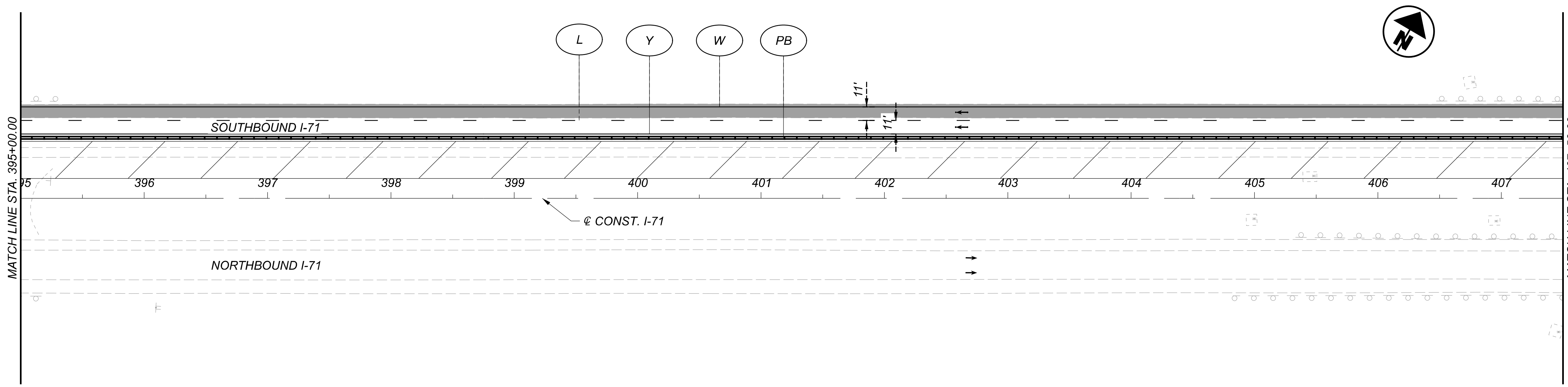
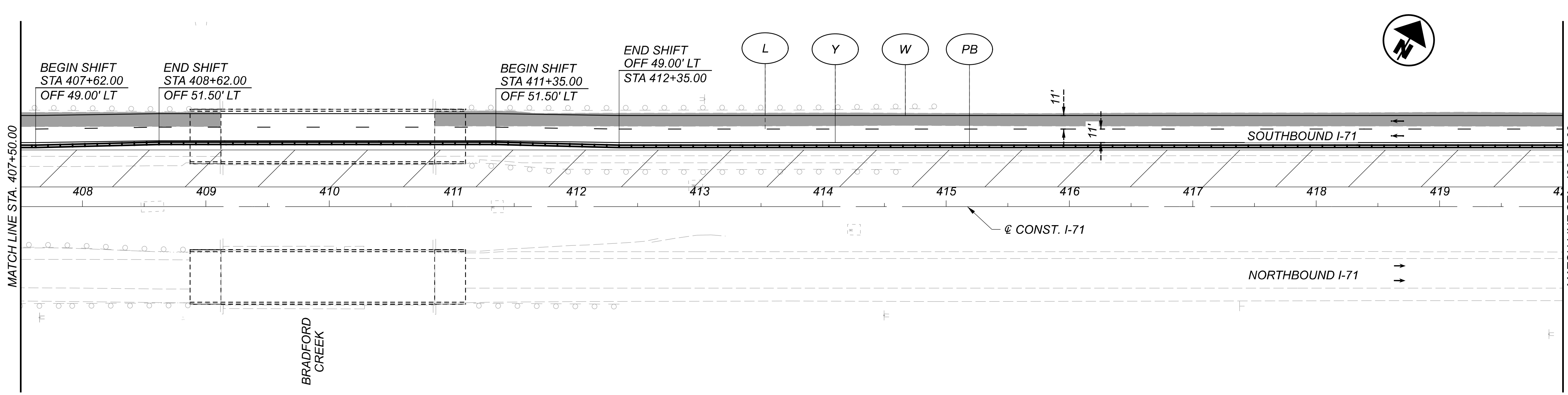
REVIEWER
MJC 06/25/21

PROJECT ID
107630

SHEET P.26 TOTAL 393





HORIZONTAL SCALE IN FEET

0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 1
STA. 395+00 TO STA. 420+00

DESIGN AGENCY

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Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER
TDP

REVIEWER
MJC 06/25/21

PROJECT ID
107630

SHEET P.27 | TOTAL 393

MAD-71-4.56

MODEL: 107630_MP711 PAPERSIZE: 17x11 (in.) DATE: 6/29/2021 TIME: 12:44:29 AM USER: mcornett
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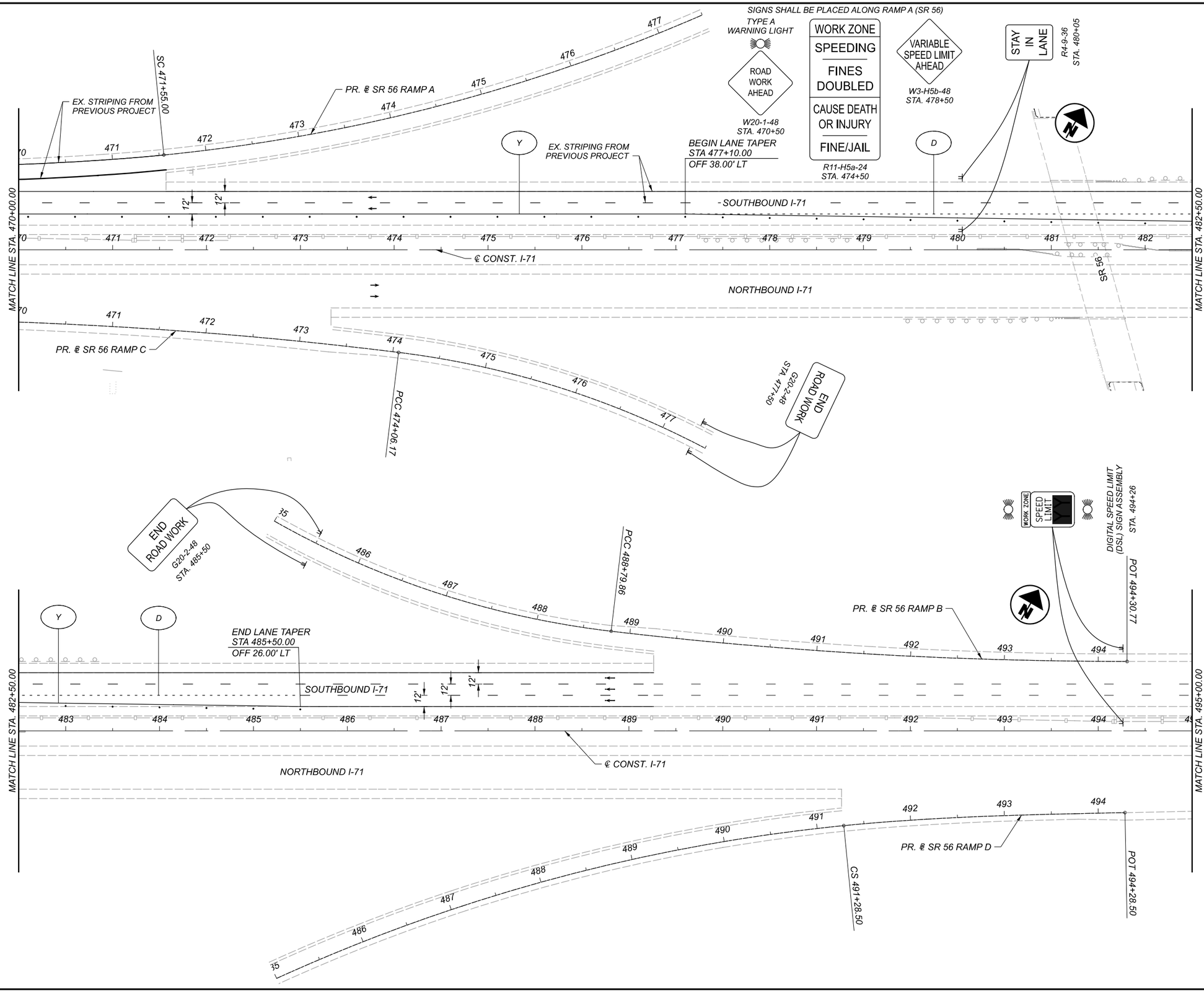

HORIZONTAL SCALE IN FEET
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MAINTENANCE OF TRAFFIC - PHASE 1
STA. 470+00 TO STA. 495+00

MAD-71-4.56

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DESIGNER	TDP
REVIEWER	MJC 06/25/21
PROJECT ID	107630
SHEET	P.30
TOTAL	393

MODEL: I07630_MP7I9 PAPERSIZE: I7xII(In.) DATE: 6/29/202I TIME: I2:44:58 AM USER: mcornett
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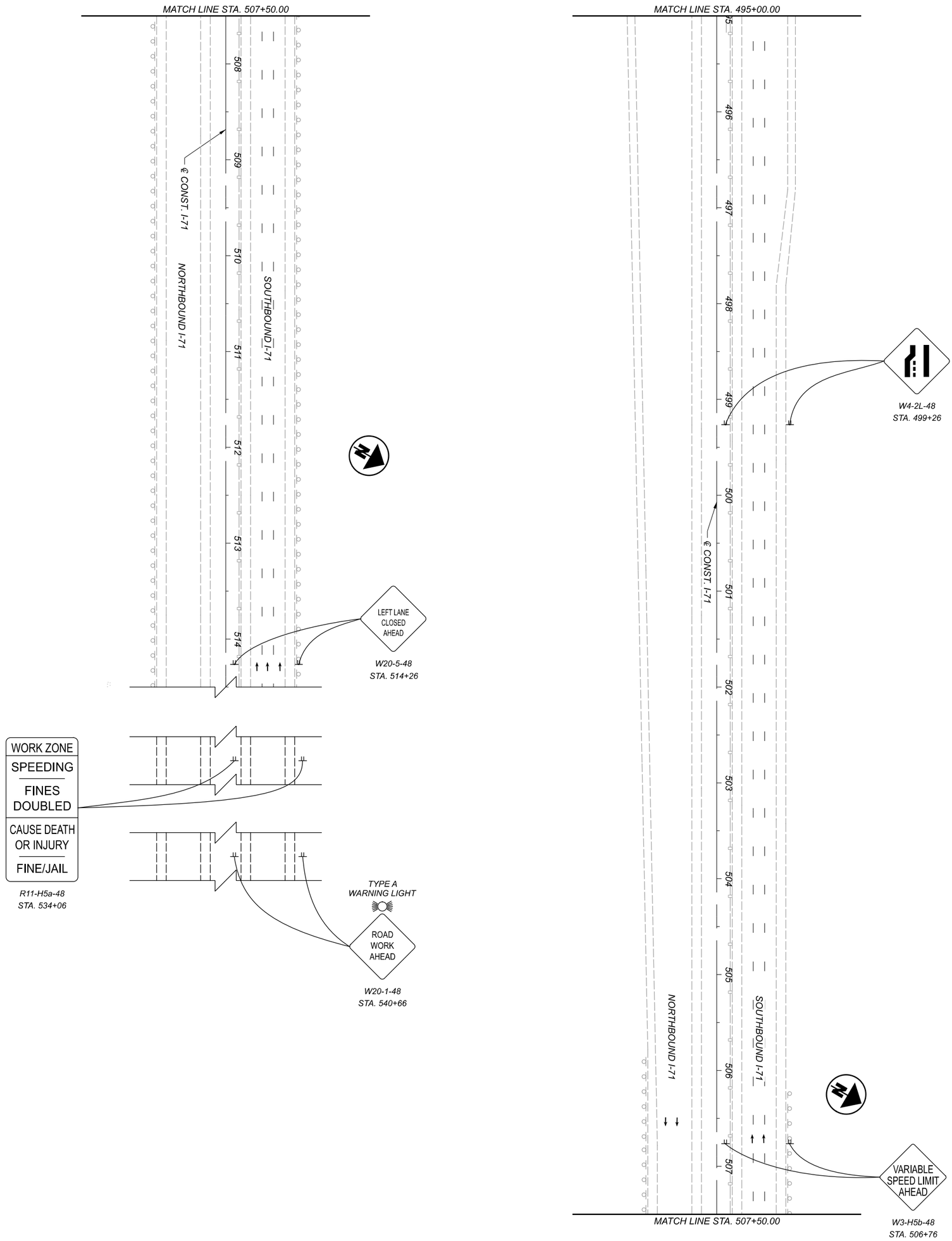

SHEET	TOTAL
P 31	393

PROJECT ID
I07630

REVIEWER
MJC 06/25/21

DESIGNER
TDP

DESIGN AGENCY
E.L. ROBINSON
1468 West 9th St, Suite 800
Cleveland, Ohio 44113
959 Goodale Blvd, Suite 150
Columbus, Ohio 43212

MAINTENANCE OF TRAFFIC - PHASE 1
STA. 495+00 TO STA. 514+00

HORIZONTAL SCALE IN FEET
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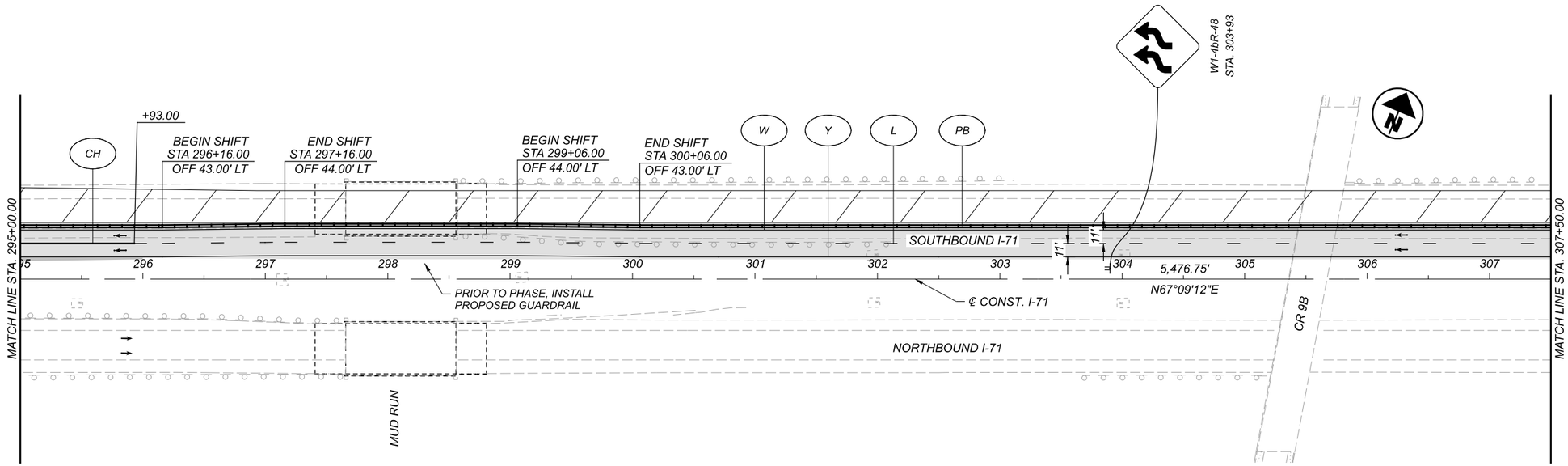

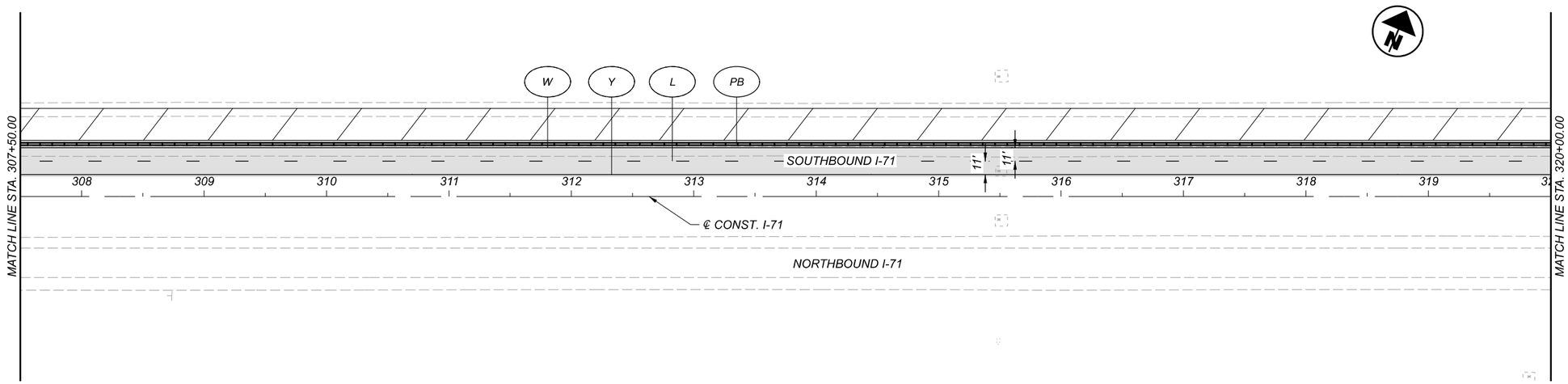

HORIZONTAL
SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 2
STA. 295+00 TO STA. 320+00

DESIGN AGENCY

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DESIGNER
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REVIEWER
MJC 06/25/21

PROJECT ID
107630

SHEET P.33 | TOTAL 393

MAD-71-4.56

MODEL: 107630_MP803 PAPERSIZE: 17x11(in.) DATE: 6/29/2021 TIME: 12:45:13 AM USER: mcornett
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HORIZONTAL
SCALE IN FEET
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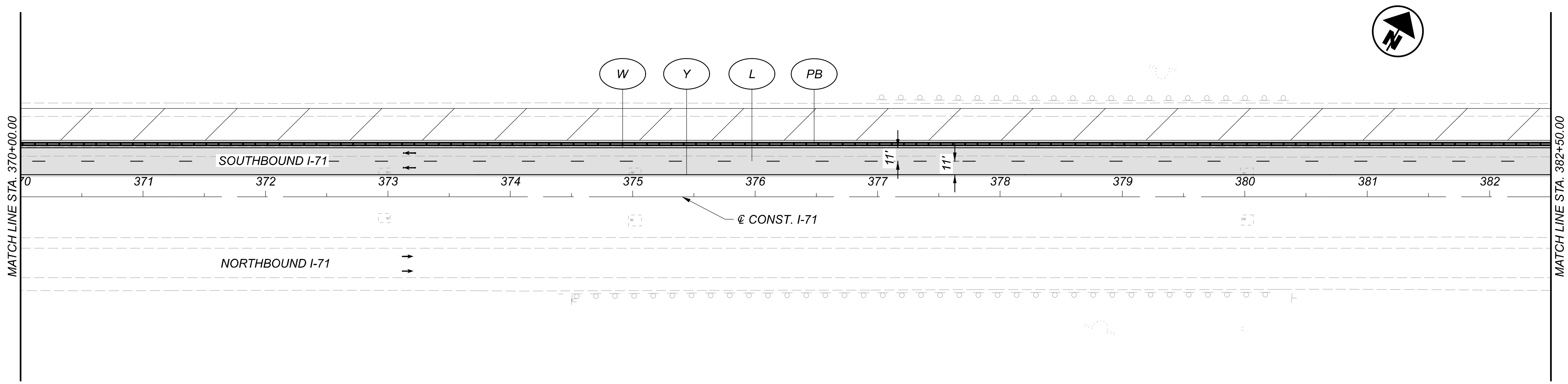

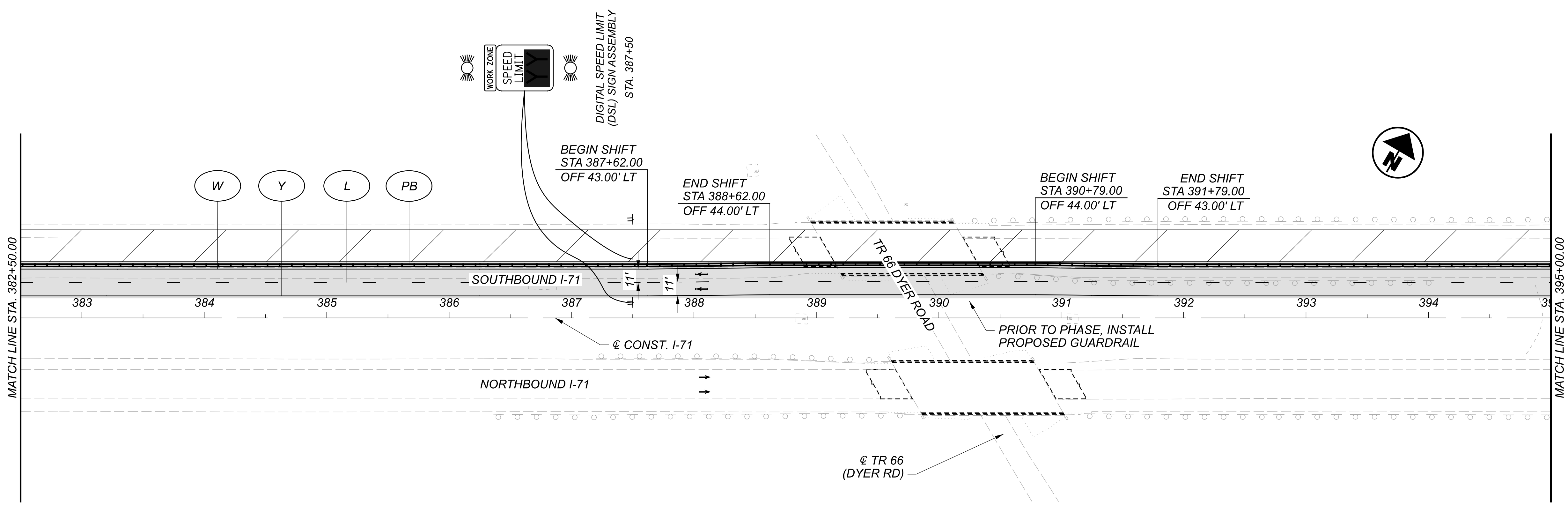

MAINTENANCE OF TRAFFIC - PHASE 2
STA. 370+00 TO STA. 395+00

DESIGN AGENCY

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DESIGNER
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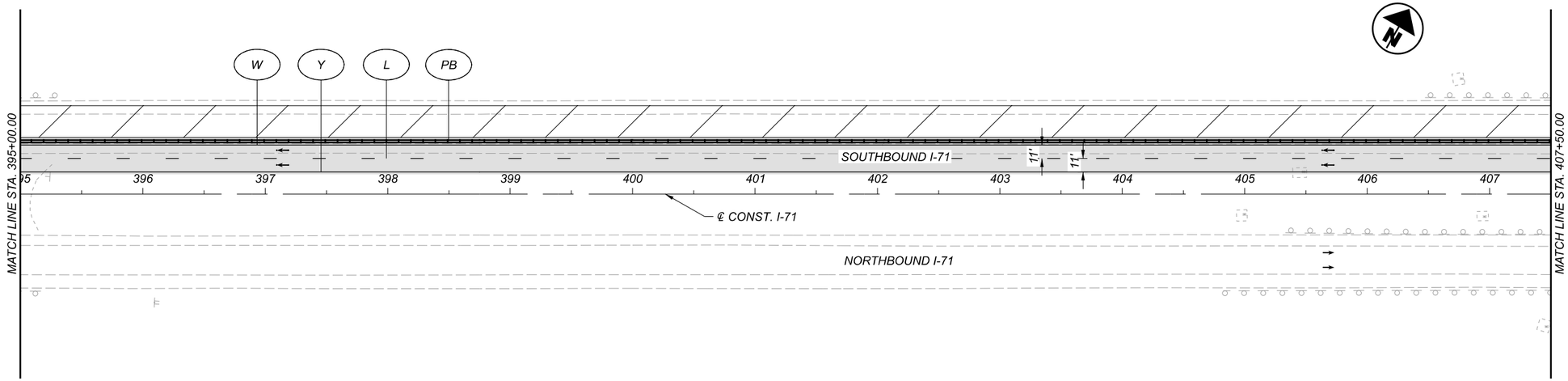
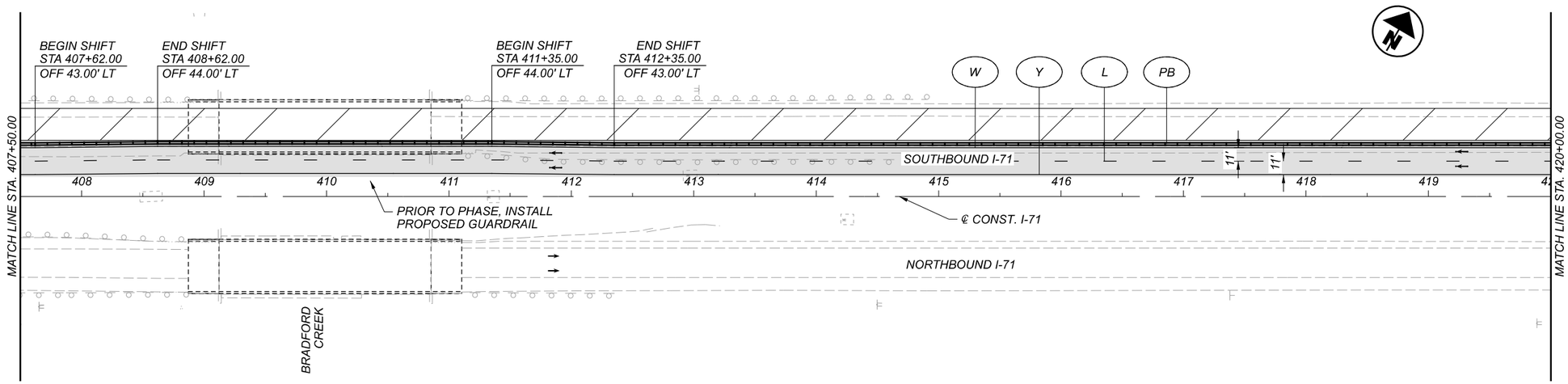
REVIEWER
MJC 06/25/21

PROJECT ID
107630

SHEET P.36 TOTAL 393





HORIZONTAL
SCALE IN FEET
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MAINTENANCE OF TRAFFIC - PHASE 2
STA. 395+00 TO STA. 420+00

MAD-71-4.56

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DESIGN AGENCY
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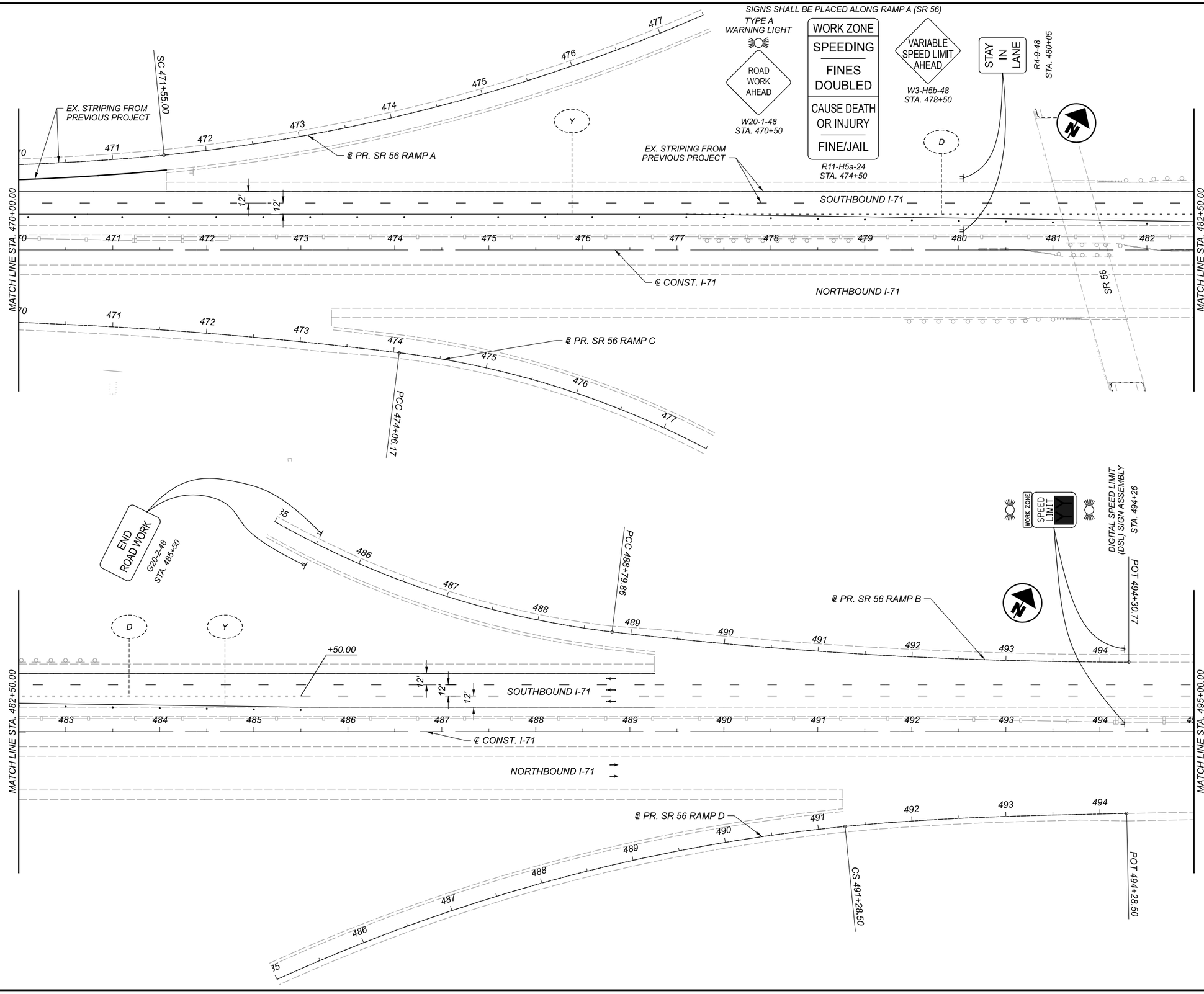
Grandview Heights, Ohio

DESIGNER	TDP
REVIEWER	MJC 06/25/21
PROJECT ID	107630
SHEET	P.37
TOTAL	393



HORIZONTAL SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 2
STA. 470+00 TO STA. 495+00

MAD-71-4.56

MODEL: 107630_MPB17 PAPERSIZE: 17x11(in.) DATE: 6/29/2021 TIME: 12:46:04 AM USER: mcornett
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DESIGN AGENCY
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950 Goodale Blvd, Suite 180
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DESIGNER: TDP
REVIEWER: MJC 06/25/21
PROJECT ID: 107630
SHEET: P.40 TOTAL: 393

MAINTENANCE OF TRAFFIC - PHASE 2
STA. 495+00 TO STA. 514+00

HORIZONTAL SCALE IN FEET
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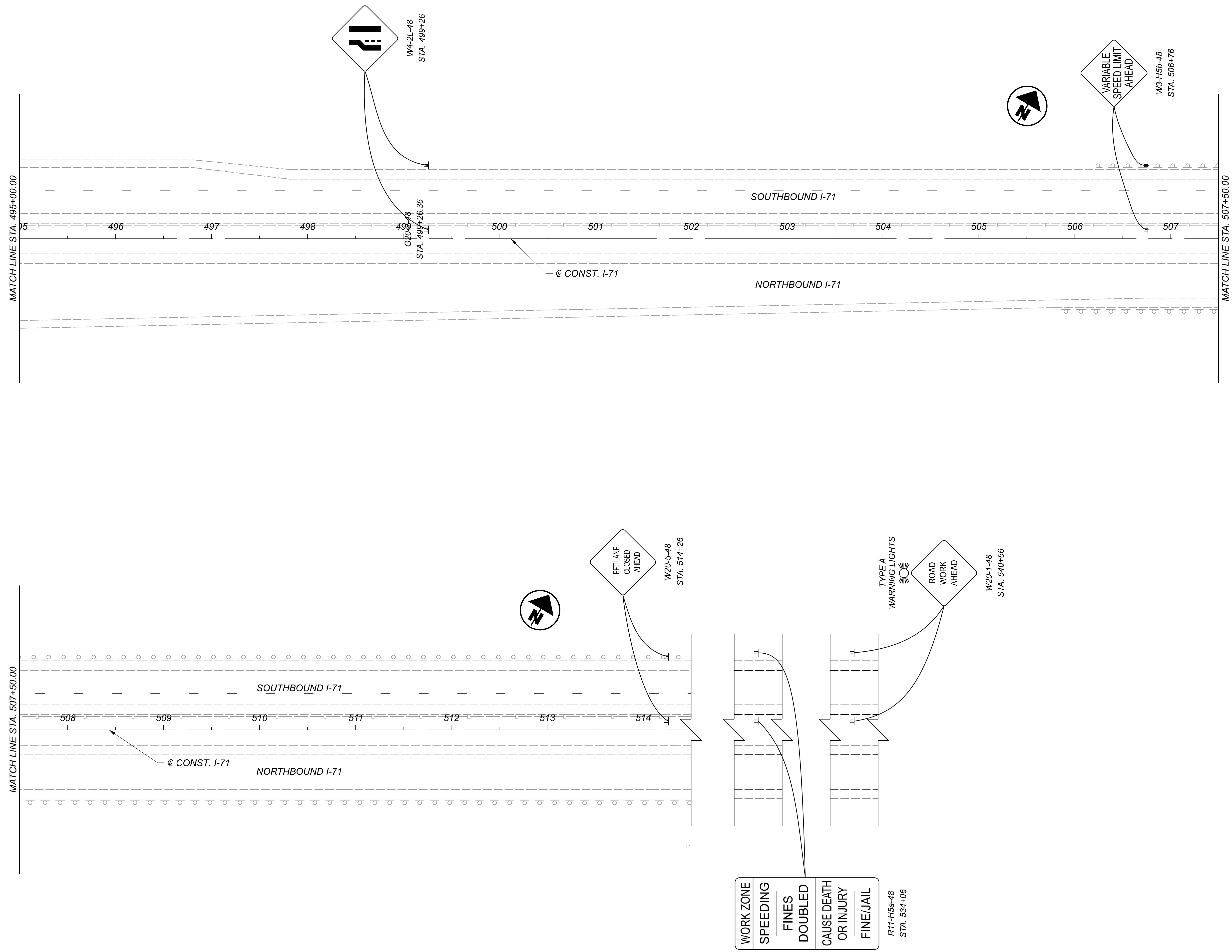

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER	TDP
REVIEWER	MJC 06/25/21
PROJECT ID	107630
SHEET	P.41
TOTAL	393

MAD-71-4.56

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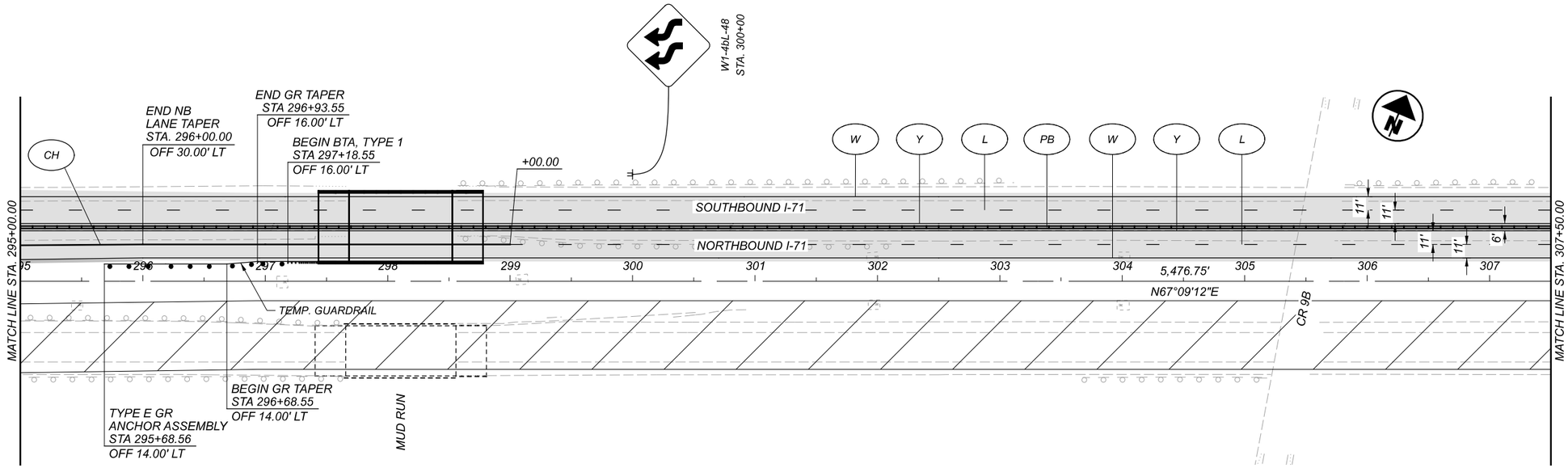

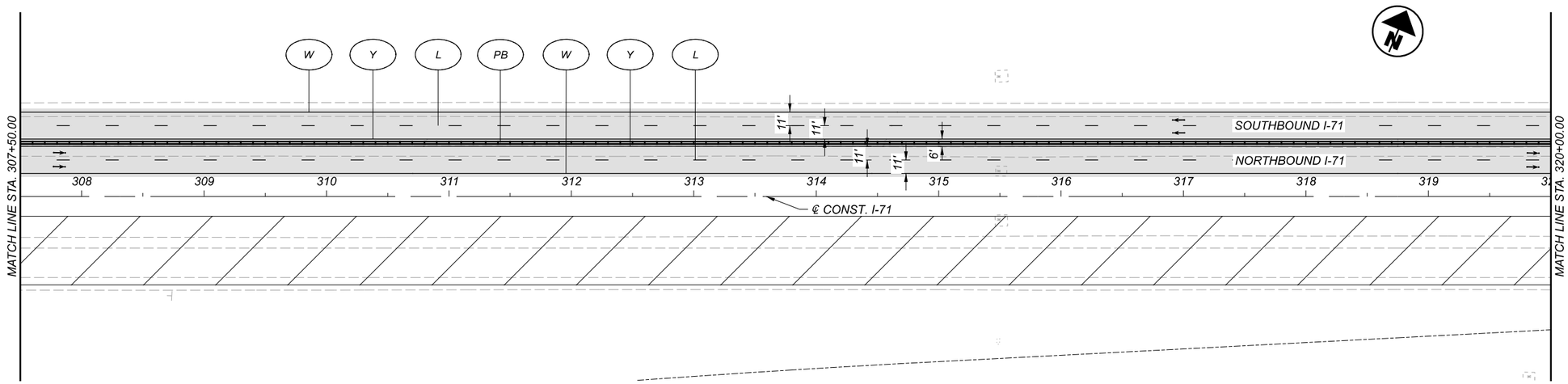

HORIZONTAL
SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 3
STA. 295+00 TO STA. 320+00

DESIGN AGENCY
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DESIGNER
TDP

REVIEWER
MJC 06/25/21

PROJECT ID
107630

SHEET P.43 | TOTAL 393

MAD-71-4.56

MODEL: 107630_MP903 PAPERSIZE: 17x11(in.) DATE: 6/30/2021 TIME: 9:48:44 AM USER: tpike
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MAD-71-4.56

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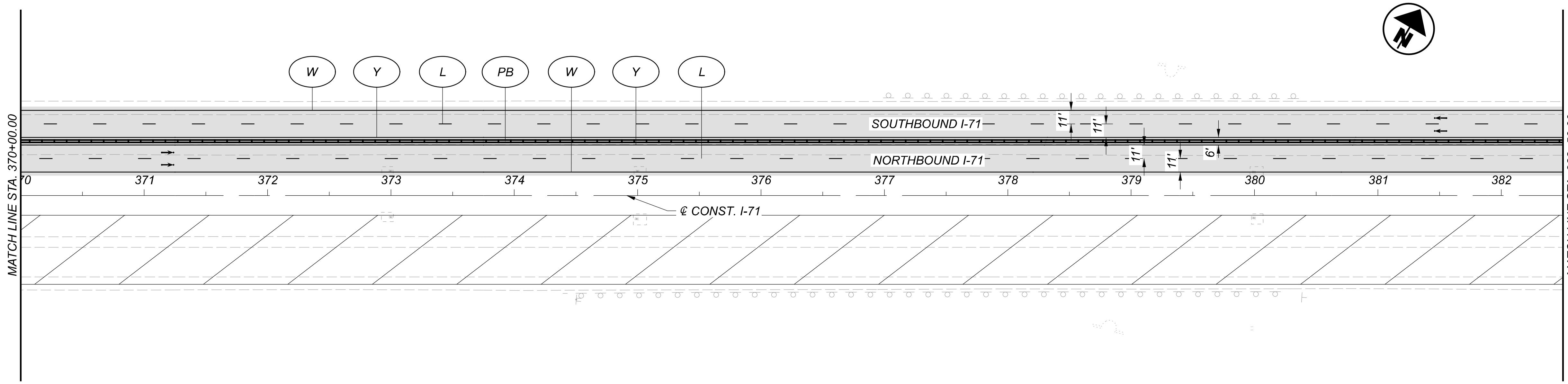
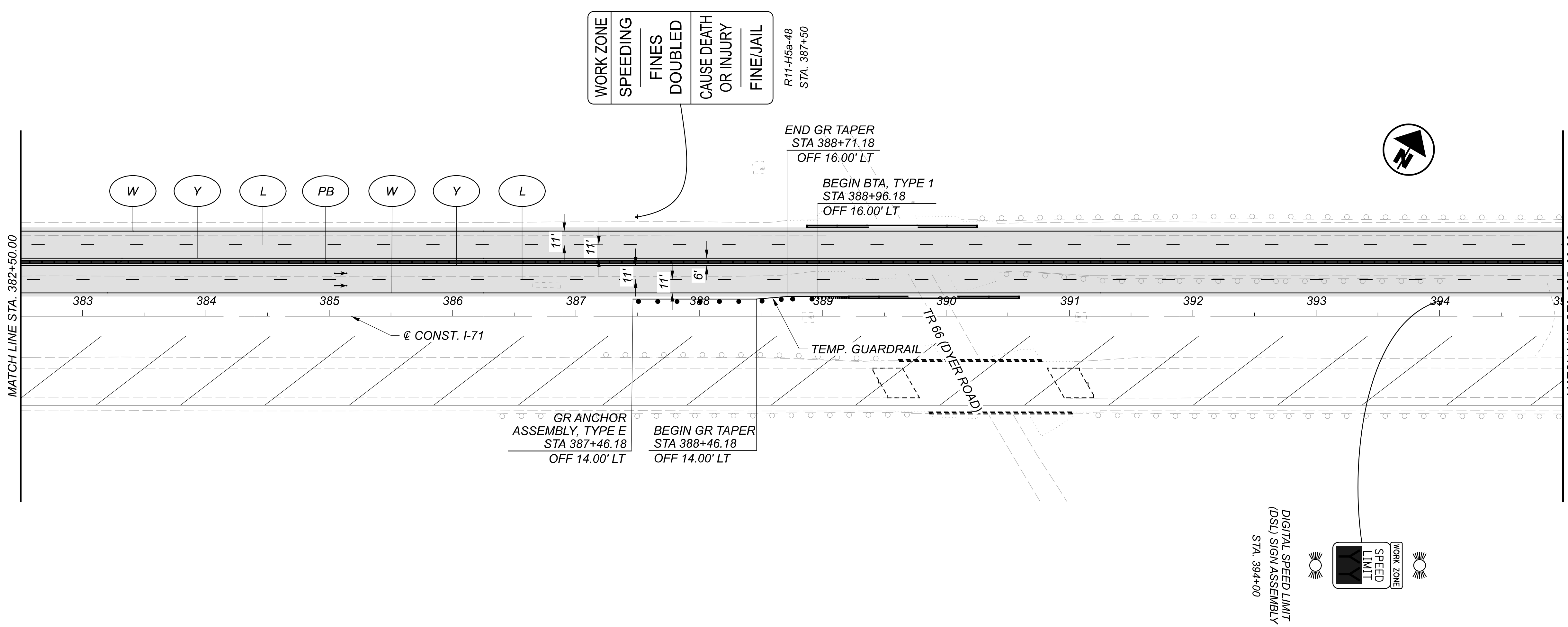




HORIZONTAL SCALE IN FEET

0 25 50 100

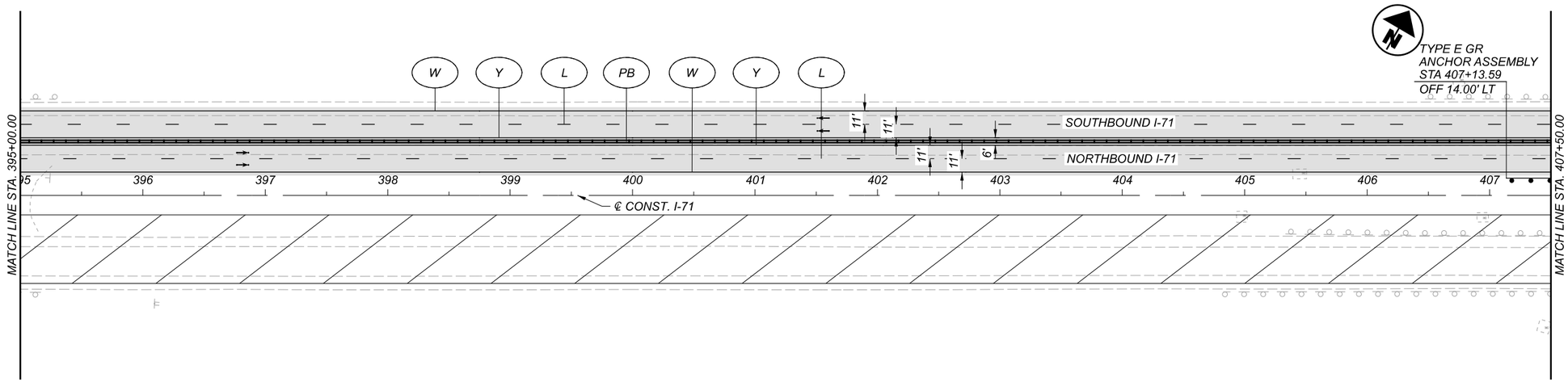
MAINTENANCE OF TRAFFIC - PHASE 3
STA. 370+00 TO STA. 395+00

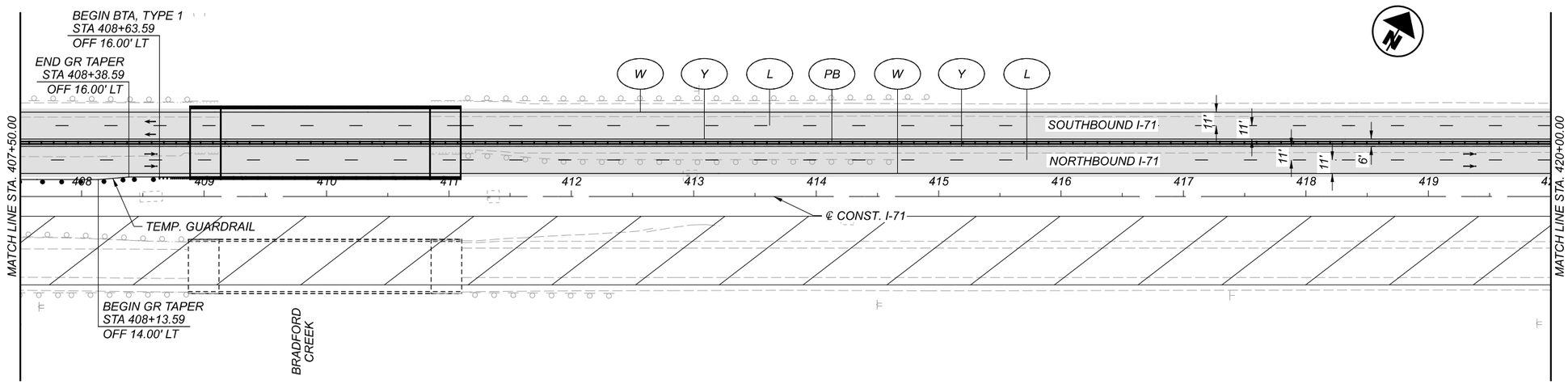
DESIGN AGENCY

E.L. ROBINSON ENGINEERING

1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER	TDP
REVIEWER	MJC 06/25/21
PROJECT ID	107630
SHEET	P.46
TOTAL	393





HORIZONTAL
SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 3
STA. 395+00 TO STA. 420+00

MAD-71-4.56

MODEL: I07630_MP9ll PAPERSIZE: 17x11(in.) DATE: 6/30/2021 TIME: 10:04:08 AM USER: tpike
P:_OHDOT_Worksets\107630\400-Engineering\MOT\Sheets\107630_MP906.dgn

DESIGN AGENCY

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DESIGNER
TDP

REVIEWER
MJC 06/25/21

PROJECT ID
107630

SHEET P.47 | TOTAL 393

SIGNS SHALL BE PLACED ALONG RAMP A (SR 56)

TYPE A WARNING LIGHT

ROAD WORK AHEAD
W20-1-48
STA. 470+50

WORK ZONE
SPEEDING
FINES DOUBLED
CAUSE DEATH OR INJURY
FINE/JAIL
R11-H5a-24
STA. 474+50

VARIABLE SPEED LIMIT AHEAD
W3-H5b-48
STA. 478+50

STAY IN LANE
R4-9-48
STA. 480+05

BEGIN LANE SHIFT
STA 470+10.00
OFF 66.00' LT

SC 471+55.00

℄ PR. SR 56 RAMP A

END LANE SHIFT
STA 472+90.00
OFF 62.00' LT

EX. STRIPING FROM PREVIOUS PROJECT

SOUTHBOUND I-71

NORTHBOUND I-71

℄ CONST. I-71

+10.00

SR 56

MATCH LINE STA. 470+00.00

MATCH LINE STA. 482+50.00

℄ PR. SR 56 RAMP C

PCC 474+06.17

END ROAD WORK
G20-2-48
STA. 471+35

END ROAD WORK
G20-2-48
STA. 485+50

PCC 488+79.86

℄ PR. SR 56 RAMP B

+85.00

EX. STRIPING FROM PREVIOUS PROJECT

SOUTHBOUND I-71

NORTHBOUND I-71

℄ CONST. I-71

MATCH LINE STA. 482+50.00

MATCH LINE STA. 495+00.00

WORK ZONE SPEED LIMIT

DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY
STA. 494+26

POT 494+30.77

℄ PR. SR 56 RAMP C

CS 491+28.50

℄ EX. SR 56 RAMP C

POT 494+28.50

HORIZONTAL SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 3
STA. 470+00 TO STA. 495+00

DESIGN AGENCY	E.L. ROBINSON ENGINEERING
	1468 West 9th St. Suite 800 Cleveland, Ohio 950 Goodale Blvd. Suite 180 Grandview Heights, Ohio
DESIGNER	TDP
REVIEWER	MJC 06/25/21
PROJECT ID	107630
SHEET	P.50
TOTAL	393

MAD-71-4.56

MODEL: I07630_MP917 PAPERSIZE: 17x11(in.) DATE: 6/29/2021 TIME: 12:17:17 AM USER: mcornett
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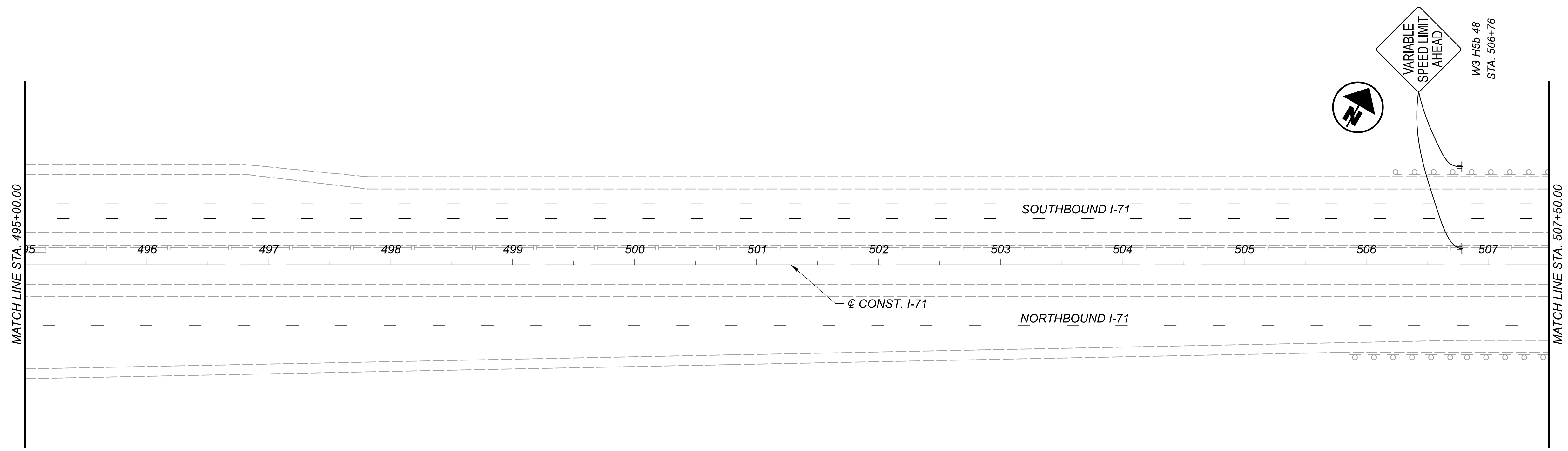

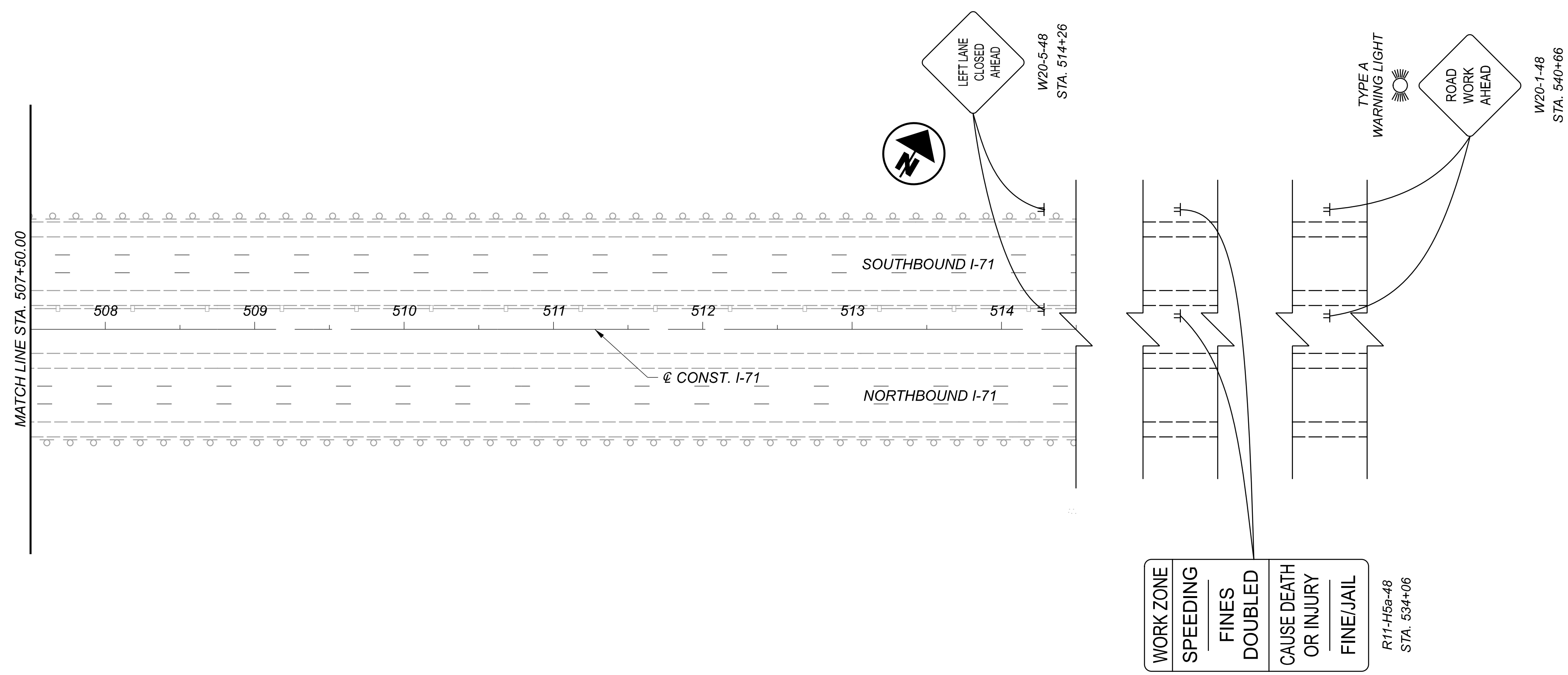

HORIZONTAL SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 3
STA. 495+00 TO STA. 514+00

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
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950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

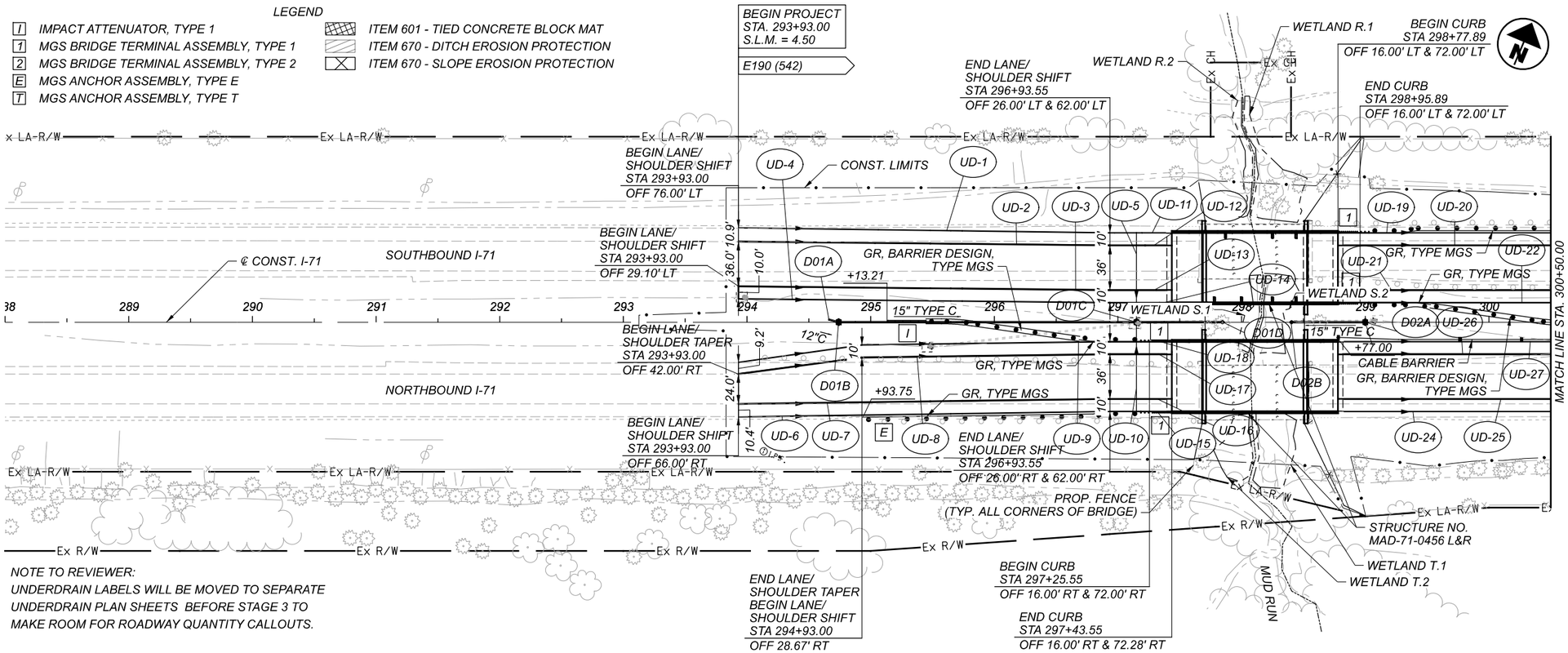
DESIGNER TDP
REVIEWER MJC 06/25/21
PROJECT ID 107630
SHEET P.51 TOTAL 393

MAD-71-4.56

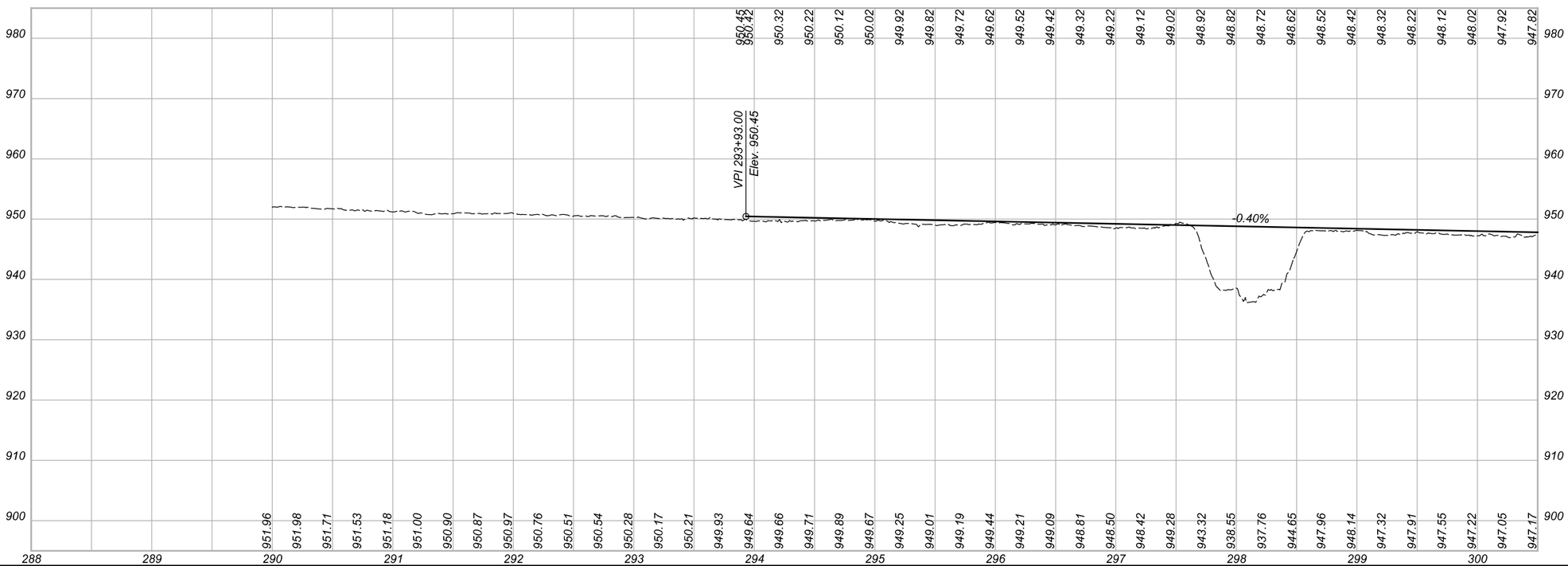
MODEL: 107630_MP919 PAPERSIZE: 17x11 (in.) DATE: 6/29/2021 TIME: 12:47:25 AM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\MOT\Sheets\107630_MP910.dgn

LEGEND

I IMPACT ATTENUATOR, TYPE 1	ITEM 601 - TIED CONCRETE BLOCK MAT
1 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	ITEM 670 - DITCH EROSION PROTECTION
2 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	ITEM 670 - SLOPE EROSION PROTECTION
E MGS ANCHOR ASSEMBLY, TYPE E	
T MGS ANCHOR ASSEMBLY, TYPE T	



NOTE TO REVIEWER:
UNDERDRAIN LABELS WILL BE MOVED TO SEPARATE UNDERDRAIN PLAN SHEETS BEFORE STAGE 3 TO MAKE ROOM FOR ROADWAY QUANTITY CALLOUTS.



HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN AND PROFILE - I-71
STA. 288+00 TO STA. 300+50

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER MLL
REVIEWER MJC 06/25/21
PROJECT ID 107630
SHEET P.52 TOTAL 393

MAD-71-4.56

MODEL: 107630_GP20I PAPERSIZE: ITxII(in.) DATE: 6/29/2021 TIME: 12:48:19 AM USER: mcornett
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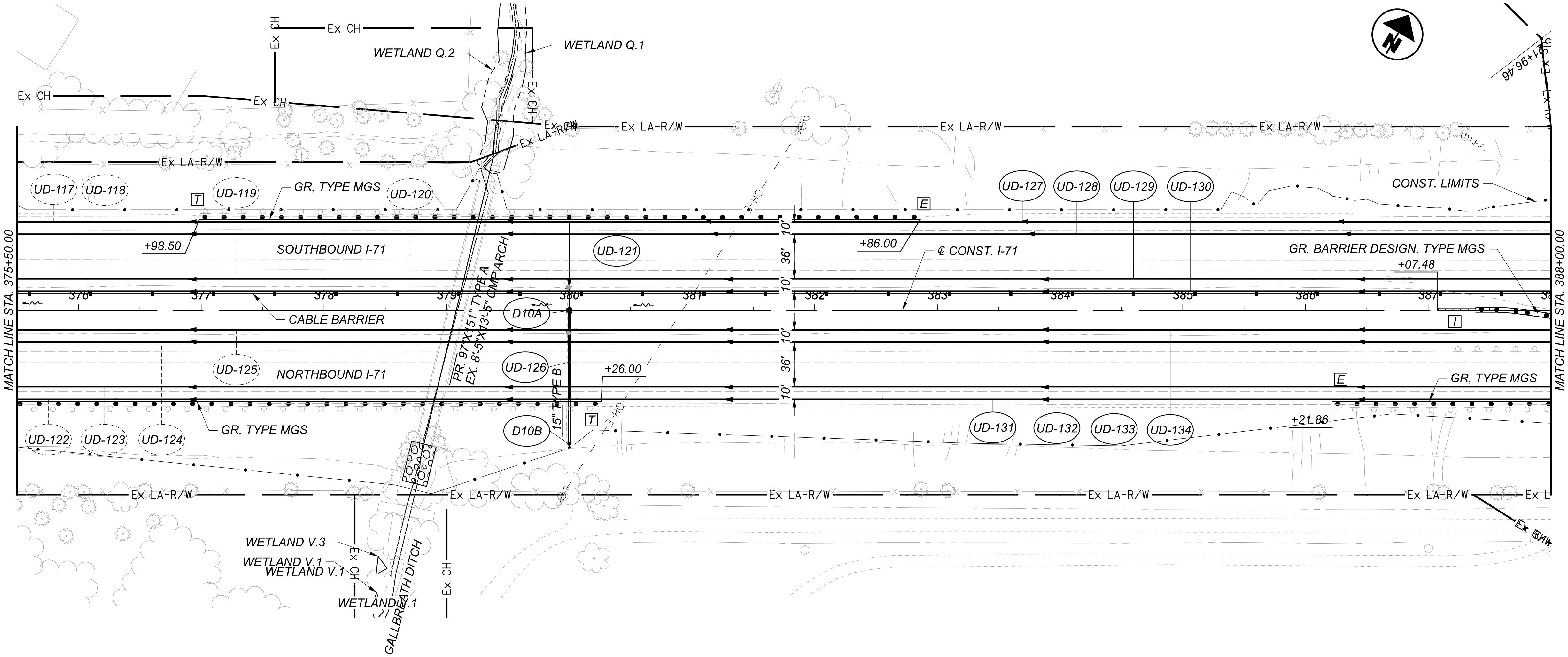

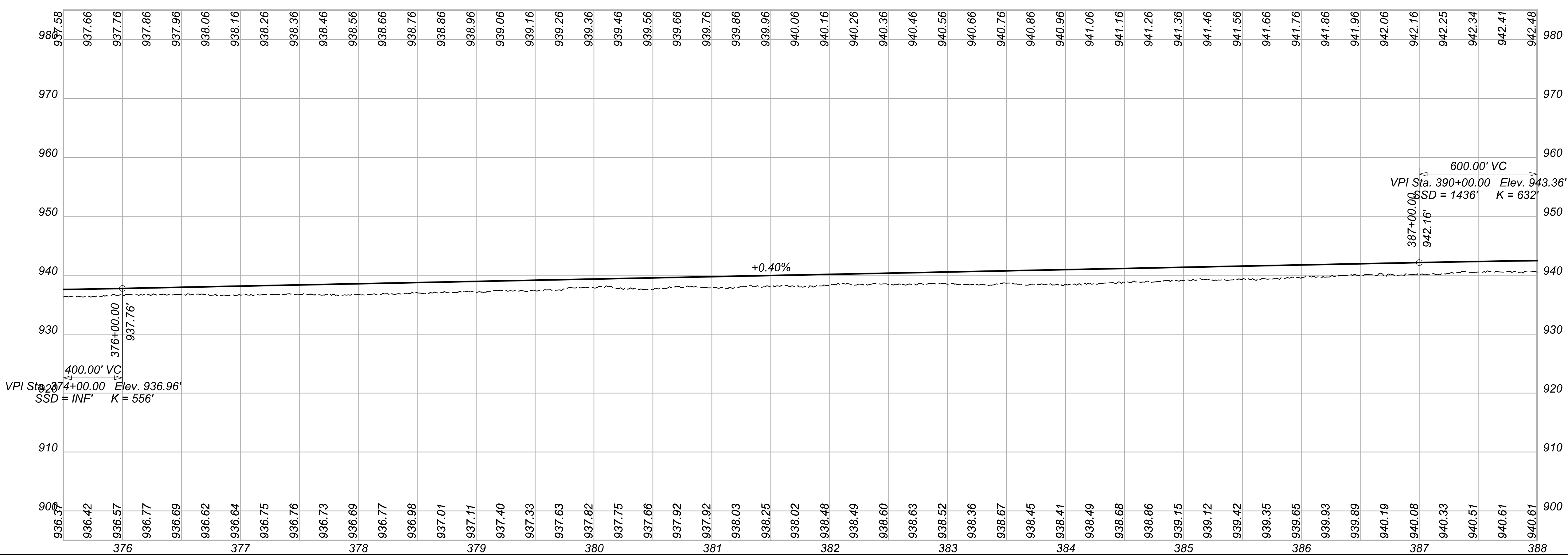

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN AND PROFILE - I-71
STA. 375+50 TO STA. 388+00

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER
MLL

REVIEWER
MJC 06/25/21

PROJECT ID
107630

SHEET P.59 TOTAL 393

MAD-71-4.56

MODEL: 107630_GP208 PAPERSIZE: 17x11 (in.) DATE: 6/30/2021 TIME: 1:09:05 AM USER: mcornett
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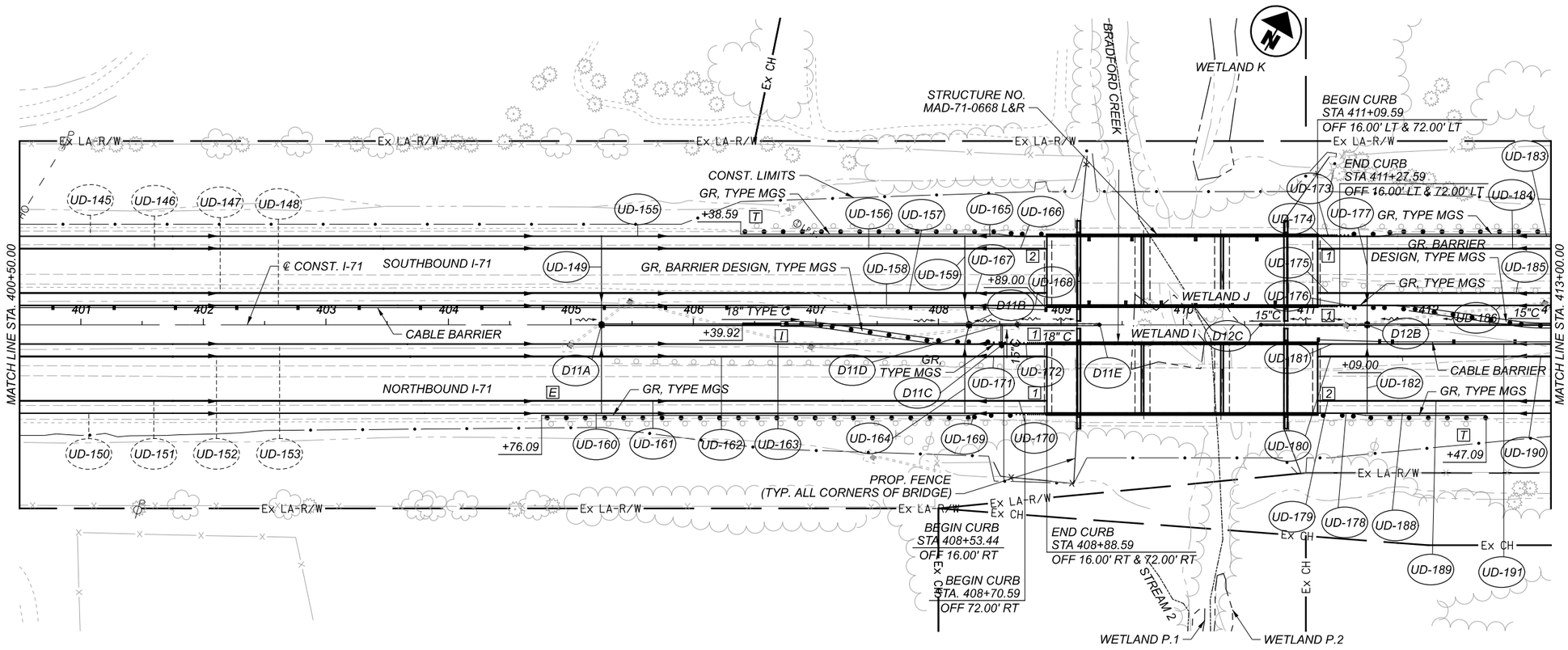

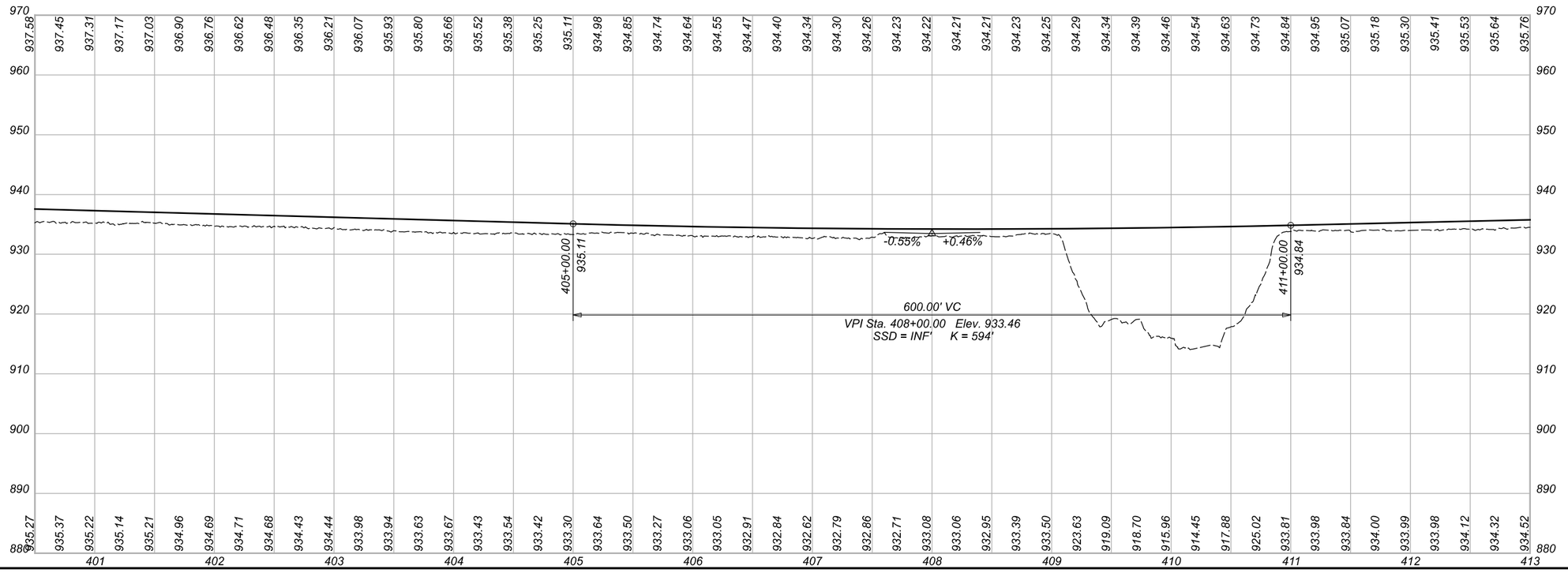

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN AND PROFILE - I-71
STA. 400+50 TO STA. 413+00

MAD-71-4.56

MODEL: 107630_GP2I0 PAPERSIZE: 17x11(in.) DATE: 6/29/2021 TIME: 12:58:01 AM USER: mcornett
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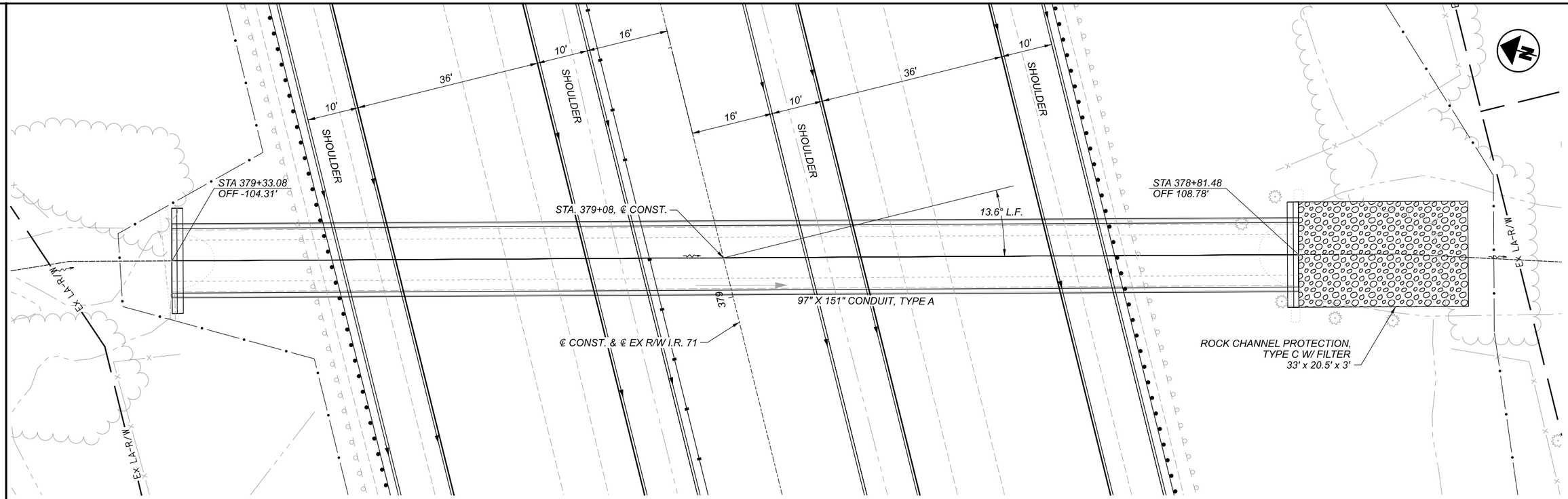
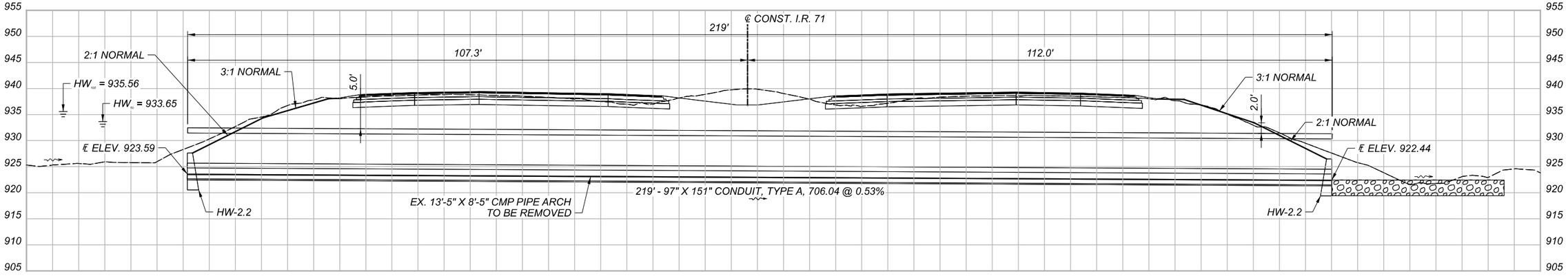
DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER	MLL
REVIEWER	MJC 06/25/21
PROJECT ID	107630
SHEET	P.61
TOTAL	393





EXISTING STRUCTURE	
TYPE:	13'-5" X 8'-5" CMP ARCH
LENGTH:	220' +/-
SKEW:	13° L.F.
WEARING SURFACE:	ASPHALT CONCRETE
YEAR BUILT:	
CONDITION:	GOOD
CFN:	

HYDRAULIC DESIGN DATA			
DRAINAGE AREA:	=	2131	AC
Q50	=	893	CFS
Q100	=	1064	CFS
HW50	=	933.65	
HW100	=	935.56	
V50	=	14.33	FPS
V100	=	15.27	FPS
ORDINARY HIGH WATER MARK	=	926.29	FT
SERVICE LIFE	=	75	YR
pH	=	7.2	
ABRASION LEVEL	=	1	
CFN	=		

I.R. 71 STA. 379+08 - ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
202	1	LS	STRUCTURE REMOVED
202	2	EACH	HEADWALL REMOVED
209	100	FT	DITCH CLEANOUT
601	75	CY	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER
602	10.8	CY	CONCRETE MASONRY
611	219	FT	97" X 151" CONDUIT, TYPE A, 706.04 OR 706.03

QUANTITIES CARRIED TO DRAINAGE SUBSUMMARY, SHEET X

HORIZONTAL SCALE IN FEET
0 5 10 20

CULVERT DETAILS
I.R. 71 STA. 379+08

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER JAB
REVIEWER ENB 06/25/21
PROJECT ID 107630
SHEET P.182 TOTAL 393

MAD-71-4.56

MODEL: Culvert 379+00 PAPERSIZE: 17x11(in.) DATE: 6/30/2021 TIME: 11:24 AM USER: mcornett
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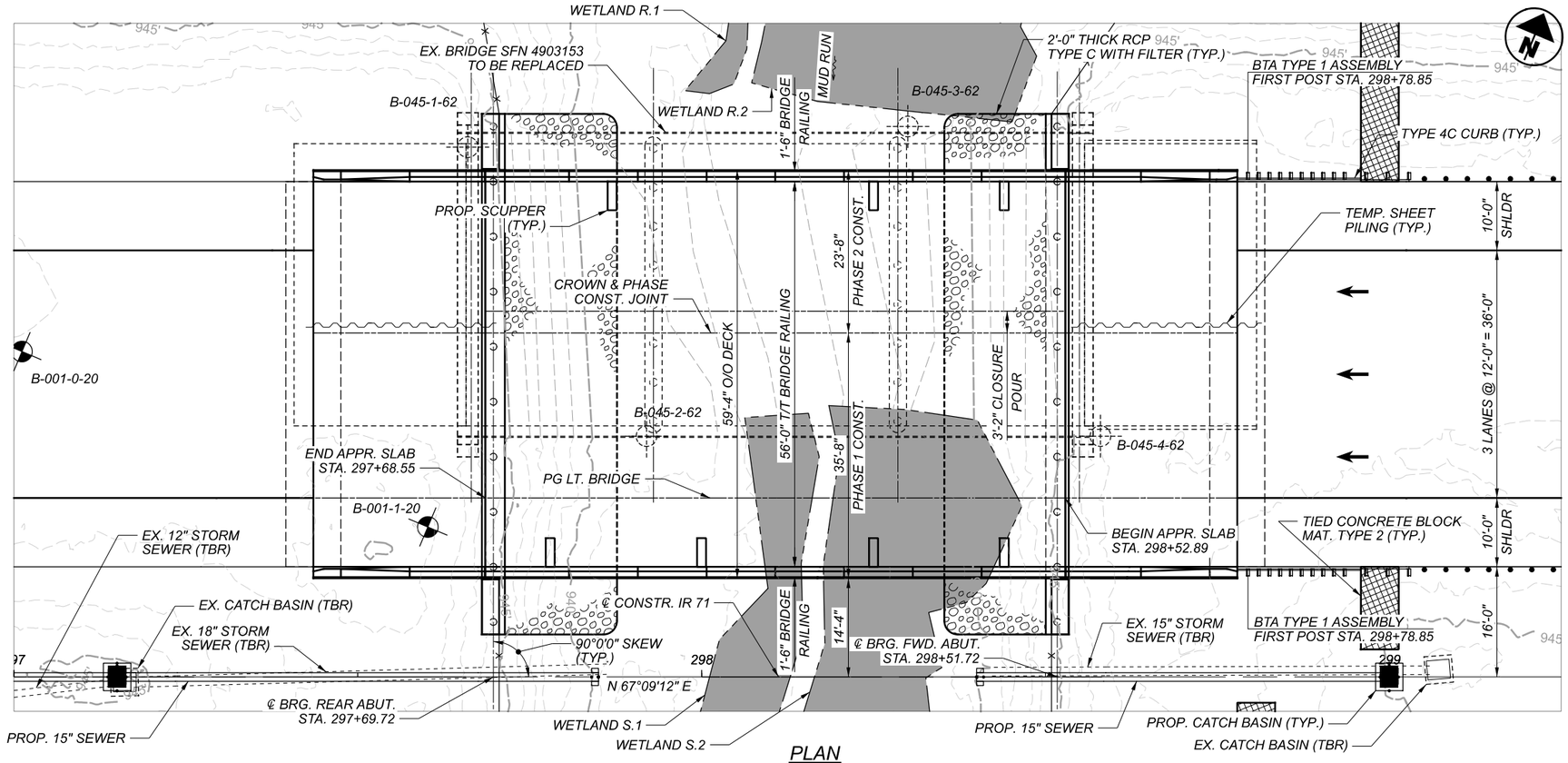
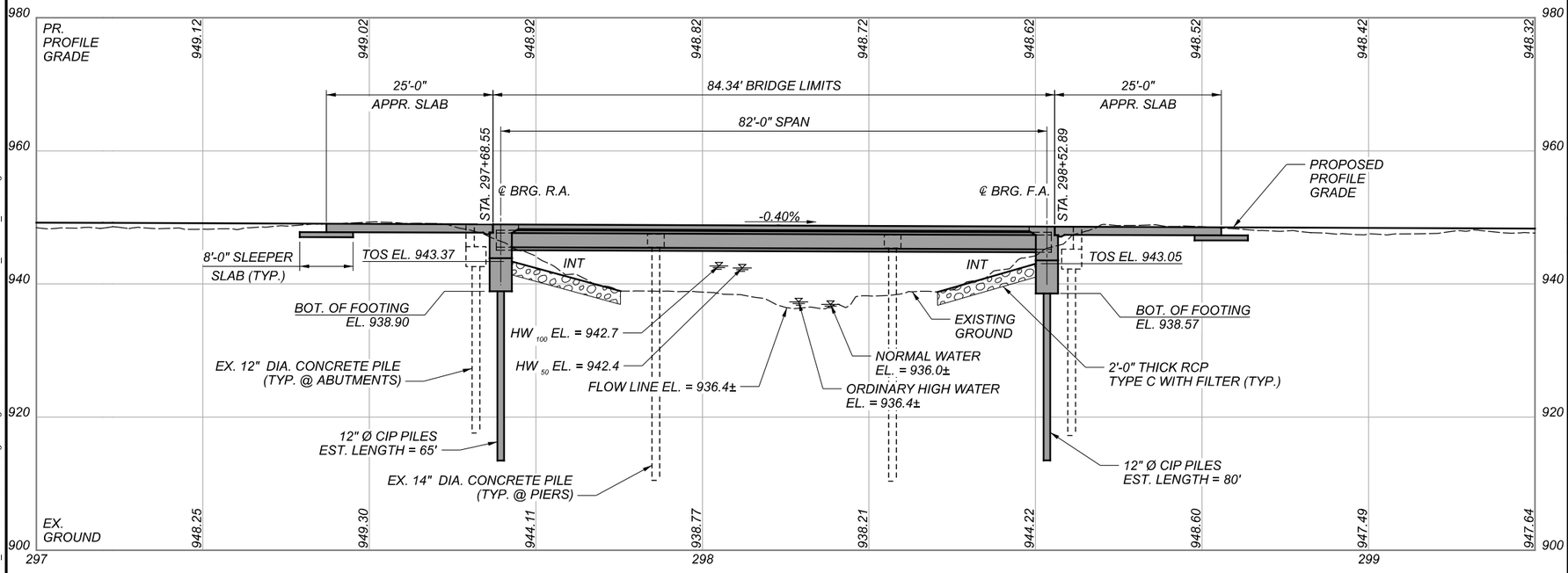


PLAN



PROFILE ALONG PROFILE GRADE IR 71 SOUTHBOUND

BENCHMARK DATA

BM #1 STA.	294+13.46	ELEV.	948.68	OFFSET	104.41'	RT.
BM #2 STA.	302+51.42	ELEV.	942.88	OFFSET	101.01'	RT.

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEETS .

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. A DATUM CORRECTION OF -0.70' WAS USED TO DETERMINE EXISTING ELEVATIONS.

DESIGN TRAFFIC:

2024 ADT = 51,000 2024 ADTT = 13,770
2044 ADT = 72,000 2044 ADTT = 19,440
DIRECTIONAL DISTRIBUTION = 0.52

LEGEND

BORING LOCATION — HISTORICAL BORING

TBR - TO BE REMOVED

HYDRAULIC DATA

DRAINAGE AREA = 4.94 SQ. MILES
Q (50) = 1210 CFS V (50) = 5.8 FT/S
Q (100) = 1440 CFS V (100) = 6.5 FT/S
STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 1.98 FEET.

EXISTING STRUCTURE

TYPE: 3-SPAN CONTINUOUS REINFORCED CONCRETE SLAB ON CONCRETE CAPPED PILE STUB ABUTMENTS WITH CONCRETE CAPPED PILE PIERS

SPANS: 26'-6 1/4"± - 35'-6 1/4"± - 26'-4 3/4"± C/C BEARINGS
ROADWAY: 41'-0" T/T RAILING
LOADING: CF 2000 (57)
SKEW: 0°
WEARING SURFACE: 1 3/4" LATEX MODIFIED CONCRETE OVERLAY
APPROACH SLABS: 25'-0"± LONG, TYPE A INSTALLATION (AS-1-15 & AS-2-15)
ALIGNMENT: TANGENT
CROWN: 0.016 FT/FT
STRUCTURE FILE NUMBER: 4903153
DATE BUILT: 1964
REHAB: 2019-2020
DISPOSITION: TO BE REPLACED

PROPOSED STRUCTURE

TYPE: SINGLE SPAN CONCRETE PRESTRESSED I-BEAM BRIDGE WITH A COMPOSITE REINFORCED CONCRETE DECK SUPPORTED BY INTEGRAL ABUTMENTS ON FRICTION PILES

SPANS: 82'-0" C/C BEARING
ROADWAY: 56'-0" T/T BRIDGE RAILING
LOADING: HL93 AND 60 PSF FUTURE WEARING SURFACE
SKEW: 0°
WEARING SURFACE: 1" MONOLITHIC
APPROACH SLABS: 25'-0" LONG, TYPE A INSTALLATION (AS-1-15 & AS-2-15)
ALIGNMENT: TANGENT
CROWN: 0.016 FT/FT
DECK AREA: 5,003 SF

COORDINATES: LATITUDE 39° 44' 02.12" N
LONGITUDE 83° 21' 38.32" W

HORIZONTAL SCALE IN FEET
0 5 10 20

SITE PLAN (1 OF 2)
BRIDGE NO. MAD-00071-04.560L&R
IR 71 OVER MUD RUN

SFN 4903154
SFN 4903189
DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio
DESIGNER FIB | CHECKER JOL
REVIEWER DFT 06/29/21
PROJECT ID 107630
SUBSET 1 | TOTAL 38
SHEET P.198 | TOTAL 393

MAD-71-4.56

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 6/29/2021 TIME: 3:33:34 PM USER: mdrockton
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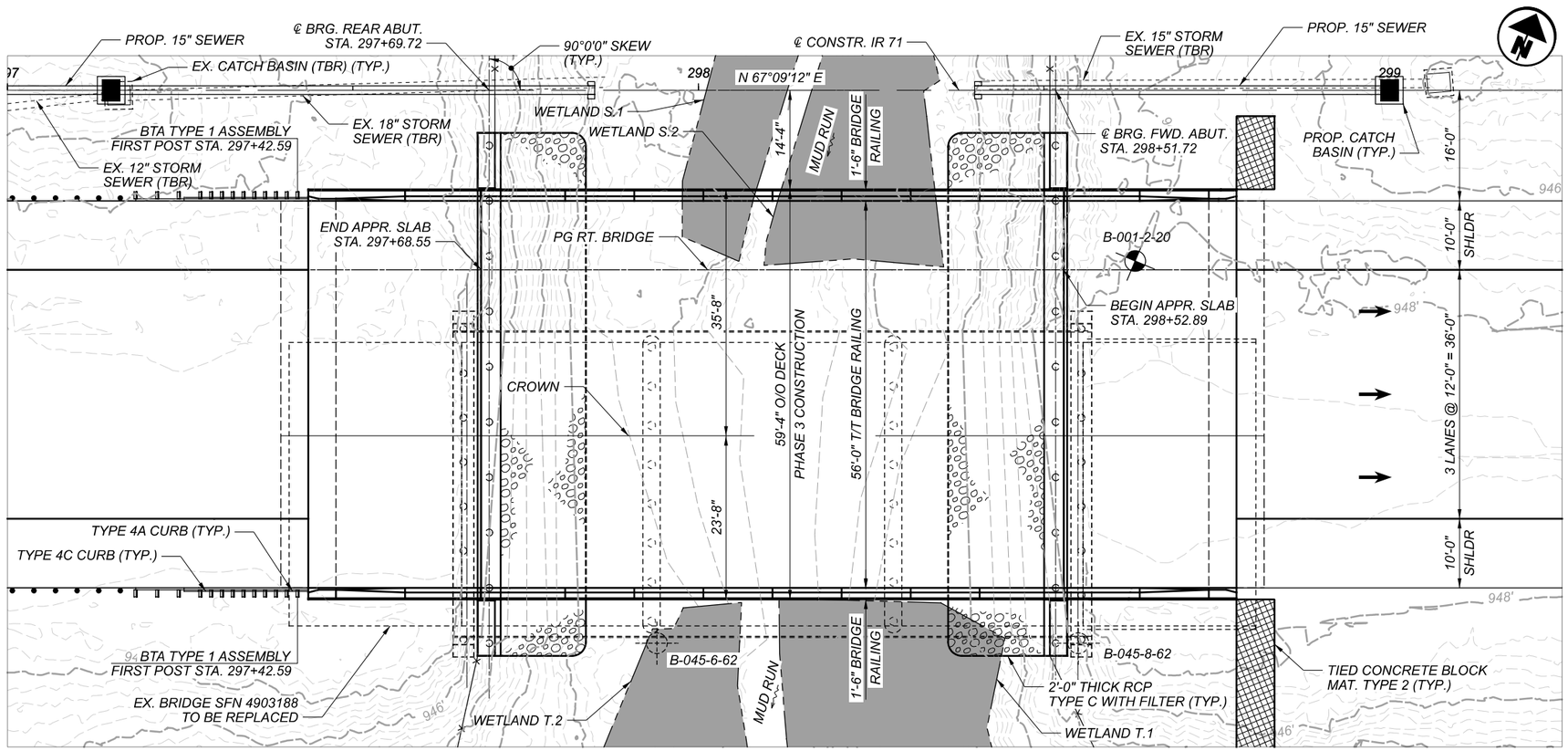
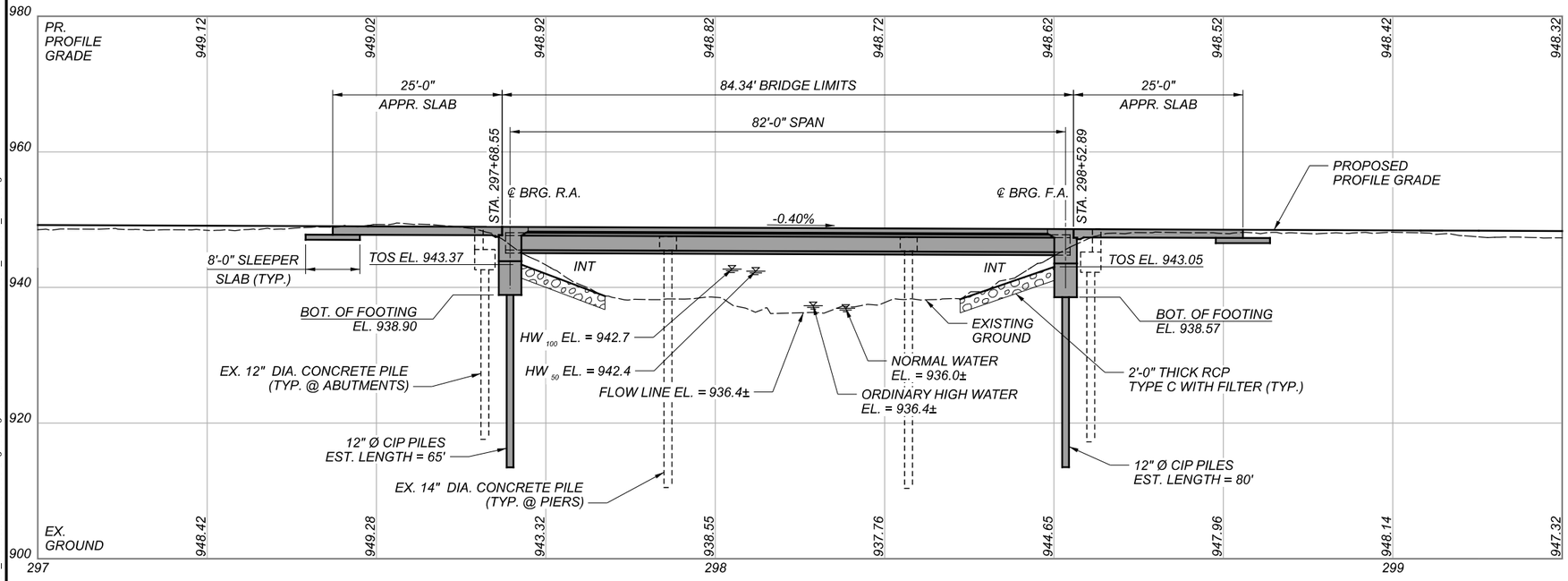


PLAN



PROFILE ALONG PROFILE GRADE IR 71 NORTHBOUND

BENCHMARK DATA

BM #1 STA.	294+13.46	ELEV.	948.68	OFFSET	104.41'
BM #2 STA.	302+51.42	ELEV.	942.88	OFFSET	101.01'

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEETS .

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. A DATUM CORRECTION OF -0.70' WAS USED TO DETERMINE EXISTING ELEVATIONS.

DESIGN TRAFFIC:

2024 ADT = 51,000 2024 ADTT = 13,770
2044 ADT = 72,000 2044 ADTT = 19,440
DIRECTIONAL DISTRIBUTION = 0.52

LEGEND

BORING LOCATION — HISTORICAL BORING

TBR - TO BE REMOVED

HYDRAULIC DATA

DRAINAGE AREA = 4.94 SQ. MILES
Q (50) = 1210 CFS V (50) = 5.8 FT/S
Q (100) = 1440 CFS V (100) = 6.5 FT/S
STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 1.98 FEET.

EXISTING STRUCTURE

TYPE: 3-SPAN CONTINUOUS REINFORCED CONCRETE SLAB ON CONCRETE CAPPED PILE STUB ABUTMENTS WITH CONCRETE CAPPED PILE PIERS

SPANS: 26'-6 1/4"± - 35'-6 1/4"± - 26'-4 3/4"± C/C BEARINGS
ROADWAY: 41'-0" T/T RAILING
LOADING: CF 2000 (57)
SKEW: 0°
WEARING SURFACE: 1 3/4" LATEX MODIFIED CONCRETE OVERLAY
APPROACH SLABS: 25'-0"± LONG, TYPE A INSTALLATION (AS-1-15 & AS-2-15)
ALIGNMENT: TANGENT
CROWN: 0.016 FT/FT
STRUCTURE FILE NUMBER: 4903188
DATE BUILT: 1964
REHAB: 2019-2020
DISPOSITION: TO BE REPLACED

PROPOSED STRUCTURE

TYPE: SINGLE SPAN CONCRETE PRESTRESSED I-BEAM BRIDGE WITH A COMPOSITE REINFORCED CONCRETE DECK SUPPORTED BY INTEGRAL ABUTMENTS ON FRICTION PILES

SPANS: 82'-0" C/C BEARING
ROADWAY: 56'-0" T/T BRIDGE RAILING
LOADING: HL93 AND 60 PSF FUTURE WEARING SURFACE
SKEW: 0°
WEARING SURFACE: 1" MONOLITHIC
APPROACH SLABS: 25'-0" LONG, TYPE A INSTALLATION (AS-1-15 & AS-2-15)
ALIGNMENT: TANGENT
CROWN: 0.016 FT/FT
DECK AREA: 5,003 SF

COORDINATES: LATITUDE 39° 44' 01.64" N
LONGITUDE 83° 21' 38.06" W

HORIZONTAL SCALE IN FEET
0 5 10 20

SITE PLAN (2 OF 2)
BRIDGE NO. MAD-00071-04.560L&R
IR 71 OVER MUD RUN

SFN 4903154
SFN 4903189
DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St. Suite 800 Cleveland, Ohio
950 Goodale Blvd. Suite 180 Grandview Heights, Ohio
DESIGNER FIB | CHECKER JOL
REVIEWER DFT 06/29/21
PROJECT ID 107630
SUBSET 2 | TOTAL 38
SHEET P.199 | TOTAL 393

MAD-71-4.56
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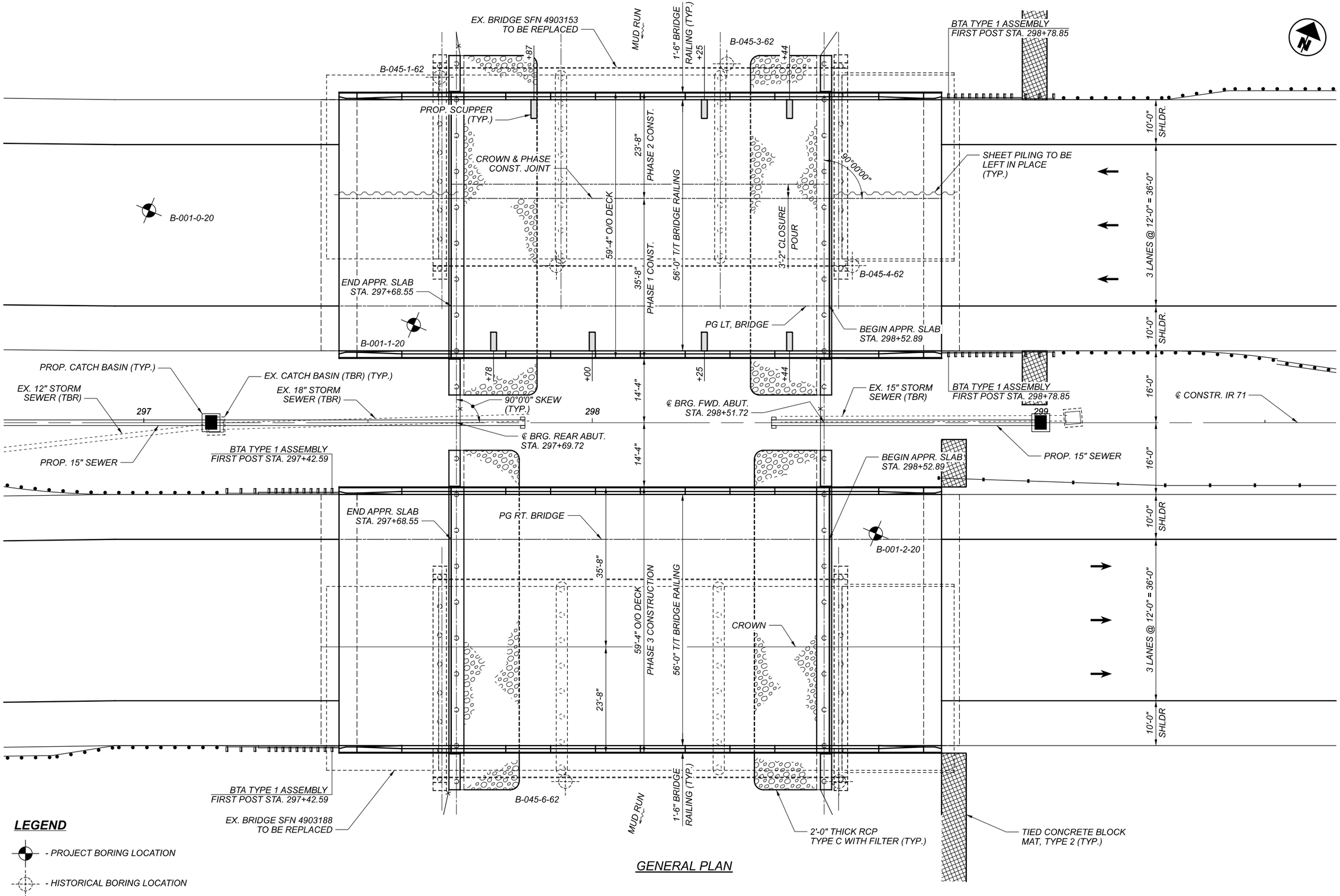

LEGEND

- PROJECT BORING LOCATION
- HISTORICAL BORING LOCATION

TBR - TO BE REMOVED

GENERAL PLAN

GENERAL PLAN
BRIDGE NO. MAD-00071-04.560L&R
IR 71 OVER MUD RUN

SFN	4903154
SFN	4903189
DESIGN AGENCY	E.L. ROBINSON ENGINEERING
	1468 West 9th St, Suite 800 Cleveland, Ohio 950 Goodale Blvd, Suite 180 Grandview Heights, Ohio
DESIGNER	FIB
CHECKER	JOL
REVIEWER	DFT 06/29/21
PROJECT ID	107630
SUBSET	3
TOTAL	38
SHEET	P.200
TOTAL	393

MAD-71-4.56

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 6/29/2021 TIME: 3:35:29 PM USER: mbrockton
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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-15	REVISED	7/17/2015
AS-2-15	REVISED	1/18/2019
PCB-91	REVISED	7/17/2020
PSID-1-13	REVISED	1/15/2021
SBR-1-20	REVISED	7/17/2020

AND THE FOLLOWING SUPPLEMENTAL SPECFICATION(S):

800	DATED	1/21/2022

DESIGN SPECIFICATIONS:

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

VEHICULAR LIVE LOAD: HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KSF

DESIGN STRESSES:

DESIGN DATA :
CONCRETE CLASS QC2- COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

WELDED WIRE FABRIC - 70 KSI

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (RELEASE) - 6.0 KSI
COMPRESSIVE STRENGTH (FINAL) - 8.0 KSI

PRESTRESSING STRAND:
AREA - 0.217 SQ. IN.
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202.5 KSI (LOW RELAXATION STRANDS)

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

EXISTING BRIDGE PLANS:

FOR INFORMATION NOT SHOWN, EXISTING BRIDGE PLANS MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE DISTRICT 6 OFFICE, 400 EAST WILLIAM STREET, DELAWARE, OHIO, 43015.

MAINTENANCE OF TRAFFIC:

FOR MAINTENANCE OF TRAFFIC PLANS, SEE ROADWAY SHEETS.

UTILITIES:

FOR UTILITY NOTES, SEE ROADWAY SHEETS.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURES AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS SECTIONS 102.05, 105.022 AND 513.04 FOR FURTHER INFORMATION.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

PILE DRIVING:

THE MINIMUM RATED ENERGY OF THE HAMMER USED TO INSTALL THE PILES SHALL BE 42,500 FT/LBS. ENSURE THAT STRESSES IN THE PILES DURING DRIVING DO NOT EXCEED 31,500 PSI.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE):

THE ULTIMATE BEARING VALUE (UBV) IS 295 KIPS PER PILE FOR THE REAR AND FORWARD ABUTMENT PILES.

ABUTMENT PILES:
20 PILES 65' LONG, ORDER LENGTH 70' - REAR ABUTMENT
20 PILES 80' LONG, ORDER LENGTH 85' - FORWARD ABUTMENT
1 DYNAMIC LOAD TESTING ITEMS

DECK PLACEMENT ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.2 K FOR STRUCTURE 4903154 DURING PHASE 1 AND PHASE 2. AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.5 K FOR STRUCTURE 4903189 DURING PHASE 3.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".
A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.
A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65"

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN:

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05.

SUBSTRUCTURE CONCRETE REMOVAL: REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER.

REMOVE REAR ABUTMENTS TO ELEV. 937.90.
REMOVE FORWARD ABUTMENTS TO ELEV. 937.57.

ITEM 203 - EMBANKMENT, AS PER PLAN

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT BETWEEN STATIONS 296+65.00 TO 297+68.55 AND BETWEEN STATIONS 298+52.89 TO 299+55.00.

ITEM 504 - STEEL SHEET PILING LEFT IN PLACE, AS PER PLAN:

THE DESIGN SHOWN IN THE TABLE BELOW FOR TEMPORARY SUPPORT OF EXCAVATION AT THE ABUTMENTS IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN IN THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE ABUTMENTS AT THE SQUARE FOOT PRICE FOR STEEL SHEET PILING LEFT IN PLACE, AS PER PLAN. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

THE STEEL SHEET PILING SHALL CONFORM TO ASTM A328 AND SHALL HAVE THE FOLLOWING:

LOCATION	REAR & FORWARD ABUTMENTS
SECTION MODULUS REQUIRED (CU. IN/FT.) (MIN.)	18.1
MINIMUM YIELD STRESS, Fy (KSI)	39
DESIGN EXCAVATION DEPTH (FT.)	10.5
DESIGN EMBEDMENT DEPTH (FT.)	10.5
DESIGN TOTAL DEPTH (FT.)	21.0

ABBREVIATIONS:

ABUT. - ABUTMENT
ADT - AVERAGE DAILY TRAFFIC
ADTT - AVERAGE DAILY TRUCK TRAFFIC
APPR. - APPROACH
B - BOTTOM
℄ - BASELINE
B.F. - BACK FACE
BM - BENCHMARK
BOT. OR BTM. - BOTTOM
BRG. - BEARING
℄ - CENTERLINE
C/C - CENTER TO CENTER
C.I.P. - CAST-IN-PLACE
C.J. - CONSTRUCTION JOINT
CLR. - CLEAR
C&MS - CONSTRUCTION AND MATERIAL SPECIFICATIONS
CONC. - CONCRETE
CONST./CONSTR. - CONSTRUCTION
CVN - CHARPY V-NOTCH
DIA. - DIAMETER
DIM. - DIMENSION
DWG. - DRAWING
E - EAST
EB - EASTBOUND
E.F. - EACH FACE
EL. OR ELEV. - ELEVATION
EOP - EDGE OF PAVEMENT
EQ. - EQUAL
EST. - ESTIMATED
EX. - EXISTING
EXP. - EXPANSION
F.A. - FORWARD ABUTMENT
F/F - FACE TO FACE
F.F. - FRONT FACE
F.S. - FIELD SPLICE
FT. - FOOT OR FEET
FWD. - FORWARD
HMWM - HIGH MOLECULAR WEIGHT METHACRYLATE
HW - HIGH WATER
IN. - INCH
JT. - JOINT
LB - LEFT BRIDGE
LEOD - LEFT EDGE OF DECK
L.F. - LEFT FORWARD
LT. - LEFT
LTBR - LEFT TOE BRIDGE RAILING
MAX. - MAXIMUM
MIN. - MINIMUM
MISC. - MISCELLANEOUS
MSE - MECHANICALLY STABILIZED EARTH
N - NORTH
NB - NORTHBOUND
NO. - NUMBER
N.P.C.P.P. - NON-PERFORATED CORRUGATED PLASTIC PIPE
OHWM - ORDINARY HIGH WATER MARK
O/O - OUT TO OUT
P.C.P.P. - PERFORATED CORRUGATED PLASTIC PIPE
P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
PG - PROFILE GRADE
PROP. - PROPOSED
PSF - POUNDS PER SQUARE FOOT
P.V.I. - POINT OF VERTICAL INTERSECTION
Q - FLOW RATE
R - RADIUS
R.A. - REAR ABUTMENT
RB - RIGHT BRIDGE
RCP - ROCK CHANNEL PROTECTION
REOD - RIGHT EDGE OF DECK
REQD. - REQUIRED
R.F. - RIGHT FORWARD
R.R. - RAILROAD
RT. - RIGHT
RTBR - RIGHT TOE BRIDGE RAILING
R/W - RIGHT OF WAY
S - SOUTH
SB - SOUTHBOUND
SDC - SUPERPLASTICIZED DENSE CONCRETE
SER. - SERIES
SHLDR - SHOULDER
SLPR. - SLEEPER
SPA. - SPACE OR SPACES
STA. - STATION
STD. - STANDARD
STR - STRAIGHT
T - TOP
T&B - TOP & BOTTOM
TBR - TO BE REMOVED
TEMP. - TEMPORARY
T.O.S. OR T/S - TOP OF SLOPE
T/T - TOE TO TOE
TYP. - TYPICAL
U.N.O. - UNLESS NOTED OTHERWISE
VAR. - VARIES
V - VELOCITY
W - WEST
WB - WESTBOUND
WWR - WELDED WIRE REINFORCEMENT

GENERAL NOTES
BRIDGE NO. MAD-00071-04.560L&R
IR 71 OVER MUD RUN

SFN 4903154
SFN 4903189

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER	CHECKER
JOL	MMD

REVIEWER: DFT 06/29/21

PROJECT ID: 107630

SUBSET	TOTAL
4	38

SHEET	TOTAL
P.201	393

MAD-71-4.56

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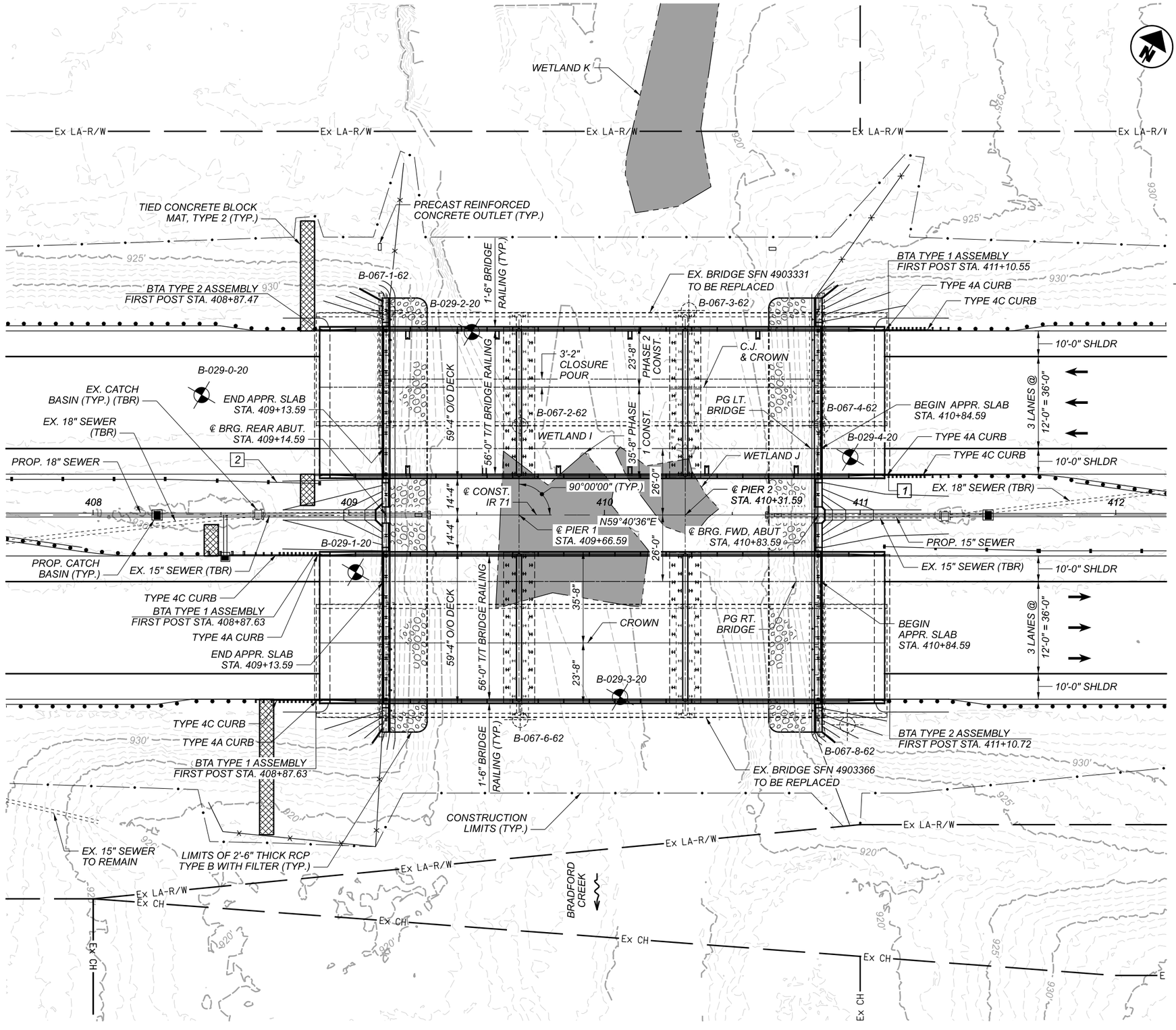

PLAN

TEMPORARY SHEET PILING NOT SHOWN FOR CLARITY. SEE SHEET 11/50 FOR MORE INFORMATION.

BENCHMARK DATA

BM #1 - I.P.F.	STA. 406+84.85,	ELEV. 932.69	OFFSET 82.65'	LT.
BM #2 - I.P.F.	STA. 414+32.74,	ELEV. 935.00	OFFSET 104.29'	LT.

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEETS.

NOTES

1. *EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.*
2. *A DATUM CORRECTION OF -0.45' WAS USED TO DETERMINE EXISTING ELEVATIONS.*

DESIGN TRAFFIC:

2024 ADT = 51,000 *2024 ADTT = 13,770*
2044 ADT = 72,000 *2044 ADTT = 19,440*
DIRECTIONAL DISTRIBUTION = 0.52

LEGEND

BORING LOCATION *HISTORICAL BORING*

1 - *BTA TYPE 1 ASSEMBLY - FIRST POST STA. 411+10.55*

2 - *BTA TYPE 1 ASSEMBLY DURING PHASE 2 CONSTRUCTION. SEE MOT PLANS FOR MORE INFORMATION.*

TBR - TO BE REMOVED

HYDRAULIC DATA

DRAINAGE AREA = 37.6 SQ. MILES
Q (50) = 4970 CFS *V (50) = 8.9 FT/S*
Q (100) = 5840 CFS *V (100) = 9.6 FT/S*
STRUCTURES CLEAR THE 50 YEAR DESIGN HW BY 7.3 FEET.

EXISTING STRUCTURES

TYPE: 3-SPAN CONTINUOUS ROLLED STEEL BEAMS COMPOSITE WITH REINFORCED CONCRETE DECK ON SEMI-INTEGRAL ABUTMENTS AND WALL-TYPE PIERS ON FRICTION PILES AND PILES TO BEDROCK

SPANS: 52'-0"± - 65'-0"± - 52'-0"± C/C BEARINGS
ROADWAY: 41'-0"± TOE/TOE RAILING
LOADING: HS20 CASE I AND ALTERNATE MILITARY LOADING
SKEW: 00°00'00"
WEARING SURFACE: 1"± MONOLITHIC CONCRETE
APPROACH SLABS: 25'-0"± LONG (AS-1-15 & AS-2-15)
ALIGNMENT: TANGENT
CROWN: 0.016± FT/FT
STRUCTURE FILE NUMBER: 4903331 & 4903366
DATE BUILT: 1964 *REHABILITATED: 2019*
DISPOSITION: STRUCTURES TO BE REPLACED IN PHASES

PROPOSED STRUCTURES

TYPE: 3-SPAN CONTINUOUS ROLLED STEEL BEAMS COMPOSITE WITH REINFORCED CONCRETE DECK ON INTEGRAL ABUTMENTS AND WALL-TYPE PIERS SUPPORTED BY FRICTION PILES

SPANS: 52'-0" - 65'-0" - 52'-0" C/C BEARING
ROADWAY: 56'-0" TOE/TOE BRIDGE RAILING
LOADING: HL93 AND 60 PSF FUTURE WEARING SURFACE
SKEW: 00°00'00"
WEARING SURFACE: 1" MONOLITHIC CONCRETE
APPROACH SLABS: 25'-0" LONG (AS-1-15 & AS-2-15)
ALIGNMENT: TANGENT
CROWN: 0.016 FT/FT
DECK AREA: 10,146 SF (PER LEFT AND RIGHT BRIDGE)

COORDINATES: LATITUDE 39°44'52.12" N / LONGITUDE 83°19'31.55" W
LATITUDE 39°44'51.68" N / LONGITUDE 83°19'31.21" W

HORIZONTAL SCALE IN FEET
0 10 20 40

SITE PLAN (1 OF 2)
BRIDGE NO. MAD-00071-06.680L&R
IR 71 OVER BRADFORD CREEK

SFN 4903332
SFN 4903367
DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio
DESIGNER MRV | CHECKER TAS
REVIEWER DFT 06/29/21
PROJECT ID 107630
SUBSET 1 | TOTAL 50
SHEET P. 261 | TOTAL 393

MAD-71-4.56

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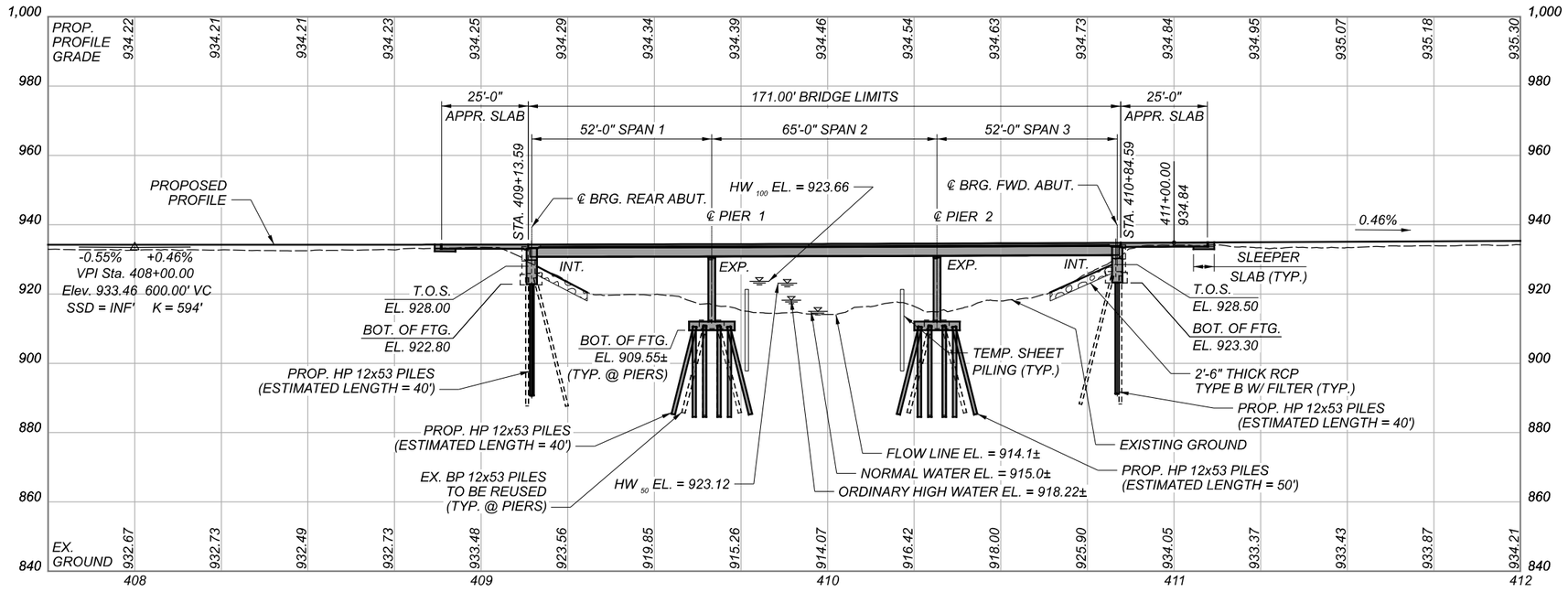
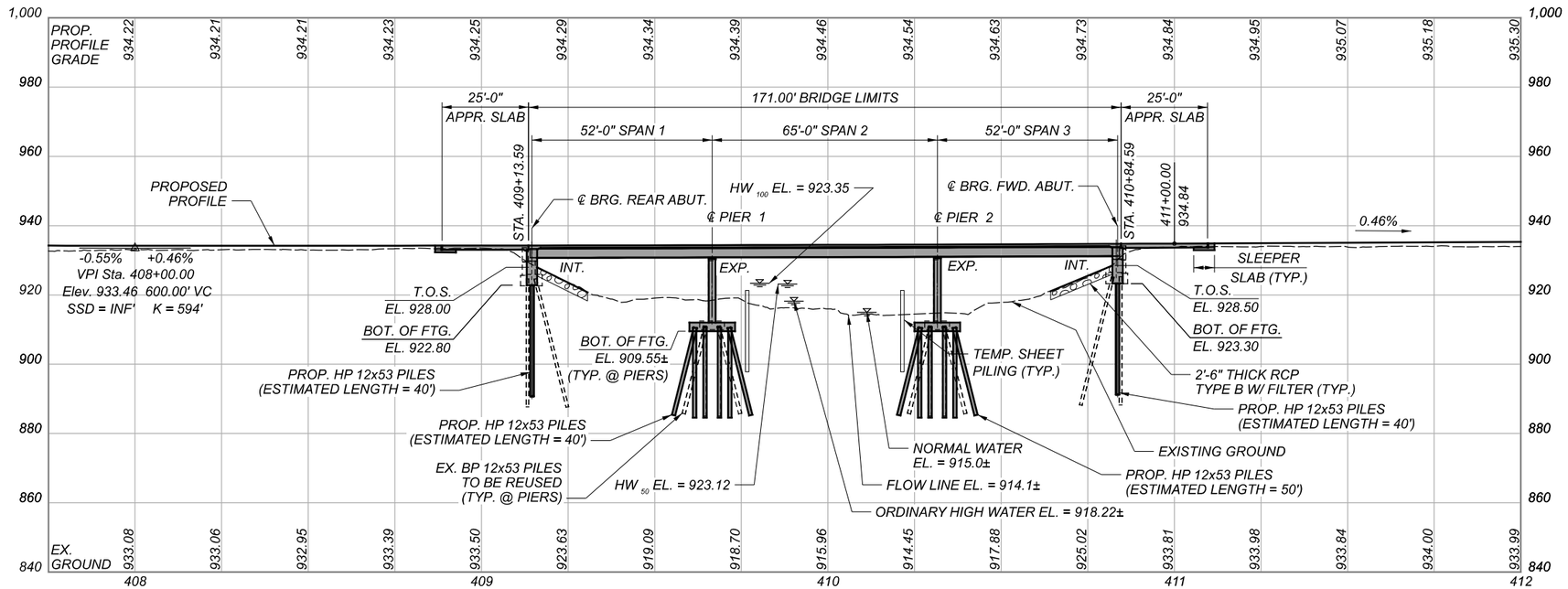


PROFILE ALONG PROFILE GRADE - LEFT BRIDGE



PROFILE ALONG PROFILE GRADE - RIGHT BRIDGE

HORIZONTAL SCALE IN FEET
0 10 20 40

SITE PLAN (2 OF 2)
BRIDGE NO. MAD-00071-06.680L&R
IR 71 OVER BRADFORD CREEK

SFN	4903332
SFN	4903367
DESIGN AGENCY	E.L. ROBINSON ENGINEERING, 1468 West 9th St., Suite 800, Cleveland, Ohio; 950 Goodale Blvd., Suite 180, Grandview Heights, Ohio
DESIGNER	MRV
CHECKER	TAS
REVIEWER	DFT 06/29/21
PROJECT ID	107630
SUBSET	2
TOTAL	50
SHEET	P.262
TOTAL	393

MAD-71-4.56

MODEL: Sheet RT Prof PAPERSIZE: 17x11 (in.) DATE: 6/29/2021 TIME: 3:33:24 PM USER: tshelton
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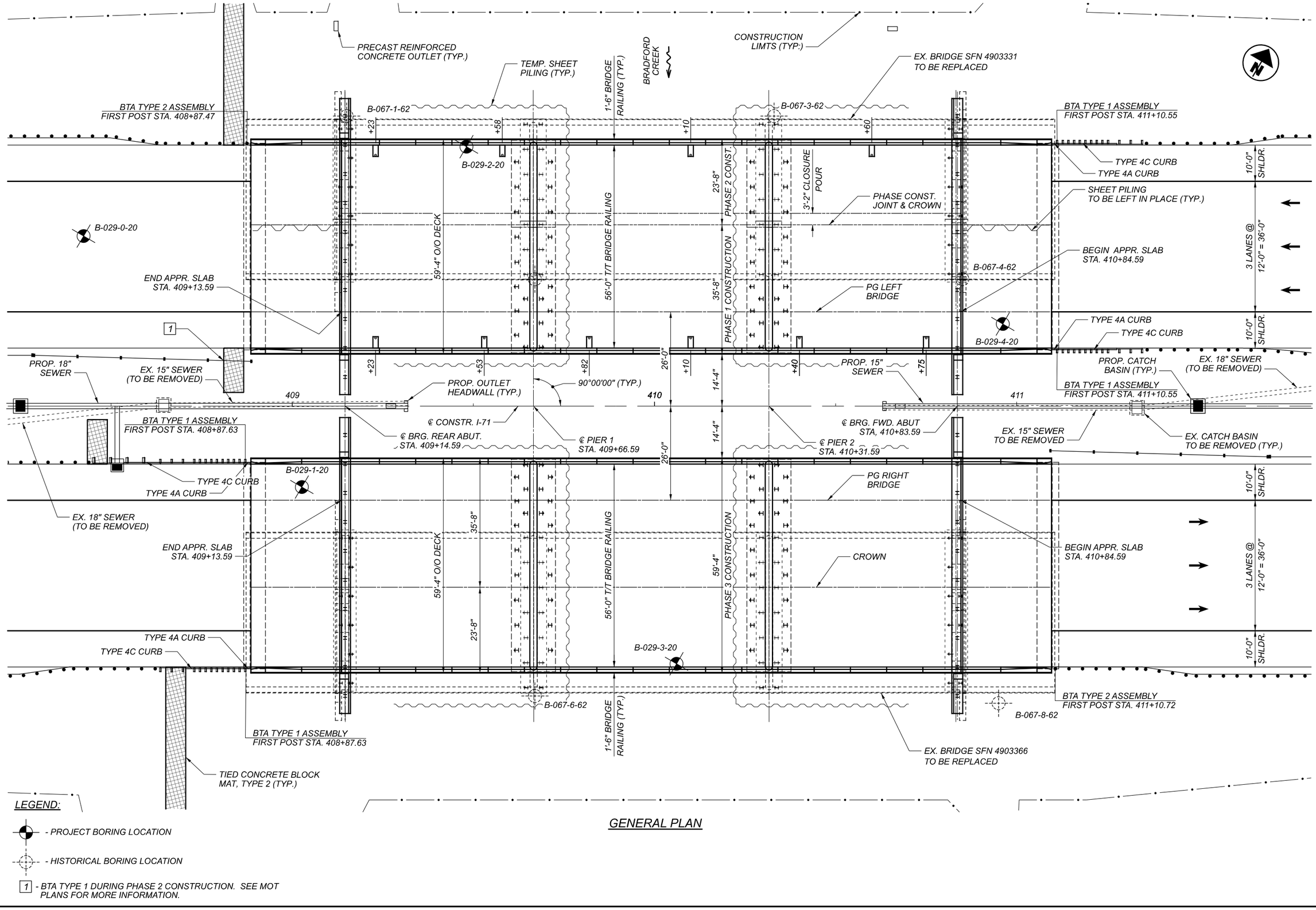

GENERAL PLAN

BRIDGE NO. MAD-00071-06.680L&R
IR 71 OVER BRADFORD CREEK

MAD-71-4.56

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SFN	4903332
SFN	4903367
DESIGN AGENCY	E.L. ROBINSON ENGINEERING
	1468 West 9th St, Suite 800 Cleveland, Ohio 950 Goodale Blvd, Suite 180 Grandview Heights, Ohio
DESIGNER	FIB
CHECKER	MRV
REVIEWER	DFT 06/29/21
PROJECT ID	107630
SUBSET	3
TOTAL	50
SHEET	P.263
TOTAL	393

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-15	REVISED	7/17/2015
AS-2-15	REVISED	1/18/2019
BP-5.1	REVISED	1/18/2019
DM-1.1	REVISED	7/17/2020
GSD-1-19	DATED	1/15/2021
MGS-3.1	REVISED	1/19/2018
MGS-3.2	REVISED	1/18/2013
PCB-91	REVISED	7/17/2020
SBR-1-20	REVISED	7/17/2020

AND THE FOLLOWING SUPPLEMENTAL SPECFICATION(S):

800	DATED	1/15/2021

DESIGN SPECIFICATIONS:

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

VEHICULAR LIVE LOAD: HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KSF

DESIGN STRESSES:

DESIGN DATA :
CONCRETE CLASS QC2- COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI
STRUCTURAL STEL - ASTM A709 GRADE 50W - YIELD STRENGTH 50 KSI
STEEL H-PILES - ASTM A572 - YIELD STRENGTH 50 KSI

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

EXISTING BRIDGE PLANS:

FOR INFORMATION NOT SHOWN, EXISTING BRIDGE PLANS MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE DISTRICT 6 OFFICE, 400 EAST WILLIAM STREET, DELAWARE, OHIO, 43015.

MAINTENANCE OF TRAFFIC:

FOR MAINTENANCE OF TRAFFIC PLANS, SEE ROADWAY SHEETS.

UTILITIES:

FOR UTILITY NOTES, SEE ROADWAY SHEETS.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURES AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS SECTIONS 102.05, 105.02 AND 513.04 FOR FURTHER INFORMATION.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE):

THE ULTIMATE BEARING VALUE IS 189 KIPS PER PILE FOR THE ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 192 KIPS PER PILE FOR THE PIER PILES. THE UBV FOR THE ABUTMENT PILES INCLUDES AN ADDITIONAL 3 KIPS FOR THE REAR ABUTMENT PILES AND 0 KIPS FOR THE FORWARD ABUTMENT PILES DUE TO THE POSSIBILITY OF LOSING 4.76 FEET OF FRICTIONAL RESISTANCE DUE TO SCOUR. THE UBV FOR THE PIER PILES INCLUDES AN ADDITIONAL 7 KIPS FOR PIER 1 AND 5 KIPS FOR PIER 2 DUE TO THE POSSIBILITY OF LOSINGS 5.51 FEET OF FRICTIONAL RESISTANCE DUE TO SCOUR. DRIVE ABUTMENT PILES TO THE UBV OR A TIP ELEVATION OF 882.80 FOR THE REAR ABUTMENT AND 883.30 FOR THE FORWARD ABUTMENT. DRIVE PIER PILES TO THE UBV OR A TIP ELEVATION OF 869.55 FOR PIER 1 AND 859.55 FOR PIER 2.

ABUTMENT PILES:
40 PILES 45 FEET LONG, ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEM

PIER PILES:
44 PILES 45 FEET LONG, ORDER LENGTH (PIER 1)
44 PILES 55 FEET LONG, ORDER LENGTH (PIER 2)
1 DYNAMIC LOAD TESTING ITEM

PILE DRIVING:

THE MINIMUM RATED ENERGY OF THE HAMMER USED TO INSTALL THE PILES SHALL BE 42,500 FT/LBS. ENSURE THAT STRESSES IN THE PILES DURING DRIVING DO NOT EXCEED 45,000 PSI.

PILE SPLICES:

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN C&MS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

DECK PLACEMENT ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.2 K FOR STRUCTURE 4903332 DURING PHASE 1 AND PHASE 2. AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.5 K FOR STRUCTURE 4903367 DURING PHASE 3.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65"

ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN:

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05.

SUBSTRUCTURE (PIER) CONCRETE REMOVAL: REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH PILING THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

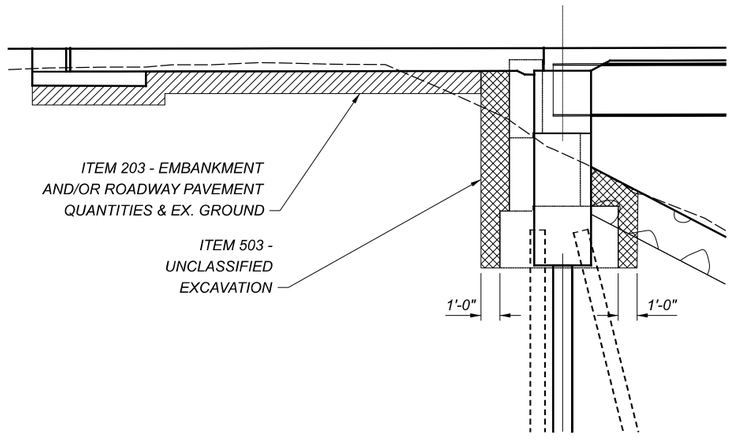
REMOVE REAR ABUTMENT TO ELEV. 921.80.
REMOVE FORWARD ABUTMENT TO ELEV. 922.30.

ITEM 203 - EMBANKMENT, AS PER PLAN:

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT BETWEEN STATIONS 408+15.00 TO 409+14.59 AND BETWEEN STATIONS 410+84.59 TO 411+85.00. QUANTITY PAID FOR WITH ROADWAY ITEMS.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN:

THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING. THE DEPARTMENT WILL NOT MAKE ADDITIONAL PAYMENT FOR PROVIDING AN ALTERNATE DESIGN.



ITEM 503 PAY LIMITS DIAGRAM

GENERAL NOTES (1 OF 2)
BRIDGE NO. MAD-00071-06.680L&R
IR 71 OVER BRADFORD CREEK

SFN 4903332
SFN 4903367
DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio
DESIGNER TAS | CHECKER MRV
REVIEWER DFT 06/29/21
PROJECT ID 107630
SUBSET 4 | TOTAL 50
SHEET P.264 | TOTAL 393

MAD-71-4.56

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ITEM 514 - FIELD PAINTING OF STRUCTURAL STEEL, FINISH COAT:

THE COLOR OF THE FINISH COAT SHALL BE FEDERAL COLOR NO. 595B - 20045 OR 20059 (THE COLOR OF WEATHERING STEEL).

PROPOSED WORK:

1. EXISTING LEFT AND RIGHT BRIDGE TO BE REMOVED EXCEPT PIER PILES THAT ARE TO BE INCORPORATED INTO THE NEW BRIDGE.

2. PROPOSED LEFT AND RIGHT STRUCTURES TO BE CONSTRUCTED INCORPORATING EXISTING PILES INTO NEW PIERS.

3. TRAFFIC AND CONSTRUCTION TO BE PERFORMED IN PHASES.

ABBREVIATIONS:

ABUT. - ABUTMENT
ADT - AVERAGE DAILY TRAFFIC
ADTT - AVERAGE DAILY TRUCK TRAFFIC
APPR. - APPROACH
B - BOTTOM
℄ - BASELINE
B.F. - BACK FACE
BM - BENCHMARK
BOT./BOTT. - BOTTOM
BRG. - BEARING
℄ - CENTERLINE
C/C - CENTER TO CENTER
C.I.P. - CAST-IN-PLACE
C.J. - CONSTRUCTION JOINT
CLR. - CLEAR
C&MS - CONSTRUCTION AND MATERIAL SPECIFICATIONS
CONC. - CONCRETE
CONSTR./CONST. - CONSTRUCTION
CVN - CHARPY V-NOTCH
DIA. - DIAMETER
DIM. - DIMENSION
DWG. - DRAWING
E - EAST
EB - EASTBOUND
E.F. - EACH FACE
EL. OR ELEV. - ELEVATION
EOP - EDGE OF PAVEMENT
EQ. - EQUAL
EST. - ESTIMATED
EX. - EXISTING
EXP. - EXPANSION
F.A. - FORWARD ABUTMENT
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FWD. - FORWARD
HMWM - HIGH MOLECULAR WEIGHT METHACRYLATE
HW - HIGH WATER
IN. - INCH
JT. - JOINT
LB - LEFT BRIDGE
LEOD - LEFT EDGE OF DECK
L.F. - LEFT FORWARD
LT. - LEFT
LTBR - LEFT TOE BRIDGE RAILING
MAX. - MAXIMUM
MIN. - MINIMUM
MISC. - MISCELLANEOUS
MSE - MECHANICALLY STABILIZED EARTH
N - NORTH
NB - NORTHBOUND
NO. - NUMBER
N.P.C.P.P. - NON-PERFORATED CORRUGATED PLASTIC PIPE
OHWM - ORDINARY HIGH WATER MARK
O/O - OUT TO OUT
P.C.P.P. - PERFORATED CORRUGATED PLASTIC PIPE
P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
PG - PROFILE GRADE
PROP. - PROPOSED
PSF - POUNDS PER SQUARE FOOT
P.V.I. - POINT OF VERTICAL INTERSECTION
Q - FLOW RATE
R - RADIUS
R.A. - REAR ABUTMENT
RB - RIGHT BRIDGE
RCP - ROCK CHANNEL PROTECTION
REOD - RIGHT EDGE OF DECK
REQD. - REQUIRED
R.F. - RIGHT FORWARD
R.R. - RAILROAD
RT. - RIGHT
RTBR - RIGHT TOE BRIDGE RAILING
R/W - RIGHT OF WAY
S - SOUTH
SB - SOUTHBOUND
SDC - SUPERPLASTICIZED DENSE CONCRETE
SER. - SERIES
SHLDR - SHOULDER
SLPR. - SLEEPER
SPA. - SPACE OR SPACES
STA. - STATION
STD. - STANDARD
STR - STRAIGHT
T - TOP
T&B - TOP & BOTTOM
TBR - TO BE REMOVED
TEMP. - TEMPORARY
T.O.S. OR T/S - TOP OF SLOPE
T/T - TOE TO TOE
TYP. - TYPICAL
U.N.O. - UNLESS NOTED OTHERWISE
VAR. - VARIES
V - VELOCITY
W - WEST
WB - WESTBOUND
WWR - WELDED WIRE REINFORCEMENT

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GENERAL NOTES (2 OF 2)
BRIDGE NO. MAD-00071-06.680L&R
IR 71 OVER BRADFORD CREEK

SFN 4903332
SFN 4903367

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

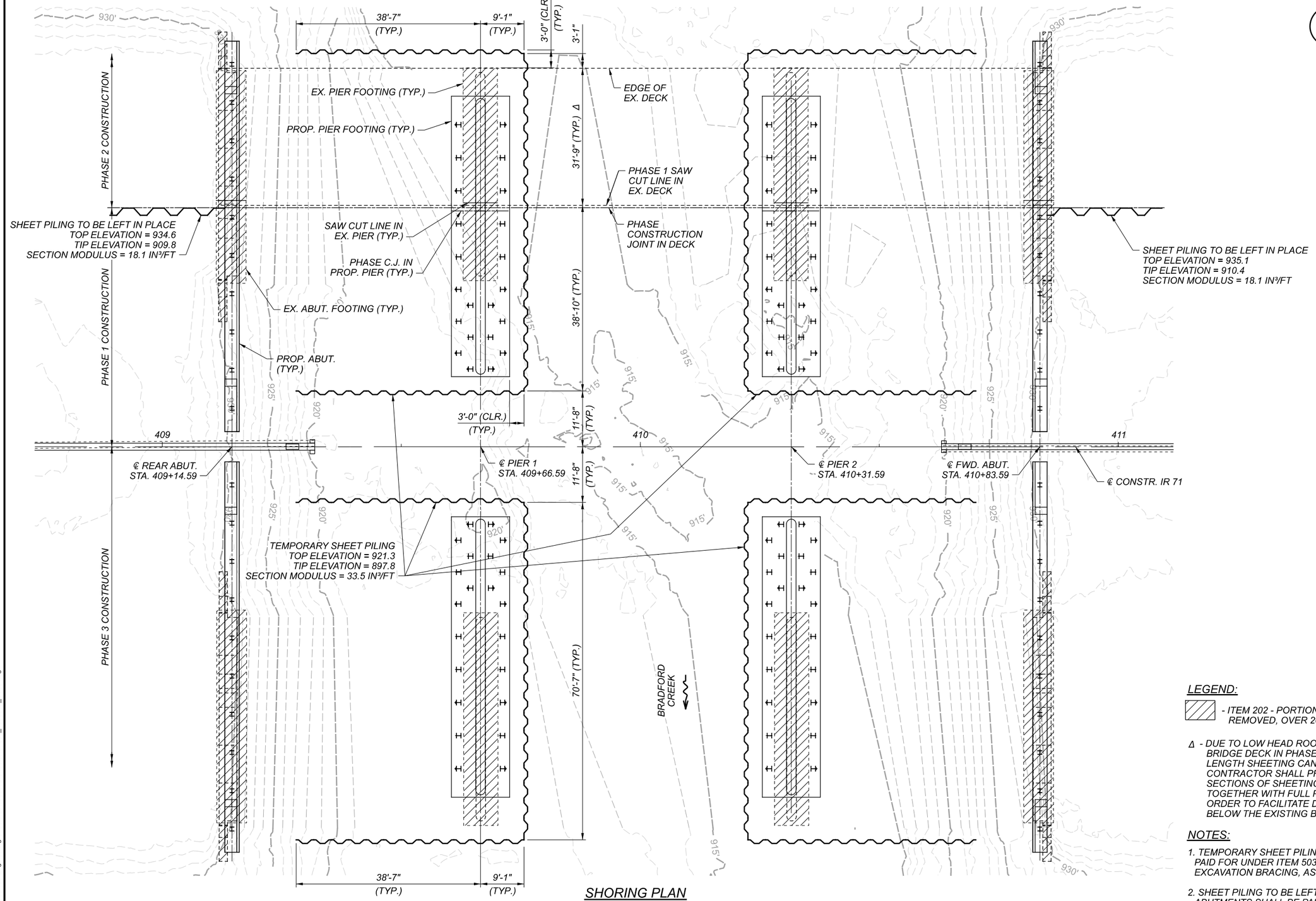
DESIGNER	CHECKER
TAS	MRV

REVIEWER DFT 06/29/21

PROJECT ID 107630

SUBSET	TOTAL
5	50

SHEET	TOTAL
P.265	393



SHORING PLAN

LEGEND:

- ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

Δ - DUE TO LOW HEAD ROOM BELOW THE EXISTING BRIDGE DECK IN PHASE 1 CONSTRUCTION, FULL LENGTH SHEETING CANNOT BE INSTALLED. CONTRACTOR SHALL PROVIDE SHORTER SECTIONS OF SHEETING AND SPLICE THEM TOGETHER WITH FULL PENETRATION WELDS IN ORDER TO FACILITATE DRIVING OF THE SHEETING BELOW THE EXISTING BRIDGE DECK.

NOTES:

1. TEMPORARY SHEET PILING AT THE PIERS SHALL BE PAID FOR UNDER ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN.
2. SHEET PILING TO BE LEFT IN PLACE AT THE ABUTMENTS SHALL BE PAID FOR UNDER ITEM 504 - STEEL SHEET PILING LEFT IN PLACE, AS PER PLAN (SECTION MODULUS = 18.1 IN³/FT)
3. THE CONTRACTOR MAY ELECT TO USE A DESIGN DIFFERENT THAN THE ONE SHOWN ON THESE PLANS, PROVIDED THE DESIGN IS PREPARED AS PER SECTION 501.05 OF C&MS.

EXCAVATION BRACING
BRIDGE NO. MAD-00071-06.680L&R
IR 71 OVER BRADFORD CREEK

SFN	4903332
SFN	4903367
DESIGN AGENCY	

E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER	CHECKER
TAS	PAN

REVIEWER: DFT 06/29/21

PROJECT ID: 107630

SUBSET	TOTAL
11	50

SHEET	TOTAL
P.271	393

MAD-71-4.56

MODEL: Sheet PAPERSIZE: 17X11 (In.) DATE: 6/29/2021 TIME: 3:38:22 PM USER: tshelton
P:_OHDOT_Worksets\107630\400-Engineering\Structures\4903332\Sheets\107630_4903332_SV004.dgn

Attachment C
Agency
Coordination

Vonderwell, Stephanie

From: Vonderwell, Stephanie
Sent: Friday, October 22, 2021 1:24 PM
To: Korfel, Lindsey M; Maunz, Kyla
Cc: Hallberg, Karen I; Pettegrew, Mike; Robbins, Samantha; Lininger, Marci; Michael, Megan; Raymond, Matthew
Subject: MAD/PIC-71-7.30/0.00 PID 107630
Attachments: Consult Form MAD-PIC-71-7.30-0.00 PID 107630.docx

Project CRS: MAD/PIC-71-7.30/0.00			**PID:** 107630			
Document Type(s): Level 1 ESR						
Requested Timeframe for Review: **Expedited – 14 days appreciated**						
Agency:	**Requested Review/Action:**					
☒ **ODNR:**	Project Comments ☒	Scenic Rivers Comments ☐	Tier V Scenic River Approval ☐	Coastal Consistency ☐	Species Specific Survey ☐	Other (list): ☐
☒ **USFWS:**	Project Comments ☒	Informal Consultation ☒	Tier II OHPBO Concurrence ☐	Formal Consultation ☐	Species Specific Survey ☐	Other (list): ☐
☐ **USACE:**	JD Request ☐		Pre-application Comments ☐		Other (list): ☐	
☐ **OEPA:**	Resource Rating Verification ☐		Pre-application Comments ☐		Other (list): ☐	
☐ **NPS:**	Project Comments ☐		Preliminary Section 7(a) Determination ☐		Other (list): ☐	
☐ **US EPA:**	Project Comments ☐				Other (list): ☐	
☐ **Other** (List agency and requested review/action)**:**						

Additional Information:
This project has a long project history and is a "legacy" PDF ESR instead of being in created within EnviroNet. A final version of the Level 1 ESR and draft USFWS Consultation Form have been uploaded to the EnviroNet Project File. If you have any questions regarding this report, please feel free to contact me. Agency comments and/or signed Consultation Form can be sent to OES for upload to the EnviroNet Project File. Thank you!

USFWS - The 2 federal bat species' effect calls are MANLAA, CC-1. All other federal species are No Effect. You can either sign the consultation form or let the 14 day review period elapse. A copy of the draft Consultation Form has also been attached for your convenience.

ODNR – Due to the proximity of state listed records to the project location, we are requesting your review and comment.
Your agency's concurrence and/or comments on this submission would be appreciated as soon as possible. If comments or notification of when comments will be furnished are not received within the requested timeframe, ODOT will continue to proceed with project development and preparation of the NEPA document. Should ODOT receive project specific comments prior to approval of the NEPA document, they will be addressed accordingly. Comments received following approval of the NEPA document will be addressed through other regulatory processes.

Stephanie S. Vonderwell
Environmental Specialist – ODOT Consultant Staff
ODOT Office of Environmental Services
1980 W. Broad Street, Columbus, Ohio 43223
(614) 644-6557
transportation.ohio.gov

Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR MARY MERTZ, DIRECTOR

Office of Real Estate
John Kessler, Chief
2045 Morse Road – Bldg. E-2
Columbus, OH 43229
Phone: (614) 265-6621
Fax: (614) 267-4764

November 8, 2021

Timothy M. Hill, Environmental Administrator
Office of Environmental Services
Ohio Department of Transportation
1980 West Broad Street
Columbus, Ohio 43223

Attn: Stephanie Vonderwell, Matt Raymond

Re: 21-0966; ODOT MAD/PIC-71-7.30/0.00 (PID 107630) - Individual Consultation - ODNR comments

Project Description: The project proposes to rebuild the pavement and replace/rehabilitate structures, drainage features, and other ancillary roadway items along a section of Interstate 71 in Pickaway, Madison, and Franklin Counties. In addition, a permanent 3rd lane in each direction for maintenance of traffic may be necessary pending a feasibility study.

Location: The proposed project is located in ODOT District 6.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state, or federal agency nor relieve the applicant of the obligation to comply with any local, state, or federal laws or regulations.

Ohio Natural Heritage Database: The following species record was added to the Database since the data request dated 9-9-20 and is located within one mile of the project area:

Wavy-rayed lampmussel (*Lampsilis fasciola*), species of concern

Fish and Wildlife: The Division of Wildlife (DOW) has the following comments:

The portion of the project from the Madison/Pickaway County line to the northern terminus is within the vicinity of records for the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species, and the little brown bat (*Myotis lucifugus*), a state endangered species. Because presence of state endangered bat species has been established in the

area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with DOW (contact Erin Hazelton at Erin.hazelton@dnr.ohio.gov).

In addition, the entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these bat species predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. The DOW recommends tree cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH $\geq$ 20 if possible.

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS "*Range-wide Indiana Bat Survey Guidelines*." If a habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the project area, please send this information to Erin Hazelton for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with the DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The DOW understands that reconnaissance surveys were conducted on three streams that resulted in mussels being observed. The DOW concurs that a mussel survey and relocation should be conducted at each of the three streams

The project is within the range of the black-crowned night-heron *(Nycticorax nycticorax*), a state-threatened bird. Night-herons are so named because they are nocturnal, conducting most of their foraging in the evening hours or at night, and roost in trees near wetlands and waterbodies during the day. Night herons are migratory and are typically found in Ohio from April 1 through December 1 but can be found in more urbanized areas with reliable food sources year-round. Black-crowned night-herons primarily forage in wetlands and other shallow aquatic habitats, and roost in trees nearby. These night-herons nest in small trees, saplings, shrubs, or sometimes on the ground, near bodies of water and wetlands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the king rail (*Rallus elegans*), a state endangered bird. Nests for this species are deep bowls constructed out of grass and usually hidden very well in marsh vegetation. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If no wetland habitat will be impacted, the project is not likely to impact this species.

The project is within the range of the least bittern (*Ixobrychus exilis*), a state threatened bird. This secretive marsh species prefers dense emergent wetlands with thick stands of cattails, sedges,

sawgrass or other semiaquatic vegetation interspersed with woody vegetation and open water. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the northern harrier (*Circus hudsonis*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31. If this habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the sandhill crane (*Grus canadensis*), a state threatened species. Sandhill cranes are primarily a wetland-dependent species. On their wintering grounds, they will utilize agricultural fields; however, they roost in shallow, standing water or moist bottomlands. On breeding grounds, they require a rather large tract of wet meadow, shallow marsh, or bog for nesting. If grassland, prairie, or wetland habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 1 through August 31. If this habitat will not be impacted, this project is not likely to have an impact on this species.

The project is within the range of the upland sandpiper (*Bartramia longicauda*), a state endangered bird. Nesting upland sandpipers utilize dry grasslands including native grasslands, seeded grasslands, grazed and ungrazed pasture, hayfields, and grasslands established through the Conservation Reserve Program (CRP). If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

ODNR appreciates the opportunity to provide these comments. Please contact Mike Pettegrew by phone or email if you have questions about these comments or need additional information.

Mike Pettegrew
Environmental Services Administrator (Acting) and ODOT Program Manager
Ohio Department of Natural Resources
Office of Real Estate, Environmental Review Services Section
2045 Morse Road, Bldg. E2
Columbus, Ohio 43229
Office: (614) 265-6387
mike.pettegrew@dnr.state.oh.us

ODOT and USFWS Transportation Infrastructure Project Consultation Summary Form (v. 12/17/19):

For use in coordination and consultation under:

- Section 7(a)(2) of the Endangered Species Act of 1973 and the Fish and Wildlife Coordination Act, in accordance with procedures described in the *Memorandum of Agreement (MOA) Between the Ohio Department of Transportation, Ohio Department of Natural Resources, and United States Fish and Wildlife Service for Interagency Coordination for Projects Requiring Consultation Under the Endangered Species Act, Impact State Listed Species, and/or Modify Jurisdictional Waters* (referred to as the Ecological MOA); and the *Memorandum of Agreement Among the United States Fish and Wildlife Service, the Ohio Department of Transportation, and the United States Army Corps of Engineers Regarding Implementation of the Transportation Program in Ohio.*
- The *Framework Programmatic Biological Opinion on the Ohio Department of Transportation's Federal-Aid Highway Program for the Federally Endangered Indiana Bat (Myotis sodalis) and Federally Threatened Northern Long-eared Bat (Myotis septentrionalis), as revised December 12, 2017* (referred to as OH PBO); and
- *Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and Federal Transit Administration (FTA) Range-wide Programmatic Informal Consultation for Indiana Bat and Northern Long-eared Bat* (referred to as the RW PC).
- *U.S. Fish and Wildlife Service's (USFWS) January 5, 2016, intra-Service Programmatic Biological Opinion (BO) on the final 4(d) rule for the Northern Long-eared Bat* (referred to as the Final 4(d) Rule)
- The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by ODOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated [June 6, 2018], and executed by FHWA and ODOT.

Lead/Requesting Agency: Ohio Department of Transportation
Agency Contact: Matthew Perlik, Assistant Environmental Administrator, Office of Environmental Services
(614) 466-1937, matt.perlik@dot.ohio.gov
District Contact(s): District 6: (DEC) Lininger, Marci <Marci.Lininger@dot.ohio.gov> Choose an item.

Section A – Project Information

Project C-R-S / Name: MAD/PIC-71-7.30-0.00 **PID:** 107630
Date: 10/22/2021 **TAILS Consultation Code:** 03E15000-
County(ies): Franklin, Madison, Pickaway Lat. (DD.ddd): See ESR Lon. (-DD.dddd): See ESR
General Project Description: **State Funded Maintenance Project:** **No**

- Rebuild pavement and replace/rehabilitate structures, drainage features and ancillary improvements.

Specific Project Description: See associated ODOT Ecological Survey Report.

Section B – ESA and BGEPA Effect Determinations

ODOT has made the following effect determinations on resources of federal concern with potential to occur in proposed project area:

€ – Endangered; (T) – Threatened; € – Candidate; (P) – Proposed T/E/CH; (SC) – Species of Concern; (CH) – Critical Habitat.

FRANKLIN COUNTY FEDERALLY LISTED SPECIES	EFFECT CALL
Bald Eagle (SC)	No Effect
Clubshell €	No Effect
Indiana Bat €	May Effect, Not Likely To Adversely Affect
Northern Long-eared Bat (T)	May Effect, Not Likely To Adversely Affect
Nothern Riffleshell €	No Effect
Rabbitsfoot (T)	No Effect
Rayed Bean €	No Effect
Scioto Madtom €	No Effect
Snuffbox €	No Effect
Round Hickorynut	No Effect

MADISON COUNTY FEDERALLY LISTED SPECIES	EFFECT CALL
Bald Eagle (SC)	No Effect
Clubshell €	No Effect
Indiana Bat €	May Effect, Not Likely To Adversely Affect
Northern Long-eared Bat (T)	May Effect, Not Likely To Adversely Affect

Northern Riffleshell €	No Effect
Rabbitsfoot (T/CH)	No Effect
Rayed Bean €	No Effect
Scioto Madtom €	No Effect
Snuffbox €	No Effect

PICKAWAY COUNTY FEDERALLY LISTED SPECIES	EFFECT CALL
Bald Eagle (SC)	No Effect
Clubshell €	No Effect
Indiana Bat €	May Effect, Not Likely To Adversely Affect
Northern Long-eared Bat (T)	May Effect, Not Likely To Adversely Affect
Northern Riffleshell €	No Effect
Rabbitsfoot (T)	No Effect
Rayed Bean €	No Effect
Scioto Madtom €	No Effect
Snuffbox €	No Effect
Round Hickorynut	No Effect

Choose another county if applicable.

NOTE: While Section 7 consultation is not required for (C) or (SC) species, coordination is being initiated in case threats to the species warrant listing under the Act, and they become listed in the near future. Coordination of potential impacts to the bald eagle is required under the Bald and Golden Eagle Protection Act (BGEPA).

- Will the proposed project result in take of bald eagles under the Bald and Golden Eagle Protection Act? No.

Section C – AMMs for Projects Affecting Non-Bat Federally Listed Species

☒ The project will have no effect on any non-bat federally listed species.

☐ The project may affect non-bat federally listed species. Select from AMMs below.

Select AMMs.

Section D – Projects with Potential Impacts to Indiana Bat (IBAT) and/or Northern Long-eared Bat (NLEB)

☐ The project will have no effect on any federally listed bat species.

☒ The project may affect the IBAT and NLEB. Provide the following information and select the appropriate AMMs below.

• Is the project located within a zone affected by White Nose Syndrome?:	**Yes**
• Is the project within 0.5 mi of an Indiana bat hibernaculum or within 0.25 mi of a northern long-eared bat hibernaculum?	**No.**
○ Will the project involve pile driving, blasting, and/or the removal of SWH.	**Not applicable.**
• List the habitat Resource(s) Impacted:	**Trees/suitable wooded habitat and bridge(s) with a 20 foot span over water.**
○ Will **documented** maternity roosts, trees within 150 foot radius of a documented maternity roost, or documented foraging/travel corridors (based on radio telemetry) be removed?	**Not applicable.**

○ Results of a species survey following USFWS guidance (if conducted):	**No survey conducted, IBATs assumed present.**
○ Will **all** trees/suitable wooded habitat removal for the project occur within 100 ft. of the existing roadway edge of pavement?	**Yes.**
○ Acreage of trees/suitable wooded habitat to be removed (if any):	**0.596 (ac)**
○ Timing of tree/suitable wooded habitat removal:	**Oct 1-Mar 31 to avoid impacts to summer roosintg**
○ Bridges (spanning 20 feet and over water) will be inspected within one year prior to the start of work. If evidence of bats are observed during any inspection conducted during this timeframe, and that has not been included in this consultation, additional consultation with the USFWS will occur.	
▪ Did a bridge inspection find evidence of roosting bats?	**No.**
• If evidence of bats was observed during inspection, what is the timing of the bridge work?	**Not applicable. No evidence of bats observed.**
• If evidence of bats was observed during inspection, will the project preclude bats from roosting in the future?	**Not applicable. No evidence of bats observed.**

• Does the project adheres to the RW PC?	**Yes**
• Does the project adhere to the Final 4(d) Rule for the NLEB?	**Yes**
• Does the project adhere to MANLAA criteria in the OH PBO?	**Yes**
○ If yes, enter the applicable OH PBO Consultation Category:	**CC1-b**

The following avoidance and minimization measures (AMMs) for IBAT and NLEB will be implemented for the project.

Suitable Wooded Habitat (SWH)/Tree Removal AMMs
• Tree Removal AMM 1: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal in excess of what is required to implement the project safely. • Tree Removal AMM 2(a) (OH PBO: A-1). Time of year restrictions for tree removal when bats are not likely to be present - To avoid impacts to summer roosting bats, SWH will be cleared only between 1 October and 31 March, when the species would not be present. • Tree Removal AMM 3. Ensure tree removal is limited to that specified in project plans by clearly marking clearing limits. Ensure that contractors understand clearing limits and how they are marked in the field. Choose applicable AMM.
Noise and Vibration Near Documented Hibernacula AMMs
• Not Applicable. Project is not within 0.5 mile of an Indiana bat hibernaculum or within 0.25 mile of a northern long-eared bat hibernaculum.
Bridge Over Water Project AMMs
Not Applicable. The project does not involve work on bridges spanning 20 feet and over water, or no suitable habitat was found beneath the bridge.
Lighting, Dust Control, Water Quality, and Wetland/Stream Protection AMMs
ODOT 2016 Construction and Materials Specifications (CMS) and ODOT Supplemental Specification (SS) 813, SS 832, and SS 913 will be followed **as applicable** to address the following AMMs: • Lighting AMMs - ODOT SS 813. • Dust Control AMM – ODOT CMS 616. • Water Quality, Wetland and Stream Protection AMMs – ○ ODOT CMS 601, ODOT CMS 659,ODOT CMS 670, ODOT CMS 671, ODOT SS 832, ODOT Location and Design Manual, Volume 2;

- projects will be developed in full compliance with Sections 404 and 401 of the Clean Water Act and/or Ohio's Isolated Wetland Law;
- compensatory stream and wetland mitigation will be conducted when required, and in accordance with the USACE's Mitigation Rule and Ohio EPA's rules on Water Quality.

(Select only if additional locations are associated with the PID. If not, continue to Section E.)

Section E – ESA Consultation Conclusion

This project meets Consultation Category 1 of the 2016 OH PBO and is Non-Notifying under the 2016 MOA. Therefore, USFWS has programmatically concurred with ODOT's MANLAA determination, and all ESA section 7 obligations have been fulfilled.

(Select only if USFWS response is necessary.)

This concludes consultation, as required by section 7(a)(2) of the Endangered Species Act, on the project addressed in this form. Should, during the term of this action, additional information on listed or proposed species or their critical habitat become available, if a proposed species becomes officially listed, or if new information reveals effects of the action that were not previously considered, consultation with the Service should be reinitiated to assess whether the determinations are still valid.

The comments provided by the Service, above, have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Endangered Species Act, of 1973, as amended, and are consistent with the intent of the National Environmental Policy Act of 1969, and the U.S. Fish and Wildlife Service's Mitigation Policy.

USFWS Contact(s): Choose a reviewer.

Patrice Ashfield,
USFWS Field Supervisor

Date: Click here to enter a date.

Section: Cultural Resource Coordination

1. Is this project being cleared under Appendix A or Appendix B? Yes

2. Is this a re-evaluation that requires activation of the other sub-section below? No

Appendix A & B

3. Coordination Type: Minimal Potential to Cause Effect - Appendix A

5. Remarks

This project falls under Item 22 of the Section 106 Programmatic Agreement.

In accordance with Stipulation V(C)(1) and Appendix A of the Section 106 Programmatic Agreement executed on November 8, 2017 (Agreement No. 19319), amended on July 11, 2019, ODOT has determined that the proposed project is a type of undertaking that has 'minimal potential to cause effects' to historic properties and is not a part of a larger undertaking.

ODOT Approver	ODOT Approval Date
Marci Lininger	11/22/2021