| PROJECT | DESIGNATION |
|---|---|
| 1700731 | 1700731 |
| CONTRACT | |
| R-40286 | |

# INDIANA DEPARTMENT OF TRANSPORTATION

# ROAD PLANS

STAGE 3 PLANS
JANUARY 2020

## TRAFFIC DATA

| | 191st STREET | GRASSY BRANCH RD |
|---|---|---|
| A.A.D.T. (2016) | 8,374 VPD | 3,251 VPD |
| A.A.D.T. (2022 PROJECTED) | 9,630 VPD | 3,740 VPD |
| A.A.D.T. (2042 PROJECTED) | 13,815 VPD | 5,365 VPD |
| D.H.V (2042 PROJECTED) | 1,380 VPH | 540 VPH |
| DIRECTIONAL DISTRIBUTION | 60% E.B. | 55% N.B. |
| TRUCKS | 2% AADT/DHV | 2% AADT/DHV |

## DESIGN DATA

| | | |
|---|---|---|
| DESIGN SPEED | 50 M.P.H. | 45 M.P.H. |
| 4R-NEW CONSTRUCTION (NON -FREEWAY) | COLLECTOR | COLLECTOR |
| FUNCTIONAL CLASSIFICATION | COLLECTOR | COLLECTOR |
| RURAL/URBAN | URBAN | URBAN |
| TERRAIN | LEVEL | LEVEL |
| ACCESS CONTROL | NONE | NONE |

APPROVED BY:
HAMILTON COUNTY BOARD OF COMMISSIONERS

STEVE C. DILLINGER, PRESIDENT

MARK HEIRBRANDT, VICE PRESIDENT

CHRISTINE ALTMAN, COUNTY COMMISSIONER

HAMILTON COUNTY HIGHWAY DEPARTMENT

DAVID LUCAS, PROJECT COORDINATOR, ERC

## ROUTE: 191ST STREET & GRASSY BRANCH ROAD

## PROJECT NO. 1700731

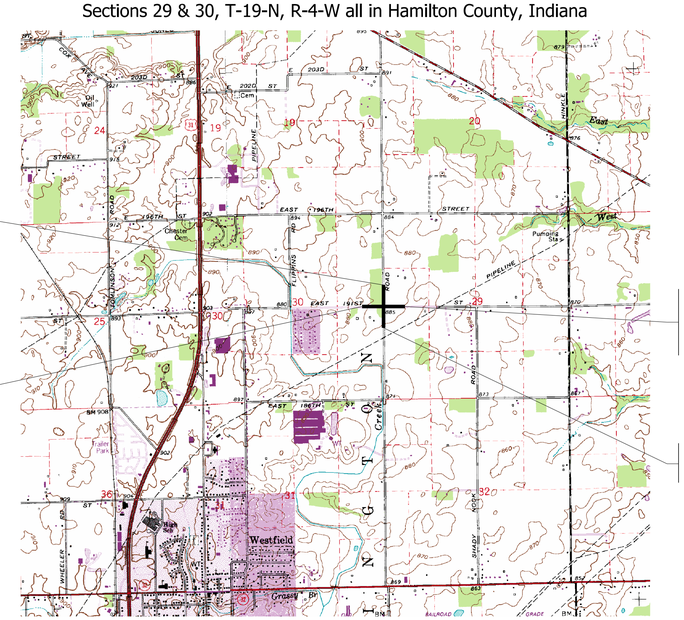
(X) P.E.
( ) R/W
( ) CONST.

ADDITIONAL RIGHT-OF-WAY
REQUIRED FOR THIS PROJECT

Reconstruction of the Intersection of 191st Street and Grassy Branch Road. The Roadway Improvements Extend Along both 191st Street and Grassy Branch Road Approaches Approximately 500 feet in each direction from the intersection.
Sections 29 & 30, T-19-N, R-4-W all in Hamilton County, Indiana

END CONSTRUCTION
STA. 74+39.43 'PRA'

BEGIN PROJECT
STA. 31+29.45 LINE 'PRB'

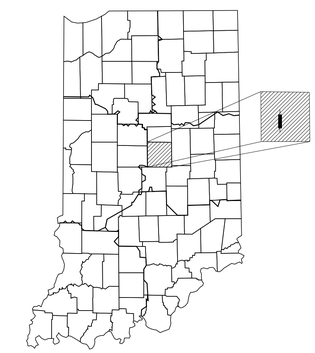



END PROJECT
STA. 43+34.06 LINE 'PRB'

BEGIN CONSTRUCTION
STA. 65+07.21 LINE 'PRA'

## HAMILTON COUNTY

SCALE: 1' = 2,000'



PROJECT LOCATION SHOWN BY
HAMILTON COUNTY

LATITUDE: 40°3'53.8" LONGITUDE: 86°6'33.3"

| | | |
|---|---|---|
| ROADWAY LENGTH: | 0.423 | MI. |
| TOTAL LENGTH: | 0.647 | MI. |
| MAX. GRADE: | 2.0 | % |

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE SCALES BELOW MAY BE USED.

SCALES:

PLAN 20 10 0 20 40
SCALE: 1" = 20'

DETAILS 30 15 0 30 60
SCALE: 1" = 30'

INDIANA D.O.T. STANDARDS DRAWINGS, AS LISTED IN THE STANDARD DRAWING INDEX EFFECTIVE SEPT 1, 2019 TO BE USED WITH THESE PLANS.
INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS DATED 2020 TO BE USED WITH THESE PLANS.

CERTIFIED BY:
REGISTERED PROFESSIONAL ENGINEER
STATE OF INDIANA NO.
COVERING OVERALL DESIGN
DATE

CERTIFIED BY:
REGISTERED PROFESSIONAL ENGINEER
STATE OF INDIANA NO.
COVERING CIVIL DESIGN
DATE

CERTIFIED BY:
REGISTERED PROFESSIONAL ENGINEER
STATE OF INDIANA NO.
COVERING
DATE

NOT FOR CONSTRUCTION
DLZ INDIANA, LLC

NOT FOR CONSTRUCTION
DLZ INDIANA, LLC

NOT FOR CONSTRUCTION
DLZ INDIANA, LLC

DLZ

PLANS PREPARED BY:
DLZ INDIANA, LLC
157 East Maryland Street
Indianapolis, Indiana 46204
(317) 633-4120

APPROVED
FOR LETTING:
INDIANA DEPARTMENT OF TRANSPORTATION DATE

| ROAD FILE | | |
|---|---|---|
| | | |
| DESIGNATION | | |
| 1700731 | | |
| SURVEY BOOK | SHEETS | |
| ELECTRONIC | 1 of | 68 |
| CONTRACT | PROJECT | |
| R-40286 | 1700731 | |

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## UTILITIES

CABLE
Comcast
Scott Evans (Telecom Placement, Inc.)
(317) 752-6569

WATER & SEWER
Citizens Energy Group
Robert Mashbaum
2150 Dr. Martin Luther King, Jr. Street
Indianapolis, IN 46202
(317) 429-3961

COMMUNICATION
Frontier
Steve Costlow
20905 Hague Road
Noblesville, IN 46062
(317) 984-9010

ELECTRIC
Duke Energy
Luis Alvarez
1619 W. Deffenbaugh Street
Kokomo, IN 46902
(787) 966-5253

PIPELINE
Marathon Pipe Line LLC
Greg Newman
20-C Industrial Drive
Lexington, OH 44904
(419) 564-8826

## INDEX


| SHEET NO. | SUBJECT |
|---|---|
| 1 | TITLE |
| 2 | INDEX |
| 3-5 | TYPICALS |
| 6 | MAINTENANCE OF TRAFFIC |
| 7-8 | PLAT 1 |
| 9 | GEOMETRICS |
| 10 | EDGE OF PAVEMENT GEOMETRICS |
| 11 | ROUNDABOUT LAYOUT PLAN |
| 12-21 | PLAN AND PROFILES SHEETS |
| 22 | BASIN DETAIL |
| 23-24 | SPOT DETAIL |
| 25 | PAVEMENT MARKING PLAN |
| 26-27 | SIGNING PLAN |
| 28-29 | EROSION CONTROL PLAN |
| 30-31 | SIGN TABLE |
| 32-33 | UNDERDRAIN TABLE |
| 34-37 | PIPE MATERIALS TABLE |
| 38 | MISCELLANEOUS TABLES |
| 39 | STRUCTURE DATA TABLE |
| 40-68 | CROSS SECTIONS |


## REVISIONS

| SHEET NO. | DATE | REVISED |
|---|---|---|
| | | |

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DLZ

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

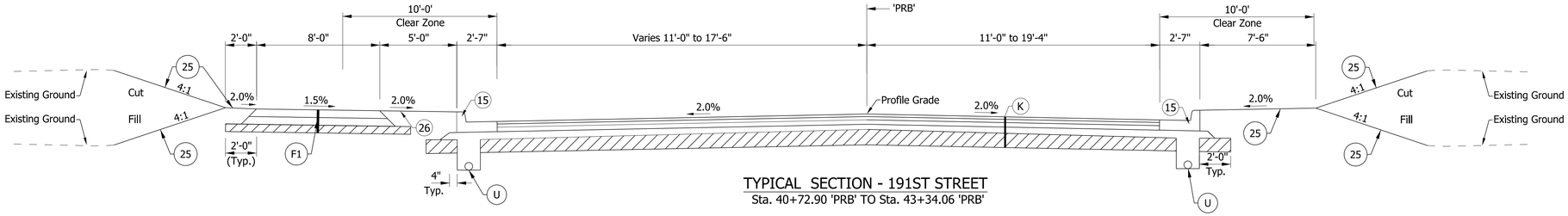
DESIGNED: PH 1/2020 DRAWN: DPH 1/2020

CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

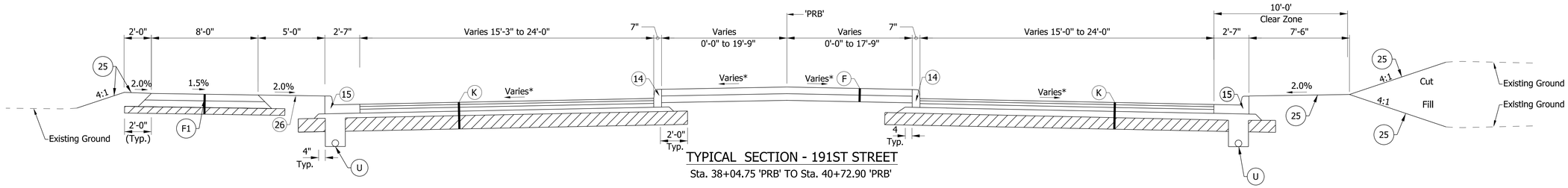
INDEX

| SCALE | ROAD FILE |
|---|---|
| NONE | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 2 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




TYPICAL SECTION - 191ST STREET

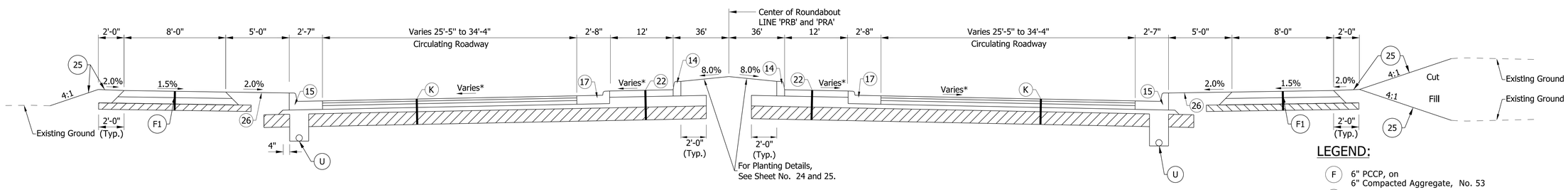
Sta. 40+72.90 'PRB' TO Sta. 43+34.06 'PRB'




TYPICAL SECTION - 191ST STREET

Sta. 38+04.75 'PRB' TO Sta. 40+72.90 'PRB'

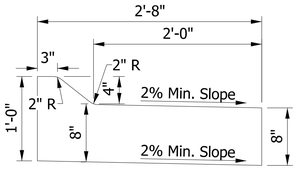
* 2% Unless Shown Otherwise
See Sheet No. 23 and 24.




TYPICAL SECTION - ROUNDABOUT

Sta. 36+54.75 'PRB' TO Sta. 38+04.75 'PRB'
(Center at Sta. 37+29.75 Line 'PRB')
Sta. 68+93.12 'PRA' TO Sta. 70+43.12 'PRA'
(Center at Sta. 69+68.12 Line 'PRA')

* 2% Unless Shown Otherwise
See Sheet No. 24 and 25.




17 COMBINED CONCRETE CURB AND GUTTER, TYPE B, MODIFIED

Not to Scale

## LEGEND:

- (F) 6" PCCP, on 6" Compacted Aggregate, No. 53
- (F1) 360 lbs/SYD HMA For Sidewalk Consisting of: 140 lbs/SYD HMA, Surface, Type B, on 220 #/SYD HMA, Intermediate, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment, Type II
- (K) Mainline Pavement Section 220 lbs/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on 275 lbs/SYD QC/QA-HMA, 2, 70, Intermediate, 19.0 mm on 385 lbs/SYD QC/QA-HMA, 2, 64, Base, 19.0 mm on 3" Compacted Aggregate No. 53 Subgrade Treatment, Type ID
- (U) Underdrain, See Detail, Sheet 4
- (14) Curb Concrete
- (15) Curb & Gutter, Concrete
- (17) Curb & Gutter B, Concrete, Modified
- (22) 7" PCCP, Colored & Jointed (With 15' D-1 Joint Spacing and 1" Dowel Bars) on 12.5" Compacted Aggregate, No. 53, on Subgrade Treatment Type 1D
- (25) Seed Mixture, U
- (26) Sodding, Nursery

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DLZ

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: PH 1/2020 DRAWN: DPH 1/2020

CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

| SCALE | ROAD FILE |
|---|---|
| 1 / 4" = 1'-0" | N/A |
| | DESIGNATION |
| | 1700731 |
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| ELECTRONIC | 3 of 68 |
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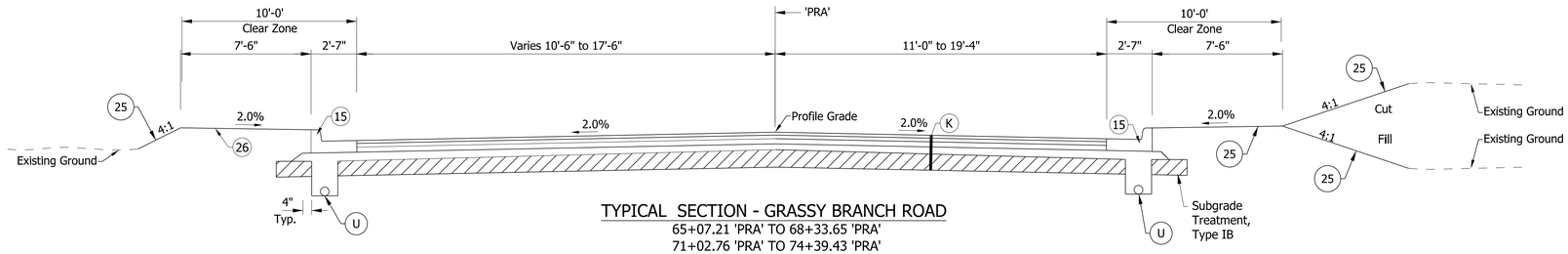
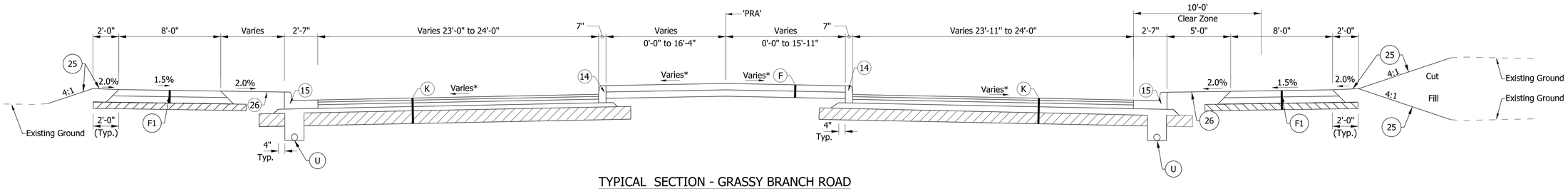
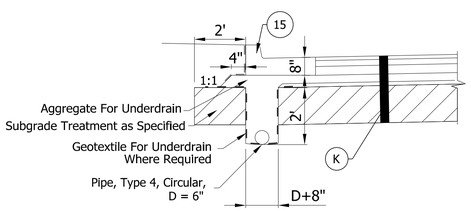


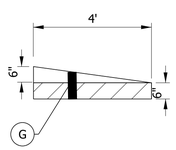

TYPICAL SECTION - GRASSY BRANCH ROAD
65+07.21 'PRA' TO 68+33.65 'PRA'
71+02.76 'PRA' TO 74+39.43 'PRA'




TYPICAL SECTION - GRASSY BRANCH ROAD
68+33.65 'PRA' TO 68+93.12 'PRA'
70+43.12 'PRA' TO 71+02.76 'PRA'
* 2% UNLESS SHOWN OTHERWISE, See Sheet No. 24 and 25.




UNDERDRAIN DETAIL
Not to Scale




SPLITTER ISLAND CORNER DETAIL
Not to Scale

## LEGEND:

- (F) 6" PCCP, on
  6" Compacted Aggregate, No. 53
- (F1) 360 lbs/SYD HMA For Sidewalk Consisting of:
  140 lbs/SYD HMA, Surface, Type B, on
  220 #/SYD HMA, Intermediate, Type B, on
  6" Compacted Aggregate, No. 53, on
  Subgrade Treatment, Type II
- (G) Splitter Island Corner, See Detail this Sheet
  Variable Depth PCCP, on
  6" Compacted Aggregate, No. 53
- (K) Mainline Pavement Section
  220 lbs/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on
  275 lbs/SYD QC/QA-HMA, 2, 70, Intermediate, 19.0 mm on
  385 lbs/SYD QC/QA-HMA, 2, 64, Base, 19.0 mm on
  3" Compacted Aggregate No. 53
  Subgrade Treatment, Type ID
- (U) Underdrain, See Detail, Sheet 4
- (14) Curb Concrete
- (15) Curb & Gutter, Concrete
- (22) 7" PCCP, Colored & Jointed
  (With 15' D-1 Joint Spacing and 1" Dowel Bars) on
  12.5" Compacted Aggregate, No. 53, on
  Subgrade Treatment Type 1D
- (25) Seed Mixture, U
- (26) Sodding, Nursery

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DLZ

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

DESIGNED: PH 1/2020 DRAWN: DPH 1/2020
CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

| SCALE | ROAD FILE |
|---|---|
| 1 / 4" = 1'-0" | N/A |
| | DESIGNATION |
| | 1700731 |
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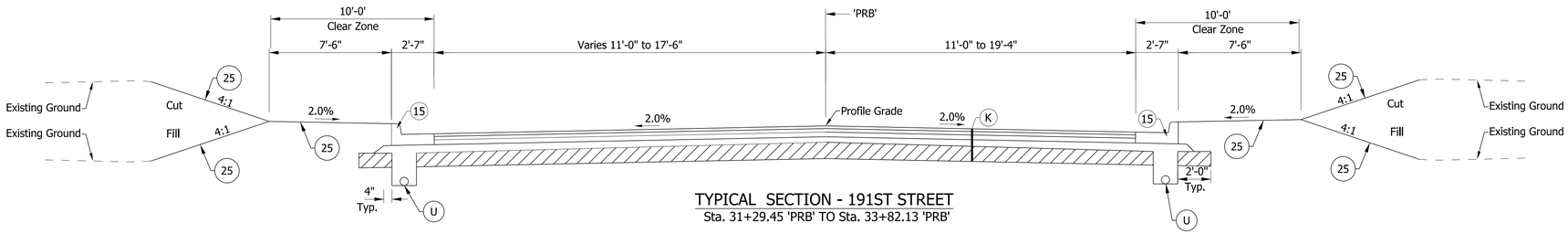
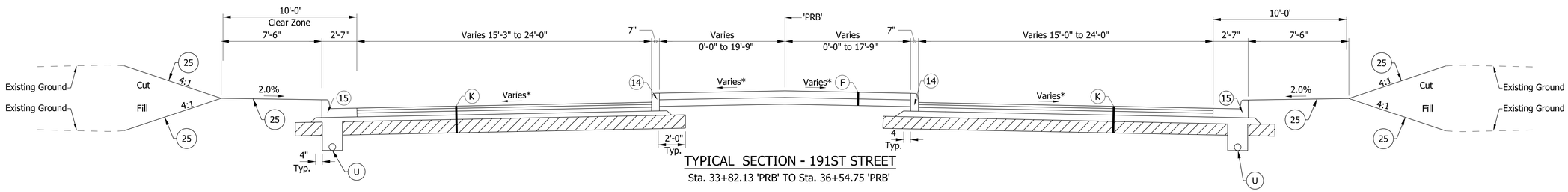
| ELECTRONIC | 4 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




TYPICAL SECTION - 191ST STREET

Sta. 31+29.45 'PRB' TO Sta. 33+82.13 'PRB'




TYPICAL SECTION - 191ST STREET

Sta. 33+82.13 'PRB' TO Sta. 36+54.75 'PRB'

* 2% Unless Shown Otherwise
See Sheet No. 23 and 24.

## LEGEND:

- (F) 6" PCCP, on
  6" Compacted Aggregate, No. 53
- (K) Mainline Pavement Section
  220 lbs/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on
  275 lbs/SYD QC/QA-HMA, 2, 70, Intermediate, 19.0 mm on
  385 lbs/SYD QC/QA-HMA, 2, 64, Base, 19.0 mm on
  3" Compacted Aggregate No. 53
  Subgrade Treatment, Type ID
- (U) Underdrain, See Detail, Sheet 4
- (14) Curb Concrete
- (15) Curb & Gutter, Concrete
- (25) Seed Mixture, U

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DLZ

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

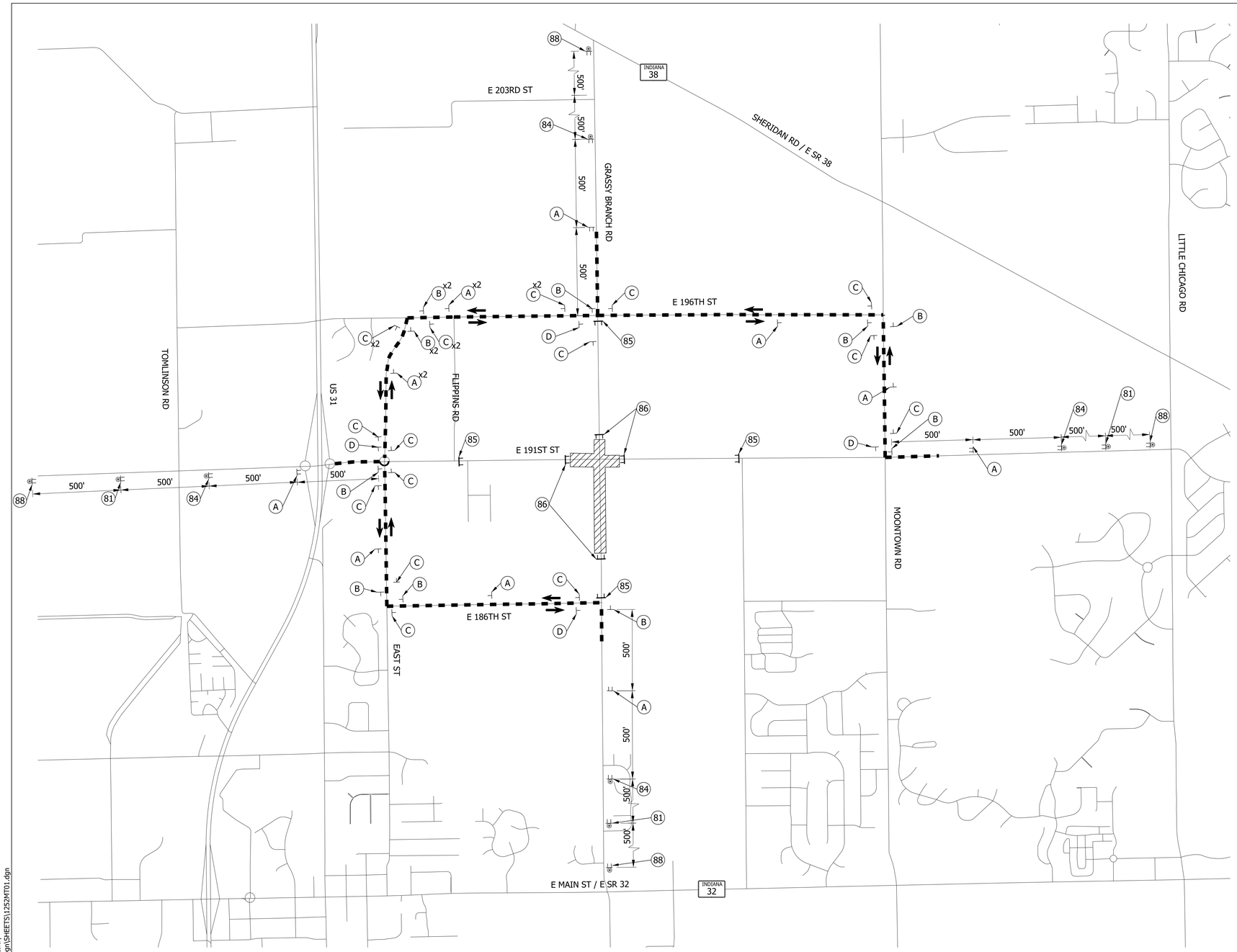
| | | | |
|---|---|---|---|
| DESIGNED: PH | 1/2020 | DRAWN: DPH | 1/2020 |
| CHECKED: RAC | 1/2020 | CHECKED: PH | 1/2020 |

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

| SCALE | ROAD FILE |
|---|---|
| 1 / 4" = 1'-0" | N/A |
| | DESIGNATION |
| | 1700731 |

| SURVEY BOOK | SHEETS | | |
|---|---|---|---|
| ELECTRONIC | 5 | of | 68 |
| CONTRACT | PROJECT | | |
| R-40286 | 1700731 | | |




DETOUR ROUTE

LEGEND

- (A) Advance Turn Detour Route Marker Assembly
- (B) Directional Detour Route Marker Assembly
- (C) Confirming Detour Route Marker Assembly
- (D) End Detour Route Marker Assembly
- (81) XW20-3 "Road Closed Ahead" Sign
- (84) XW20-2 "Detour Ahead" Sign
- (85) Road Closed Sign Assembly with R11-4 and 12 LFT of Type III-B Barricade
- (86) Road Closed Sign Assembly with R11-2 and 24 LFT of Type III-A Barricade
- (87) XG20-2 "End Road Work" Sign
- (88) XW2-6-A "Worksite Added Penalty" Sign
- Construction Sign
- Type 'A' Construction Warning Light
- Type III-_ Barricade
- Route Marker Assembly
- Area Under Construction
- Detour Route
- Direction of Travel

NOTES

1. All signs, barricades, and pavement markings shall conform to the Indiana Manual on Uniform Traffic Control Devices for Streets and Highways, 2011 and any current supplements thereto.
2. Contractor shall maintain access to all commercial and private properties during construction.
3. x2 On Detour Route Markers on East St. & 196th St. indicate a a dual route marker for 191st ST and Grassy.

CONSTRUCTION SIGN SCHEDULE

| ITEM | TOTALS |
|---|---|
| Type 'A' Sign | |
| R11-2 | 4 Each |
| R11-4 | 4 Each |
| XG20-2 | 4 Each |
| XW2-6-A | 4 Each |
| XW20-2 | 4 Each |
| XW20-3 | 17 Each |
| Total Type 'A' Sign | 24 Each |
| Type 'B' Sign | |
| XM 4-10(R or L) | 4 Each |
| Total Type 'B' Sign | 4 Each |
| | |
| Type III-A Barricade | 48 LFT |
| Type III-B Barricade | 48 LFT |
| Road Closed Sign Assembly | 8 Each |
| Detour Route Marker Assembly | 47 Each |

SIGN LEGEND

| SIGN | DESCRIPTION | SIZE (in x in) |
|---|---|---|
| R11-2 | "Road Closed" Sign | 48 X 30 |
| R11-4 | "Road Closed to Thru Traffic" Sign | 60 X 24 |
| XG20-2 | "End Construction" Sign | 48 X 48 |
| XW20-2 | "Detour Ahead" Sign | 48 X 48 |
| XW20-3 | "Road Closed ___" Sign | 48 X 48 |
| XW2-6-A | "WORKSITE ADDED PENALTY" SIGN | 78 X 42 |
| XM4-10(R OR L) | "Detour" (Inside Orange Arrow) Sign | 48 X 18 |

DLZ

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: PH 1/2020 DRAWN: LJS 1/2020

CHECKED: PH 1/2020 CHECKED: PH 1/2020

INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC

| SCALE | ROAD FILE |
|---|---|
| NOT TO SCALE | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 6 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

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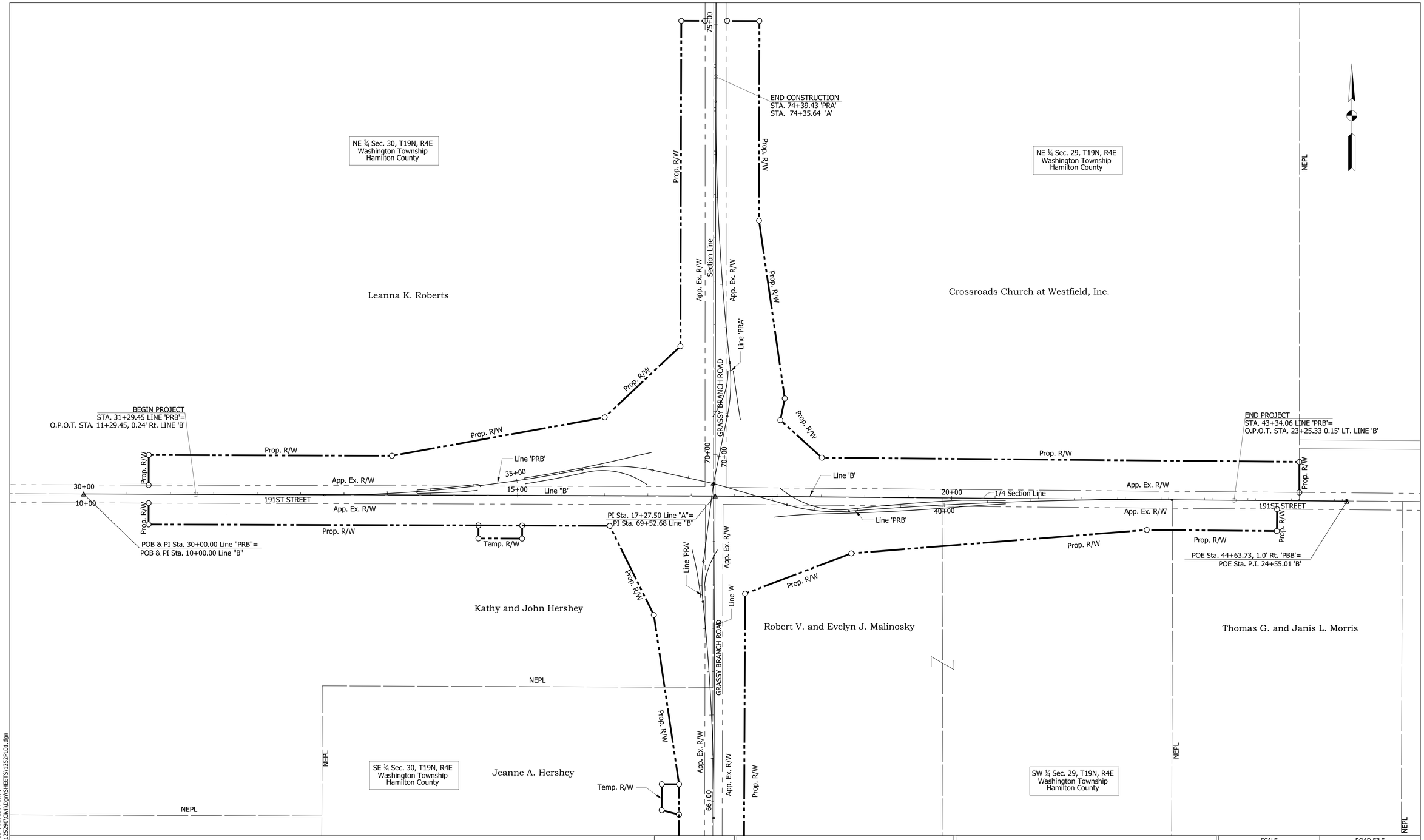


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DLZ

NOT FOR CONSTRUCTION

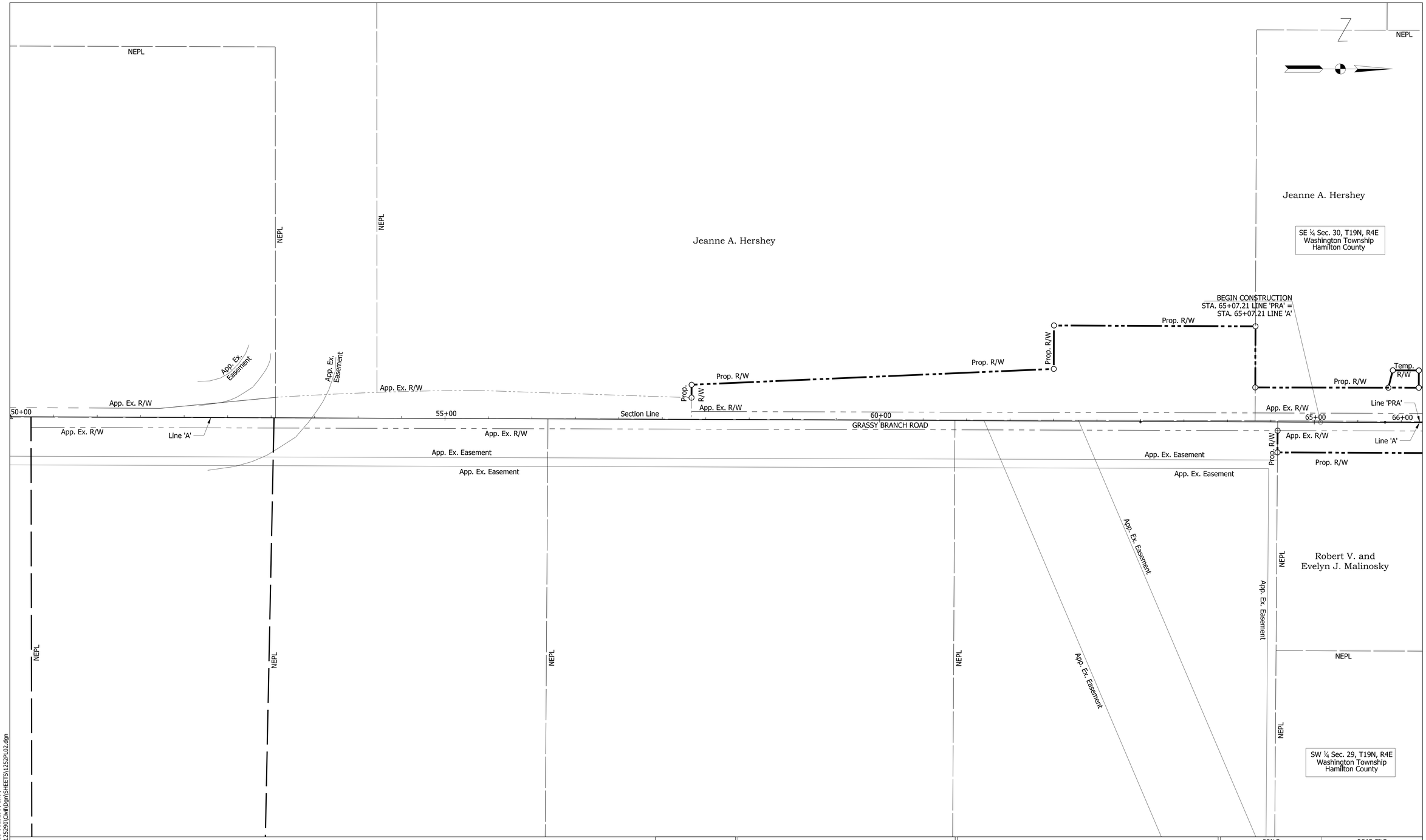
DLZ INDIANA, LLC

| RECOMMENDED FOR APPROVAL | DESIGN ENGINEER | DATE |
|---|---|---|
| DESIGNED: PH | 1/2020 | DRAWN: CJS 1/2020 |
| CHECKED: RAC | 1/2020 | CHECKED: PH 1/2020 |

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAT NO. 1

| SCALE | ROAD FILE |
|---|---|
| 1" = 50' | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 7 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

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DLZ

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

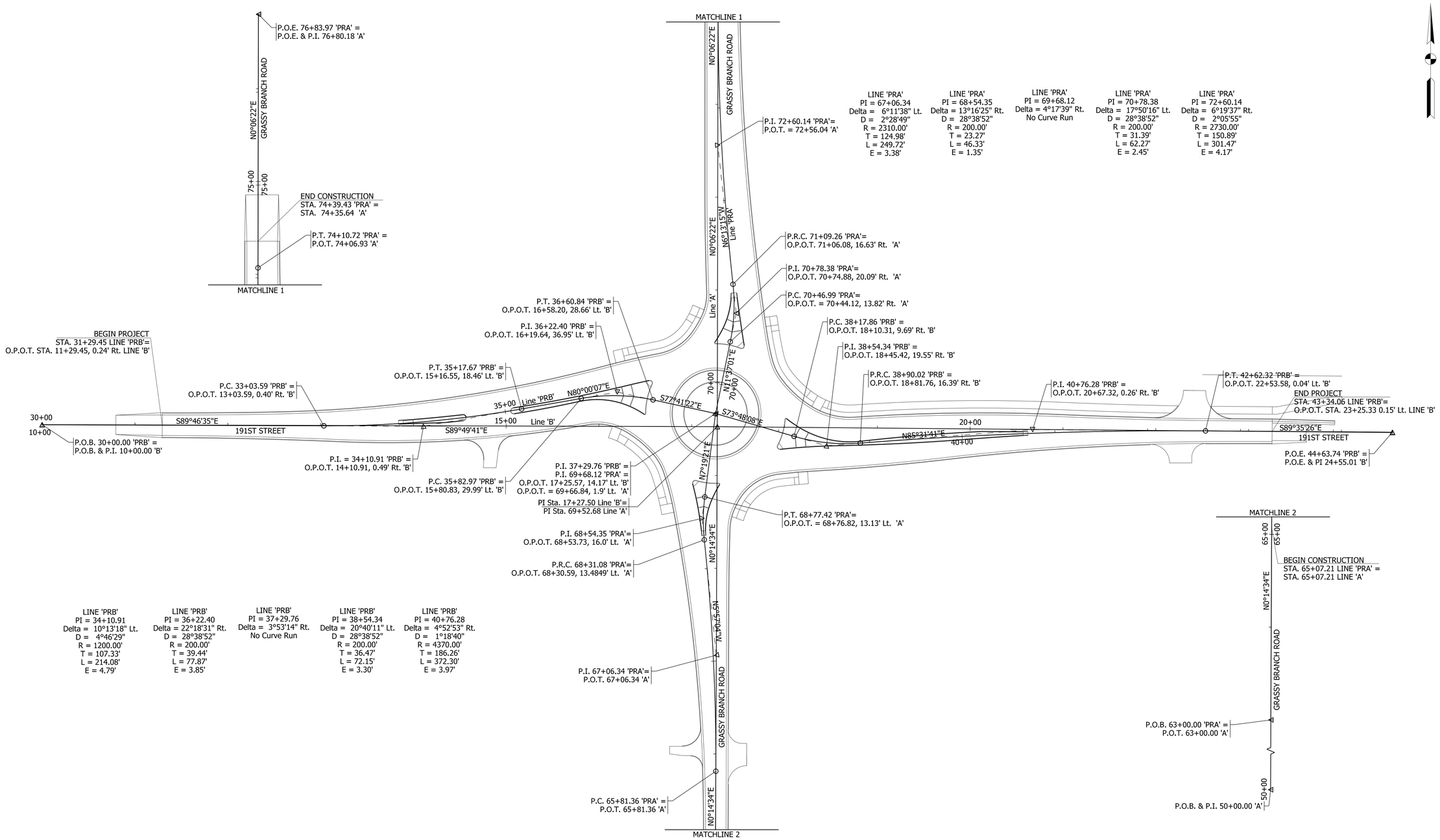
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

| | | | |
|---|---|---|---|
| DESIGNED: | PH 1/2020 | DRAWN: | LJS 1/2020 |
| CHECKED: | RAC 1/2020 | CHECKED: | PH 1/2020 |

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAT NO. 2

| SCALE | ROAD FILE |
|---|---|
| 1" = 50' | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 8 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

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DLZ

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

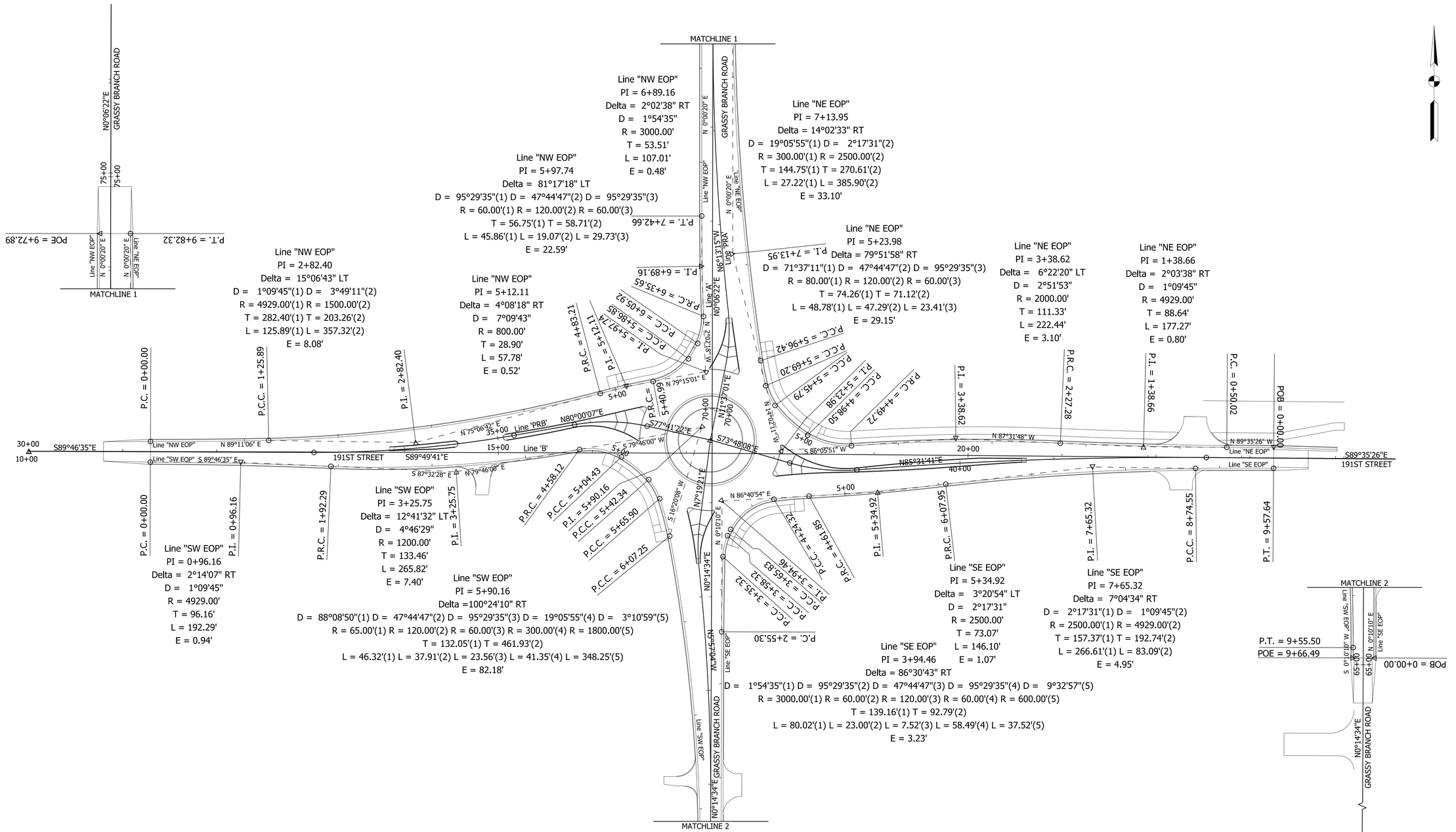
DESIGNED: PH 1/2020 DRAWN: CJS 1/2020

CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

GEOMETRIC DETAIL

| SCALE | ROAD FILE |
|---|---|
| 1" = 50' | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 9 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

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NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

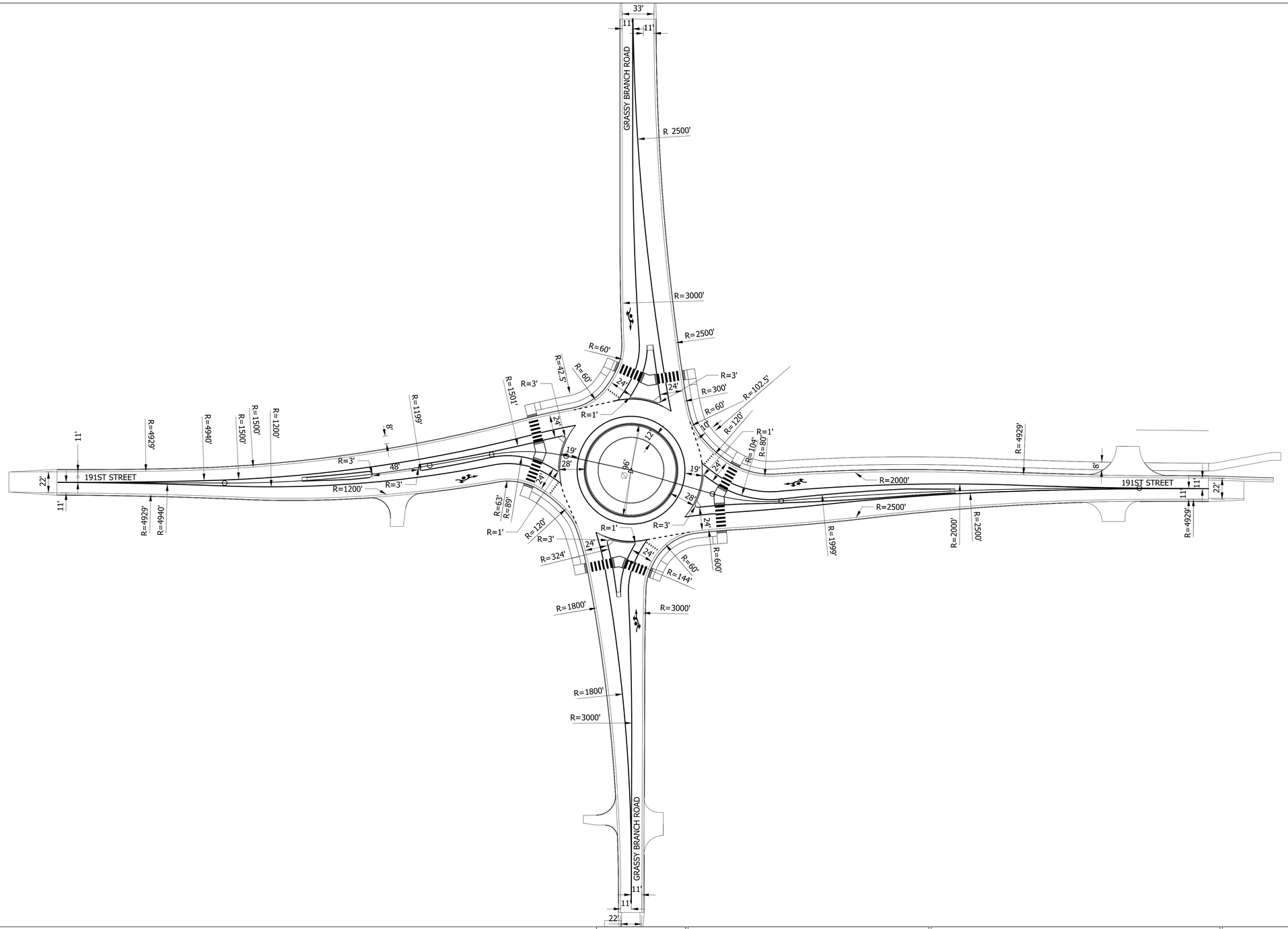
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

| | | | |
|---|---|---|---|
| DESIGNED: | PH | 1/2020 | DRAWN: CJS 1/2020 |
| CHECKED: | RAC | 1/2020 | CHECKED: PH 1/2020 |

INDIANA
DEPARTMENT OF TRANSPORTATION

# EDGE OF PAVEMENT GEOMETRIC DETAIL

| SCALE | ROAD FILE |
|---|---|
| 1" = 50' | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 10 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

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DLZ

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

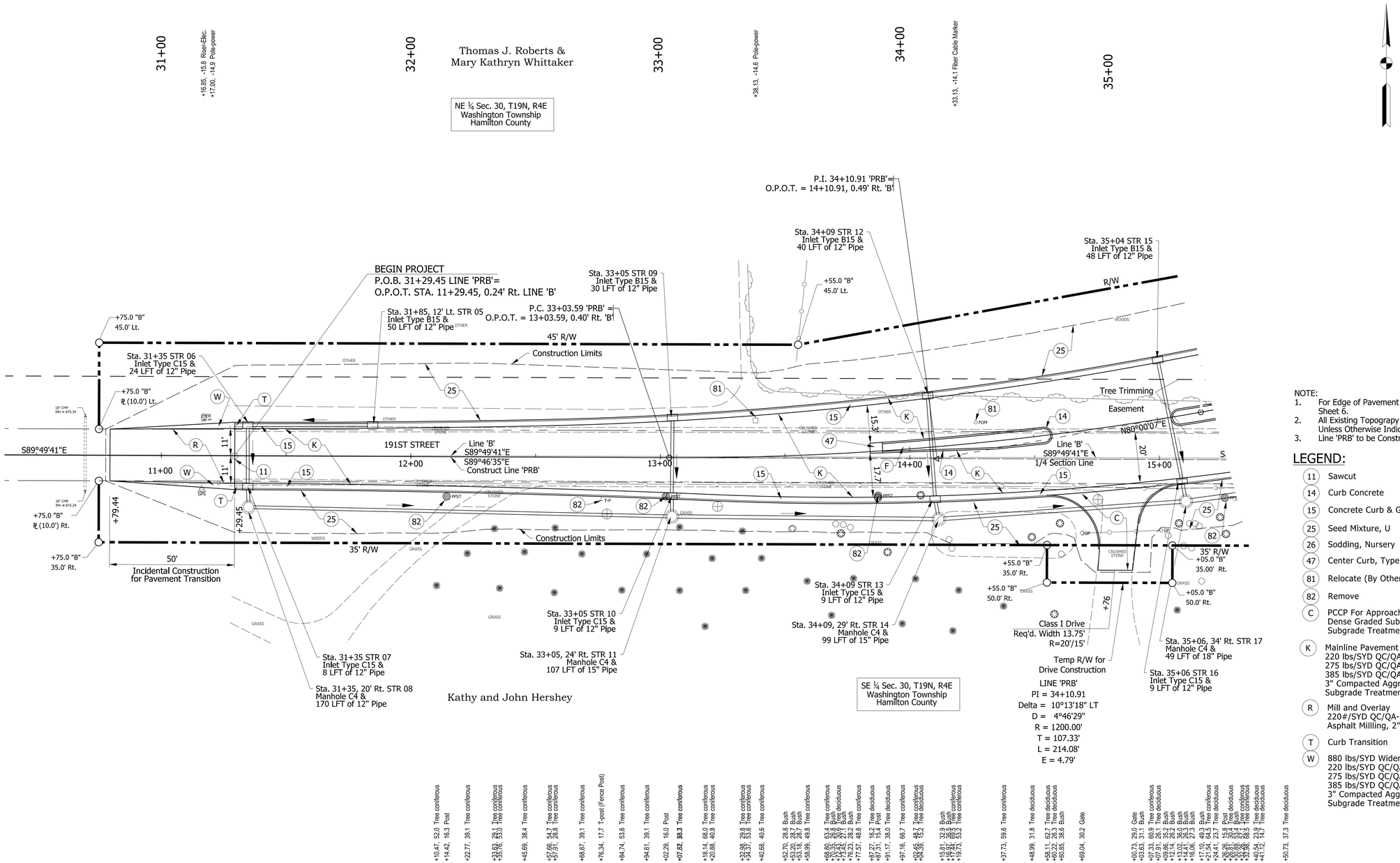
DESIGNED: PH 1/2020 DRAWN: DPH 1/2020

CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

ROUNDABOUT LAYOUT PLAN
191ST STREET AND GRASSY BRANCH RD.

| SCALE | ROAD FILE |
|---|---|
| 1" = 50' | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 11 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




NOTE:
1. For Edge of Pavement and Splitter Island Geometrics, See Sheet 6.
2. All Existing Topograpy and R/W Described from Line 'B' Unless Otherwise Indicated.
3. Line 'PRB' to be Constructed.

## LEGEND:

- (11) Sawcut
- (14) Curb Concrete
- (15) Concrete Curb & Gutter
- (25) Seed Mixture, U
- (26) Sodding, Nursery
- (47) Center Curb, Type D
- (81) Relocate (By Others)
- (82) Remove
- (C) PCCP For Approaches, 6", on Dense Graded Subbase, on Subgrade Treatment Type ID
- (K) Mainline Pavement Section
  220 lbs/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on
  275 lbs/SYD QC/QA-HMA, 2, 70, Intermediate, 19.0 mm on
  385 lbs/SYD QC/QA-HMA, 2, 64, Base, 19.0 mm on
  3" Compacted Aggregate No. 53
  Subgrade Treatment, Type ID
- (R) Mill and Overlay
  220#/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on
  Asphalt Milling, 2"
- (T) Curb Transition
- (W) 880 lbs/SYD Widening with HMA, Type B Consisting of:
  220 lbs/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on
  275 lbs/SYD QC/QA-HMA, 2, 70, Intermediate, 19.0 mm, on
  385 lbs/SYD QC/QA-HMA, 2, 64, Base, 19.0 mm, on
  3" Compacted Aggregate, No. 53, on
  Subgrade Treatment, Type ID

+10.47, 52.0 Tree coniferous
+14.42, 16.3 Post
+22.77, 39.1 Tree coniferous
+33.63, 28.1 Tree coniferous
+35.76, 53.0 Tree coniferous
+45.69, 38.4 Tree coniferous
+57.66, 54.7 Tree coniferous
+57.91, 28.8 Tree coniferous
+68.67, 39.1 Tree coniferous
+76.34, 17.7 T-post (Fence Post)
+84.74, 53.6 Tree coniferous
+94.61, 39.1 Tree coniferous
+02.29, 16.0 Post
+07.82, 88.7 Tree coniferous
+18.14, 68.0 Tree coniferous
+20.88, 40.8 Tree coniferous
+32.98, 29.8 Tree coniferous
+34.37, 53.6 Tree coniferous
+40.68, 40.6 Tree coniferous
+52.70, 28.8 Bush
+53.20, 28.8 Bush
+53.18, 28.7 Bush
+58.99, 49.0 Tree coniferous
+68.80, 63.4 Tree coniferous
+70.35, 26.8 Bush
+73.45, 27.0 Bush
+74.54, 26.9 Bush
+76.23, 28.6 Bush
+77.57, 48.6 Tree coniferous
+87.27, 16.2 Tree deciduous
+87.31, 15.4 Post
+91.17, 38.0 Tree deciduous
+97.16, 66.7 Tree coniferous
+02.45, 48.7 Tree coniferous
+04.39, 15.2 Tree deciduous
+15.81, 32.9 Bush
+16.97, 28.5 Bush
+18.92, 28.5 Tree coniferous
+19.73, 53.3 Tree coniferous
+37.73, 59.6 Tree coniferous
+48.99, 31.8 Tree deciduous
+58.11, 62.7 Tree deciduous
+60.22, 26.3 Tree deciduous
+60.85, 30.8 Bush
+69.04, 30.2 Gate
+00.73, 29.0 Gate
+03.63, 31.1 Bush
+07.33, 66.9 Tree coniferous
+07.51, 16.0 Tree deciduous
+09.86, 35.2 Bush
+12.14, 26.8 Bush
+13.41, 26.8 Bush
+14.52, 26.9 Bush
+16.06, 27.3 Bush
+17.10, 49.2 Bush
+17.54, 47.7 Tree coniferous
+24.41, 23.7 Tree deciduous
+26.26, 15.8 Post
+26.81, 30.4 Tree deciduous
+28.89, 30.4 Bush
+32.28, 64.1 Tree coniferous
+32.68, 26.6 Tree coniferous
+40.54, 23.3 Tree deciduous
+41.12, 14.7 Tree deciduous
+50.73, 37.3 Tree deciduous

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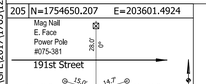
205 N=1754650.207 E=203601.4924




CAPPED REBAR
STA. 11+16.27 LINE 'B', 13.76' RT.

DLZ

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

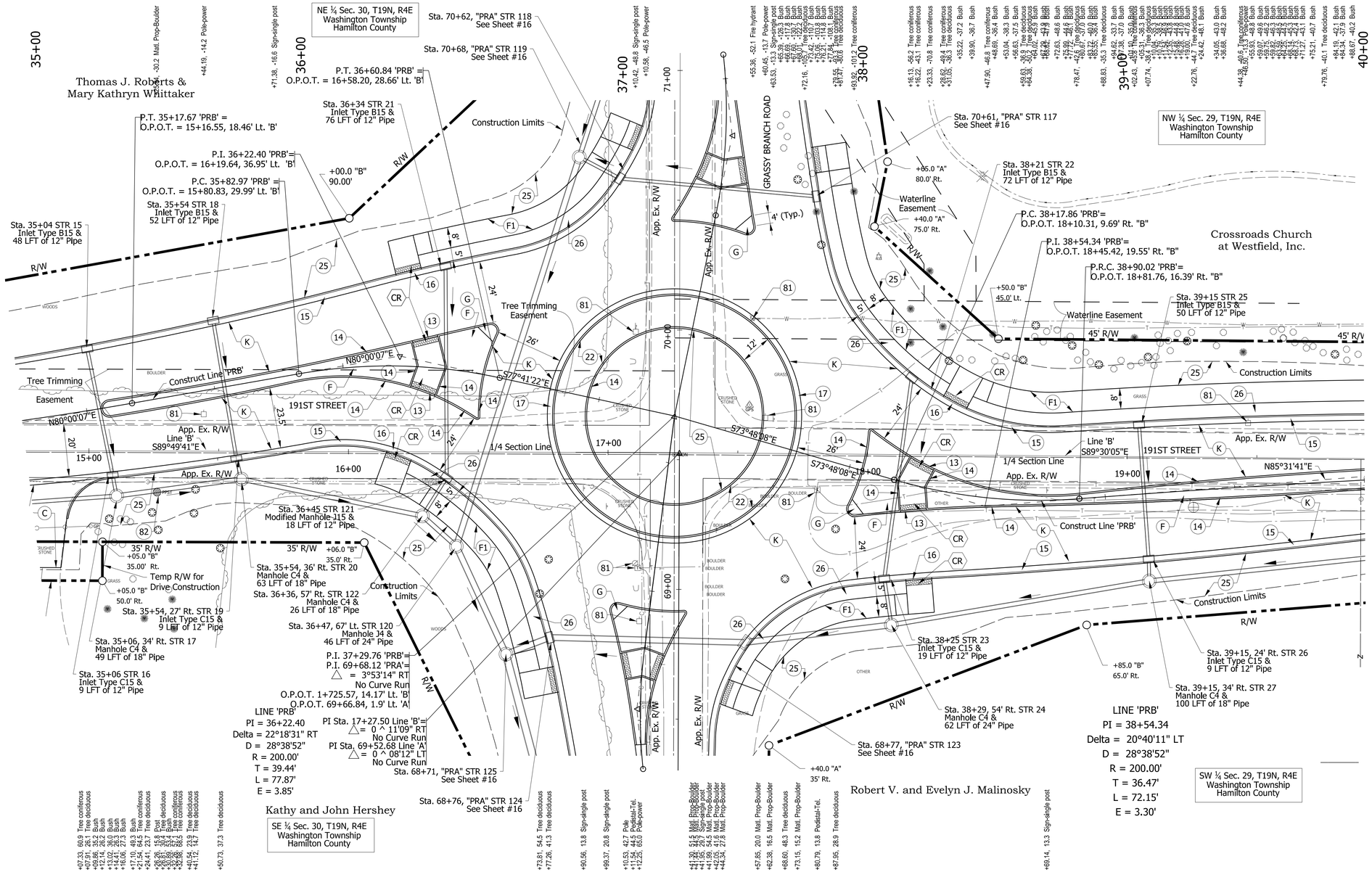
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

| | | | |
|---|---|---|---|
| DESIGNED: PH | 1/2020 | DRAWN: DPH | 1/2020 |
| CHECKED: RAC | 1/2020 | CHECKED: PH | 1/2020 |

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN
LINE 'PRB'

| SCALE | ROAD FILE |
|---|---|
| 1" = 20' | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 12 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




NOTE:
1. For Edge of Pavement and Splitter Island Geometrics, See Sheet 6.
2. All Existing Topograpy and R/W Described from Line 'B' Unless Otherwise Indicated.
3. Line 'PRB' to be Constructed.

## LEGEND:

- (11) Sawcut
- (13) Curb Concrete, Depressed
- (14) Curb Concrete
- (15) Concrete Curb & Gutter
- (16) Curb & Gutter, Concrete, Depressed
- (17) Curb & Gutter B, Concrete, Modified
- (22) 7" PCCP, Colored & Jointed (With 15' D-1 Joint Spacing and 1" Dowel Bars) on 12.5" Compacted Aggregate, No. 53, on Subgrade Treatment Type 1D
- (25) Seed Mixture, U
- (26) Sodding, Nursery
- (81) Relocate (By Others)
- (A) Single Mailbox Assembly
- (C) PCCP For Approaches, 6", on Dense Graded Subbase, on Subgrade Treatment Type ID
- (F) 6" PCCP, on 6" Compacted Aggregate, No. 53
- (F1) 360 lbs/SYD HMA For Sidewalk Consisting of: 140 lbs/SYD HMA, Surface, Type B, on 220 #/SYD HMA, Intermediate, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment, Type II
- (G) Splitter Island Corner, See Detail Sheet 4 Variable Depth PCCP, on 6" Compacted Aggregate, No. 53
- (K) Mainline Pavement Section 220 lbs/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on 275 lbs/SYD QC/QA-HMA, 2, 70, Intermediate, 19.0 mm on 385 lbs/SYD QC/QA-HMA, 2, 64, Base, 19.0 mm on 3" Compacted Aggregate No. 53 Subgrade Treatment, Type ID
- (CR) Curb Ramp

All Existing Topograpy and R/W Described from line 'B' Unless otherwise Indicated. Line 'PRB' to be Constructed.

205 N=1754650.207 E=203601.4924
Mag Nail E. Face Power Pole #075-381
191st Street
Mag Nail S. Edge Pave.
Mag Nail S. Edge Pave.
CAPPED REBAR
STA. 11+16.27 LINE 'B', 13.76' RT.

206 N=1754641.729 E=204803.9429
Mag Nail E. Face Power Pole #MM-2311
191st Street
1"Capped Rebar
N.W Face Private Light Pole
CAPPED REBAR
STA. 23+18+.83 LINE 'B', 15.25' RT.

DLZ

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

DESIGNED: PH 1/2020 DRAWN: DPH 1/2020
CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN
LINE 'PRB'

| SCALE | ROAD FILE |
|---|---|
| 1" = 20' | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 13 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

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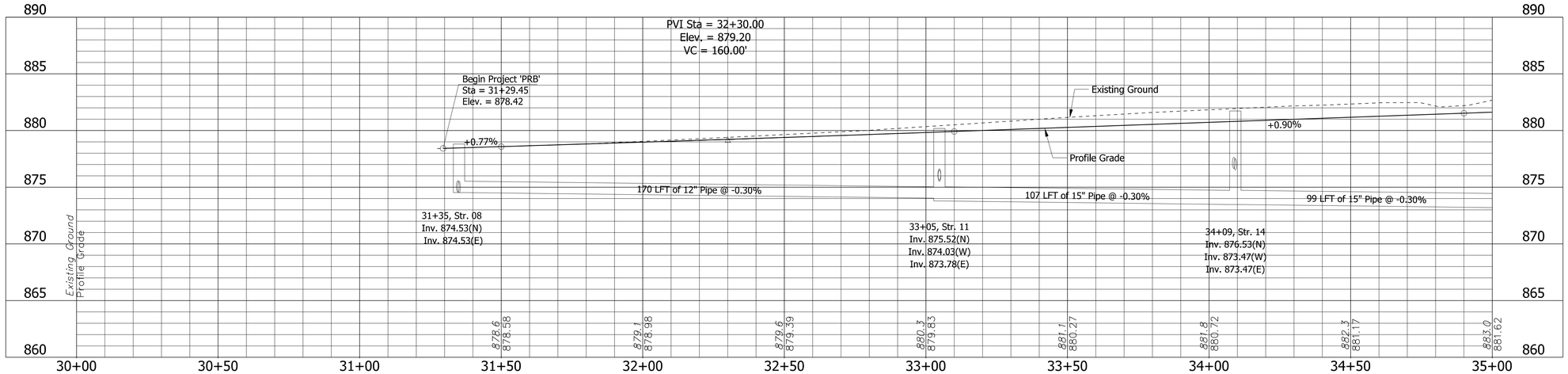


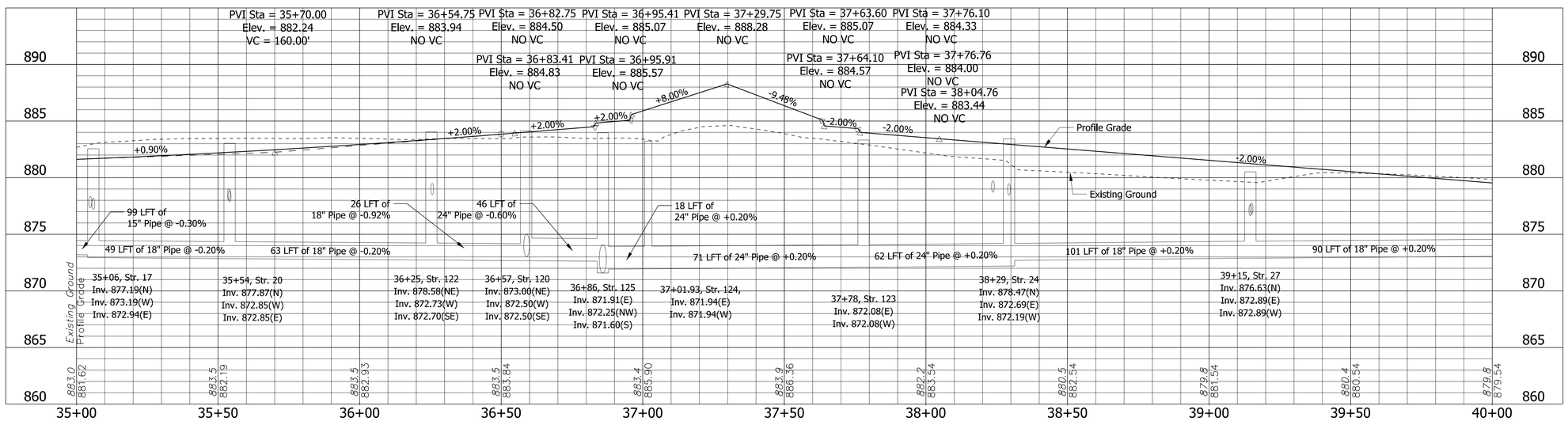


TBM 6 Elev. = 878.440' NAVD88
Mag Spike Set S. Face of Power Pole #075-319, N. Side 191st Street, +/-610' W. of Grassy Branch Road
STA. 11+17.04, Line 'B' 14.23' LT.

TBM 7 Elev. = 880.035' NAVD88
Cut "x" Top N.W. Corner Concrete Watermaln Vault, +/-65' N. of Centerline of 191st Street +/-470' E. of Grassy Branch Road
STA. 21+97.41, Line 'B' 66.75' LT.

DLZ

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: PH 1/2020 DRAWN: DPH 1/2020

CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

PROFILE
LINE 'PRB'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1" = 20' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 14 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

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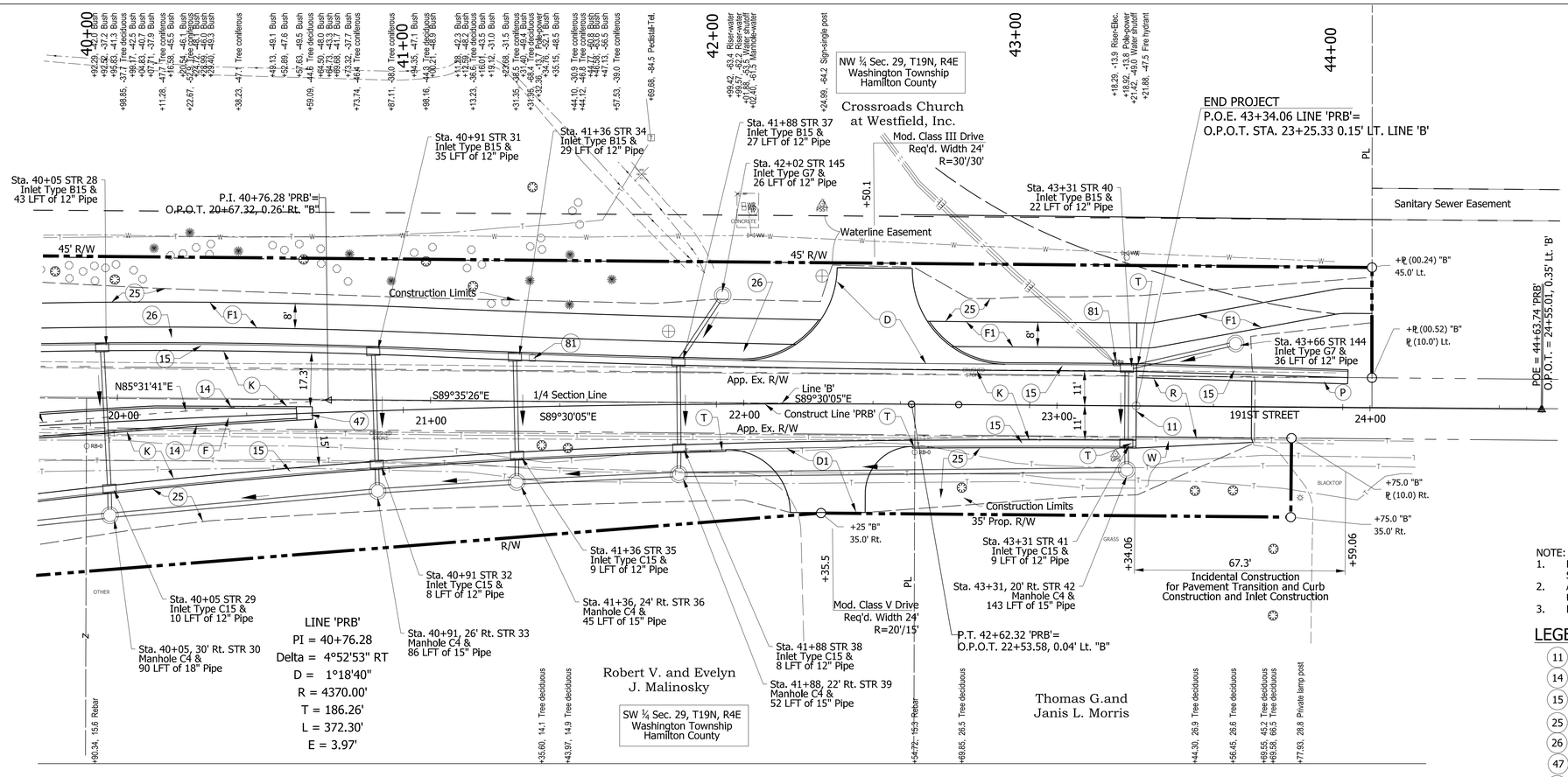


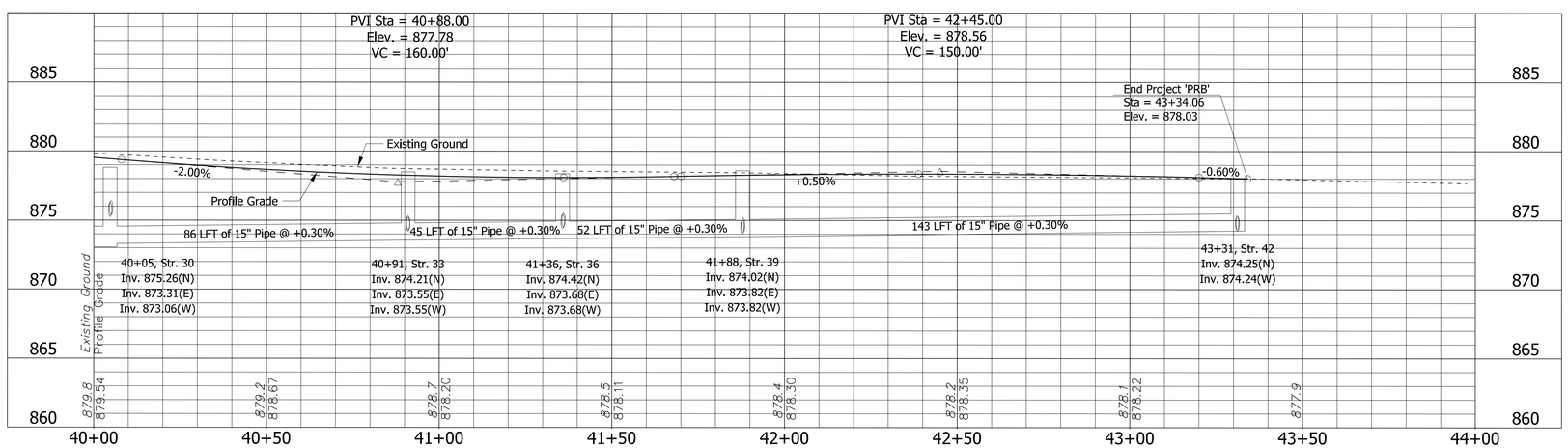


NOTE:
1. For Edge of Pavement and Splitter Island Geometrics, See Sheet 6.
2. All Existing Topograpy and R/W Described from Line 'B' Unless Otherwise Indicated.
3. Line 'PRB' to be Constructed.

## LEGEND:

- (11) Sawcut
- (14) Curb Concrete
- (15) Concrete Curb & Gutter
- (25) Seed Mixture, U
- (26) Sodding, Nursery
- (47) Center Curb, Type D
- (81) Relocate (By Others)
- (D) PCCP For Approaches, 9", on Dense Graded Subbase, Geogrid, Type IB, on Subgrade Treatment Type ID
- (D1) 6" Compacted Aggregate No. 73, on Subgrade Treatment Type ID
- (F) 6" PCCP, on 6" Compacted Aggregate, No. 53
- (F1) 360 lbs/SYD HMA For Sidewalk Consisting of: 140 lbs/SYD HMA, Surface, Type B, on 220 #/SYD HMA, Intermediate, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment, Type II
- (K) Mainline Pavement Section 220 lbs/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on 275 lbs/SYD QC/QA-HMA, 2, 70, Intermediate, 19.0 mm on 385 lbs/SYD QC/QA-HMA, 2, 64, Base, 19.0 mm on 3" Compacted Aggregate No. 53 Subgrade Treatment, Type ID
- (R) Mill and Overlay 220#/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on Asphalt Milling, 2"
- (T) Curb Transition
- (W) 880 lbs/SYD Widening with HMA, Type B Consisting of: 220 lbs/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on 275 lbs/SYD QC/QA-HMA, 2, 70, Intermediate, 19.0 mm, on 385 lbs/SYD QC/QA-HMA, 2, 64, Base, 19.0 mm, on 3" Compacted Aggregate, No. 53, on Subgrade Treatment, Type ID

206 N=1754641.729 E=204803.9429
Mag Nail
E. Face
Power Pole
#R8-2311
191st Street
Capped Rebar
N.W Face
Private Light Pole
CAPPED REBAR
STA. 23+18+.83 LINE 'B', 15.25' RT.

TBM 6 Elev. = 878.440' NAVD88
Mag Spike Set S. Face of Power Pole #075-319, N. Side 191st Street, +/-610' W. of Grassy Branch Road
STA. 11+17.04, Line 'B' 14.23' LT.

TBM 7 Elev. = 880.035' NAVD88
Cut "x" Top N.W. Corner Concrete Watermaln Vault, +/-65' N. of Centerline of 191st Street +/-470' E. of Grassy Branch Road
STA. 21+97.41, Line 'B' 66.75' LT.

DLZ

NOT FOR CONSTRUCTION
DLZ INDIANA, LLC

| RECOMMENDED FOR APPROVAL | DESIGN ENGINEER | DATE |
|---|---|---|
| DESIGNED: PH | 1/2020 | DRAWN: DPH 1/2020 |
| CHECKED: RAC | 1/2020 | CHECKED: PH 1/2020 |

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN
LINE 'PRB'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1" = 20' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 15 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

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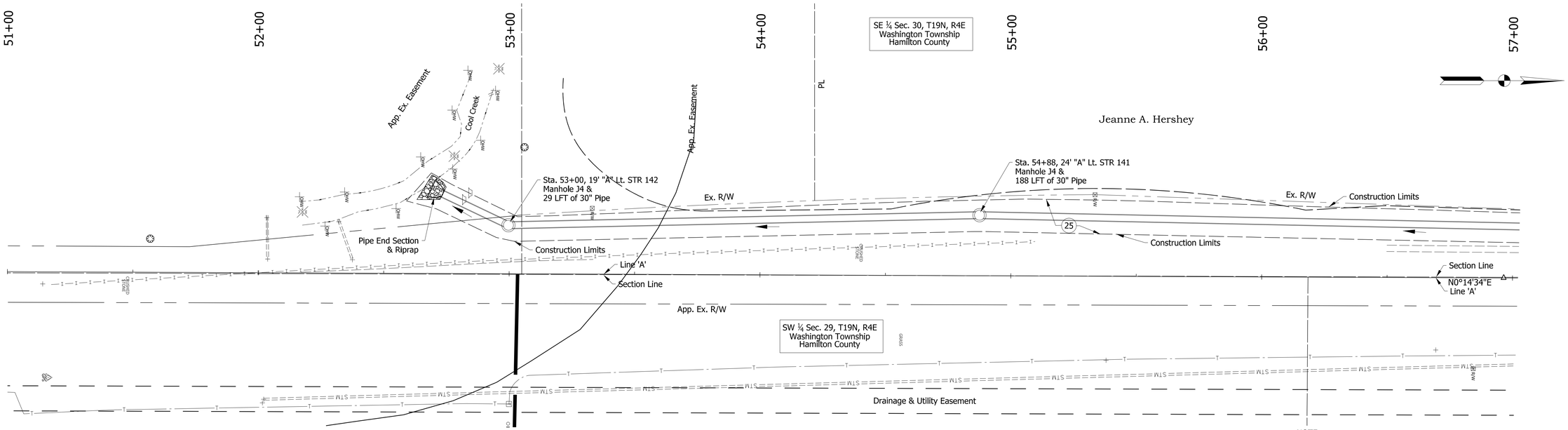
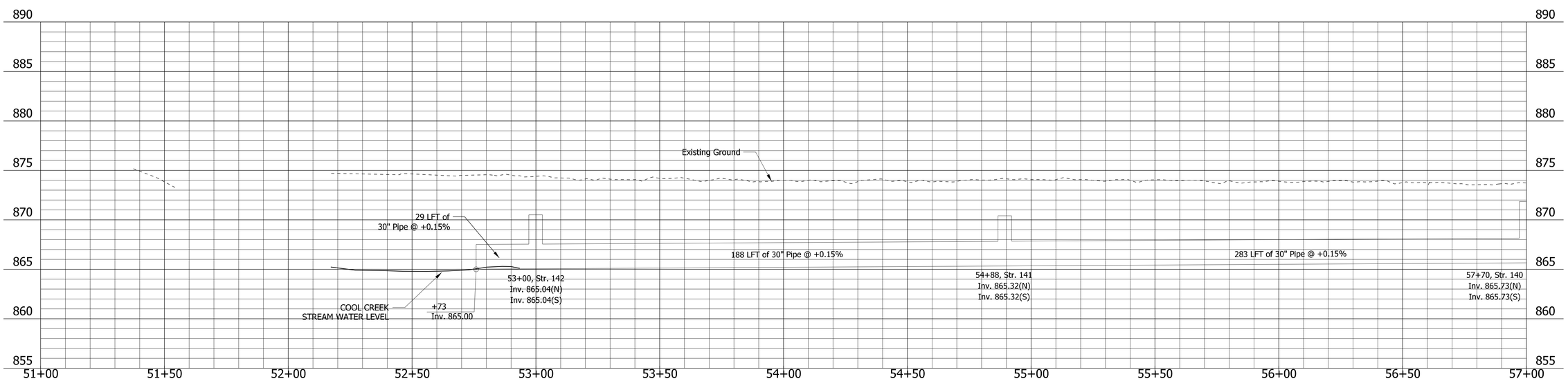



NOTE:
1. All Existing Topograpy and R/W Described from Line 'A' Unless Otherwise Indicated.
2. Line 'PRA' to be Constructed.

## LEGEND:

(25) Seed Mixture, U

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DLZ

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

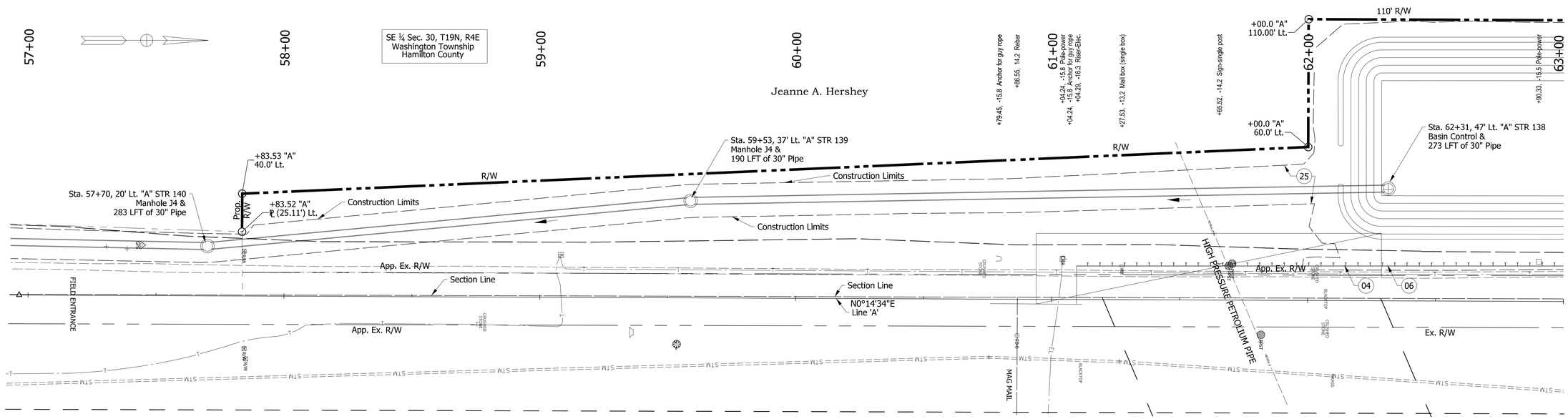
DESIGNED: PH 1/2020 DRAWN: DPH 1/2020

CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN
LINE 'A'

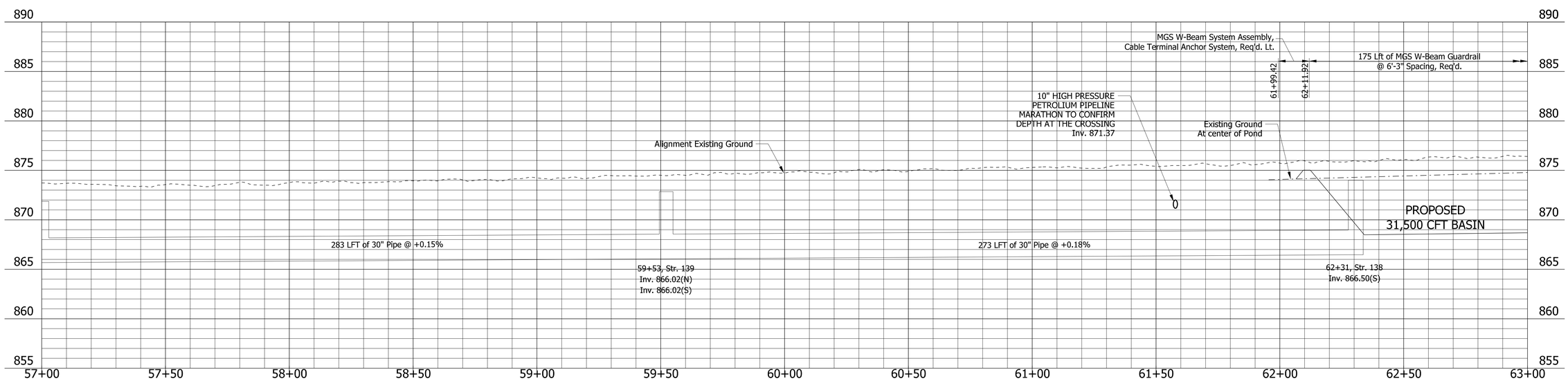
| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1" = 20' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 16 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




## LEGEND:

- (04) Guardrail, MGS, W-Beam, Cable Terminal Anchor
- (06) Guardrail, W-Beam, MGS 6'-3" Spacing
- (25) Seed Mixture, U

NOTE:
1. All Existing Topograpy and R/W Described from Line 'A' Unless Otherwise Indicated.
2. Line 'PRA' to be Constructed.

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DLZ

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

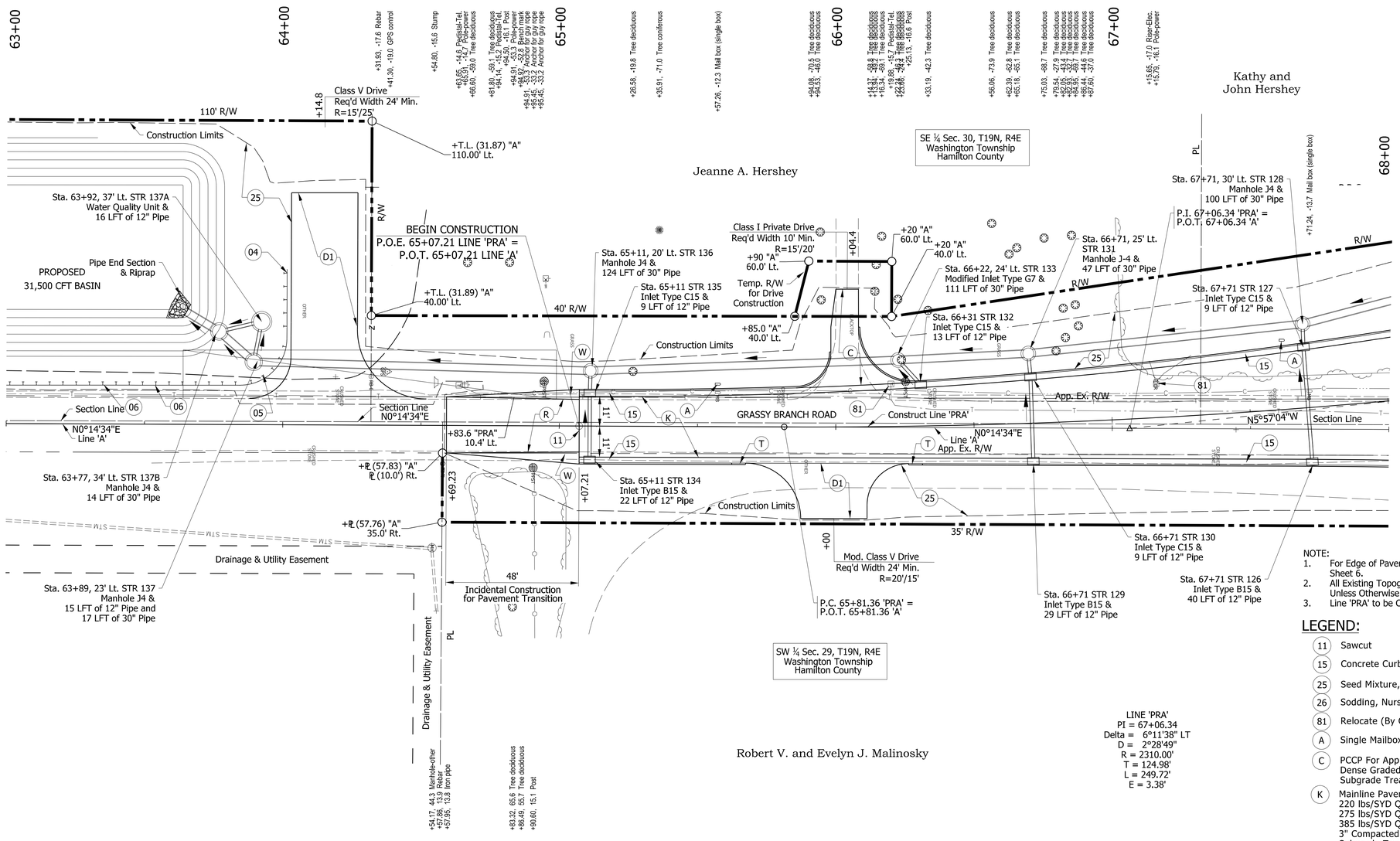
DESIGNED: PH 1/2020 DRAWN: DPH 1/2020

CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN
LINE 'A'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1" = 20' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 17 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

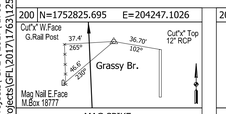



NOTE:
1. For Edge of Pavement and Splitter Island Geometrics, See Sheet 6.
2. All Existing Topograpy and R/W Described from Line 'A' Unless Otherwise Indicated.
3. Line 'PRA' to be Constructed.

## LEGEND:

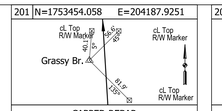
- (11) Sawcut
- (15) Concrete Curb & Gutter
- (25) Seed Mixture, U
- (26) Sodding, Nursery
- (81) Relocate (By Others)
- (A) Single Mailbox Assembly
- (C) PCCP For Approaches, 6", on Dense Graded Subbase, on Subgrade Treatment Type ID
- (K) Mainline Pavement Section
  220 lbs/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on
  275 lbs/SYD QC/QA-HMA, 2, 70, Intermediate, 19.0 mm on
  385 lbs/SYD QC/QA-HMA, 2, 64, Base, 19.0 mm on
  3" Compacted Aggregate No. 53
  Subgrade Treatment, Type ID
- (M) HMA for Approaches:
  165#/SYD HMA, Surface, Type B, on
  275#/SYD HMA, Intermediate, Type B, on
  880#/SYD HMA, Base, Type B, on
  Subgrade Treatment Type III
- (R) Mill and Overlay
  220#/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on
  Asphalt Milling, 2"
- (T) Curb Transition
- (W) 880 lbs/SYD Widening with HMA, Type B Consisting of:
  220 lbs/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on
  275 lbs/SYD QC/QA-HMA, 2, 70, Intermediate, 19.0 mm, on
  385 lbs/SYD QC/QA-HMA, 2, 64, Base, 19.0 mm, on
  3" Compacted Aggregate, No. 53, on
  Subgrade Treatment, Type ID
- (04) Guardrail, MGS, W-Beam, Cable Terminal Anchor
- (05) Guardrail, MGS W-Beam, Shop Curved, 6'-3" Spacing
- (06) Guardrail, W-Beam, MGS 6'-3" Spacing
- (D1) 6" Compacted Aggregate No. 73, on Subgrade Treatment Type ID

| 200 | N=1752825.695 | E=204247.1026 |
|---|---|---|



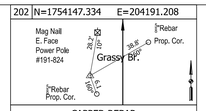

MAG SPIKE
STA. 51+16.40 LINE 'A', 42.12' RT.

| 201 | N=1753454.058 | E=204187.9251 |
|---|---|---|




CAPPED REBAR
STA. 57+44.51 LINE 'A', 19.72' LT.

| 202 | N=1754147.334 | E=204191.208 |
|---|---|---|




CAPPED REBAR
STA.64+37.79 LINE 'A', 19.38' LT.

DLZ

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

| RECOMMENDED FOR APPROVAL | DESIGN ENGINEER | DATE |
|---|---|---|
| DESIGNED: PH | 1/2020 | DRAWN: DPH 1/2020 |
| CHECKED: RAC | 1/2020 | CHECKED: PH 1/2020 |

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN
LINE 'PRA'

| SCALE | ROAD FILE |
|---|---|
| 1" = 20' | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 18 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

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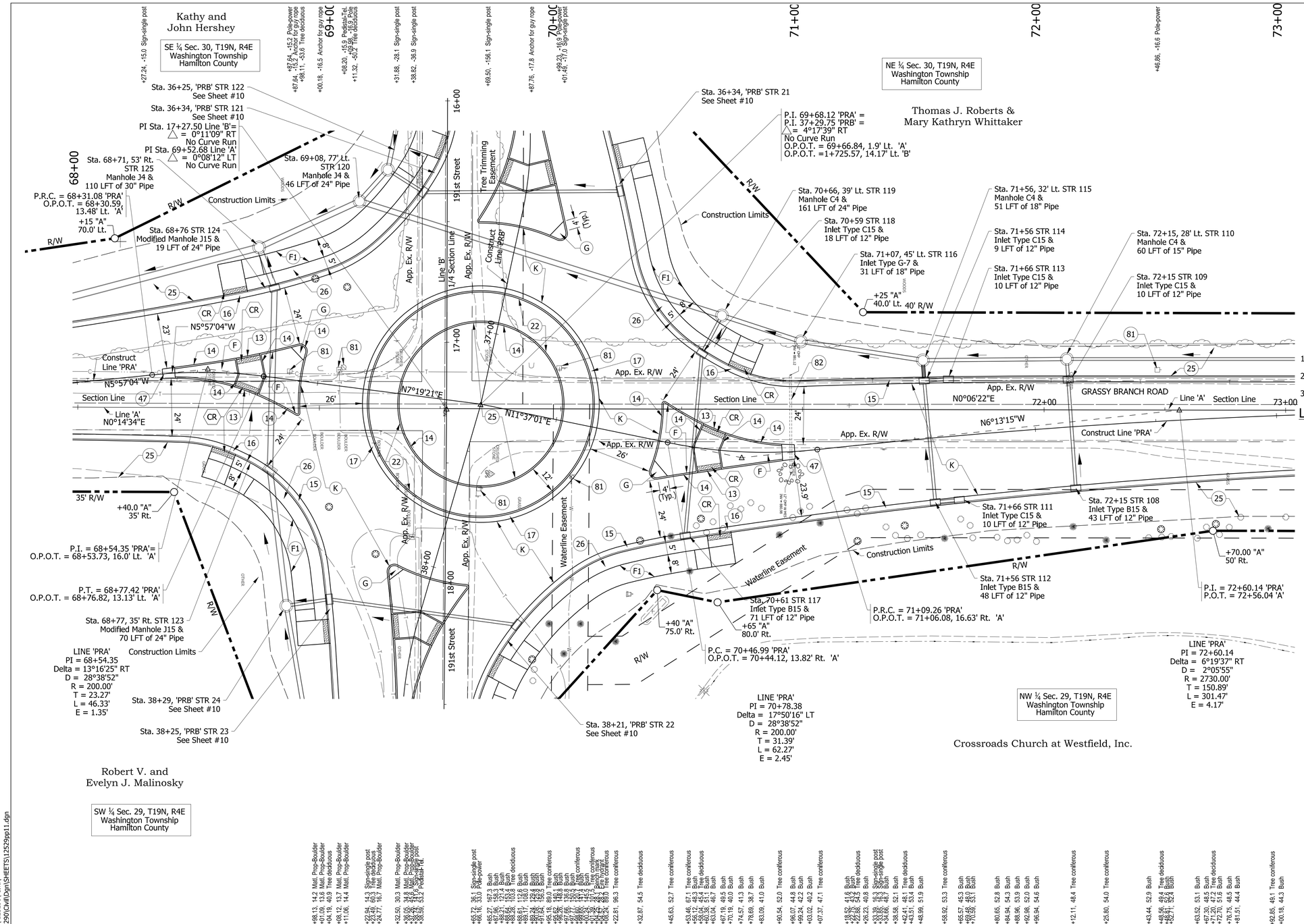


1. For Edge of Pavement and Splitter Island Geometrics, See Sheet 6.
2. All Existing Topograpy and R/W Described from Line 'A' Unless Otherwise Indicated.
3. Line 'PRA' to be Constructed.

## LEGEND:

- (13) Curb Concrete, Depressed
- (14) Curb Concrete
- (15) Concrete Curb & Gutter
- (16) Curb & Gutter, Concrete, Depressed
- (17) Curb & Gutter B, Concrete, Modified
- (22) 7" PCCP, Colored & Jointed (With 15' D-1 Joint Spacing and 1" Dowel Bars) on 12.5" Compacted Aggregate, No. 53, on Subgrade Treatment Type 1D
- (25) Seed Mixture, U
- (26) Sodding, Nursery
- (47) Center Curb, Type D
- (81) Relocate (By Others)
- (82) Remove
- (F) 6" PCCP, on 6" Compacted Aggregate, No. 53
- (F1) 360 lbs/SYD HMA For Sidewalk Consisting of: 140 lbs/SYD HMA, Surface, Type B, on 220 #/SYD HMA, Intermediate, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment, Type II
- (K) Mainline Pavement Section 220 lbs/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on 275 lbs/SYD QC/QA-HMA, 2, 70, Intermediate, 19.0 mm on 385 lbs/SYD QC/QA-HMA, 2, 64, Base, 19.0 mm on 3" Compacted Aggregate No. 53 Subgrade Treatment, Type ID
- (R) Mill and Overlay 220#/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on Asphalt Milling, 2"
- (T) Curb Transition
- (W) 880 lbs/SYD Widening with HMA, Type B Consisting of: 220 lbs/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on 275 lbs/SYD QC/QA-HMA, 2, 70, Intermediate, 19.0 mm, on 385 lbs/SYD QC/QA-HMA, 2, 64, Base, 19.0 mm, on 3" Compacted Aggregate, No. 53, on Subgrade Treatment, Type ID
- (CR) Curb Ramp

| | | | |
|---|---|---|---|
| 202 | N=1754147.334 | E=204191.208 | CAPPED REBAR STA.64+37.79 LINE 'A', 19.38' LT. |
| 203 | N=1754680.526 | E=204239.7765 | CAPPED REBAR STA. 69+71.12 LINE 'A', 26.97' RT. STA. 17+54.35 LINE 'B', 18.63' LT. |

DLZ

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: PH 1/2020 DRAWN: DPH 1/2020

CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN
LINE 'PRA'

| SCALE | ROAD FILE |
|---|---|
| 1" = 20' | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 19 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

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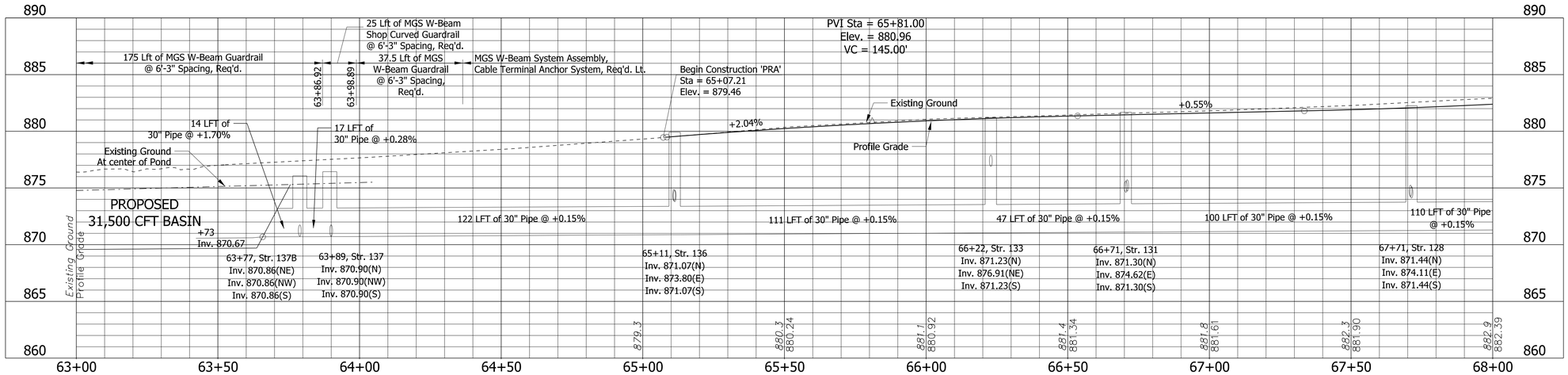


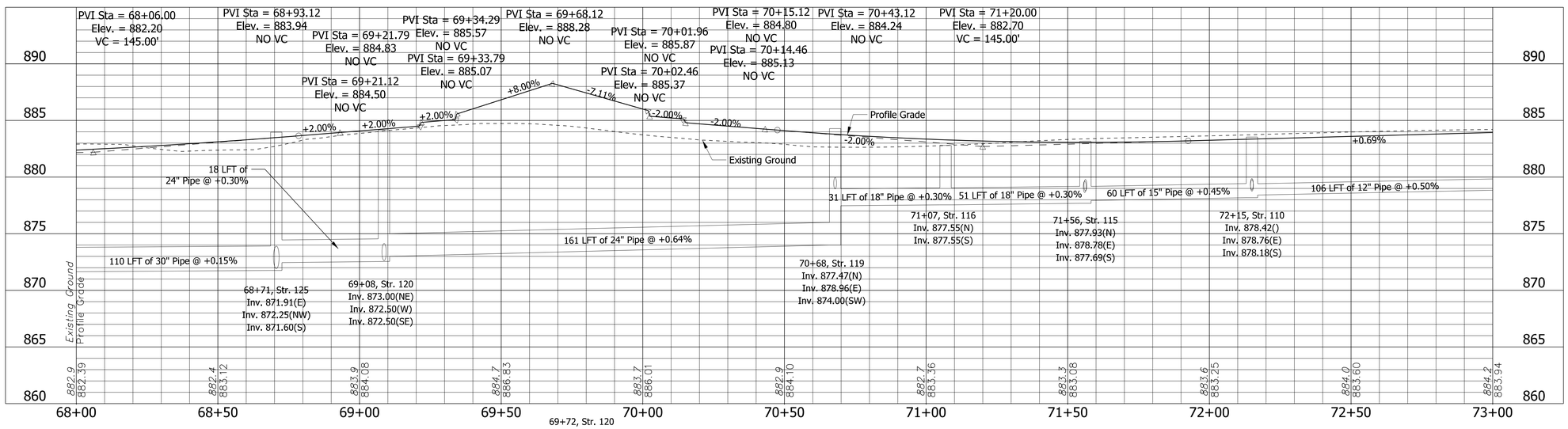


TBM 1 Elev. = 872.775' NAVD88
Cut "x" Centerline Top N. End of 12", N. Side of Commercial Drive
@18777 Grassy Branch Road
STA. 51+08.81, Line 'A' 78.12' RT.

TBM 2 Elev. = 874.840' NAVD88
Mag Spike W. Face of 12" Tree, W. Side Grassy Branch Road
+/- 160'N. of Private Drive @ 18921 Grassy Branch Road
STA. 59+53.31, Line 'A' 17.46' RT.

TBM 3 Elev. = 880.710' NAVD88
Mag Spike E. Face Power Pole #075-399, +/-110' S. of Private
Drive@ 19020 Grassy Branch Road, +/-50'
W. of Centerline of Grassy Branch Road
STA. 64+94.92, Line 'A' 52.84' LT.

TBM 4 Elev. = 883.480' NAVD88
Cut "x" S. Bonnet Bolt of Fire Hydrant at the N.E. Quadrant of 191st
Street and Grassy Branch Road
STA. 70+04.25, Line 'A' 28.06' RT.

DLZ

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

| | | | |
|---|---|---|---|
| DESIGNED: PH | 1/2020 | DRAWN: DPH | 1/2020 |
| CHECKED: RAC | 1/2020 | CHECKED: PH | 1/2020 |

INDIANA
DEPARTMENT OF TRANSPORTATION

PROFILE
LINE 'PRA'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1" = 20' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 20 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

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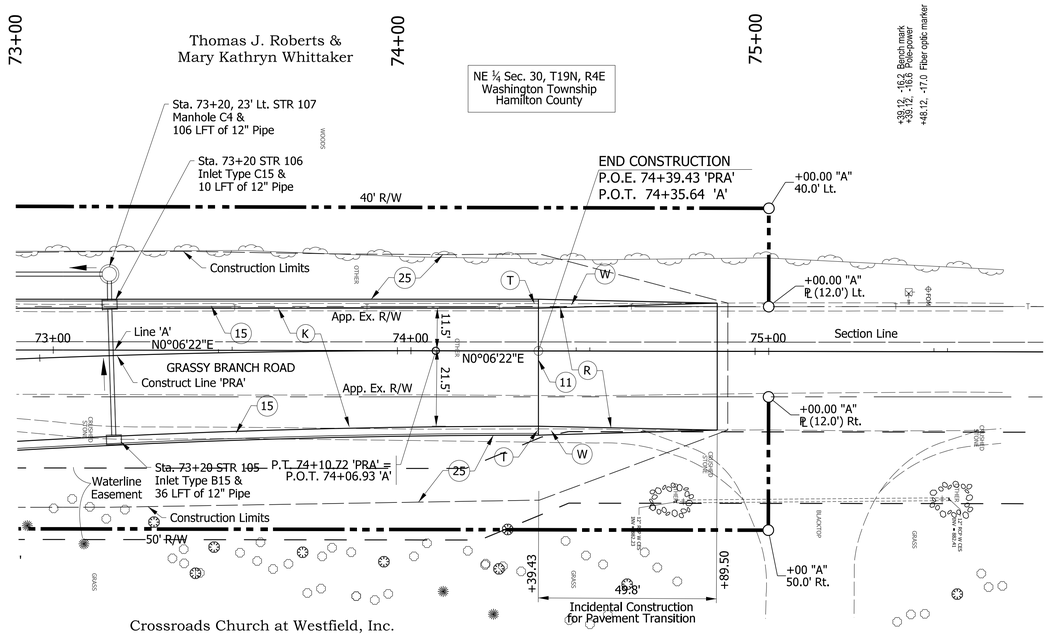


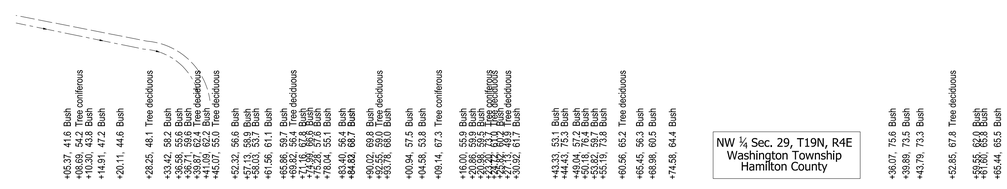


NOTE:
1. For Edge of Pavement and Splitter Island Geometrics, See Sheet 6.
2. All Existing Topograpy and R/W Described from Line 'A' Unless Otherwise Indicated.
3. Line 'PRA' to be Constructed.

## LEGEND:

- (11) Sawcut
- (15) Concrete Curb & Gutter
- (25) Seed Mixture, U
- (26) Sodding, Nursery
- (K) Mainline Pavement Section
  220 lbs/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on
  275 lbs/SYD QC/QA-HMA, 2, 70, Intermediate, 19.0 mm on
  385 lbs/SYD QC/QA-HMA, 2, 64, Base, 19.0 mm on
  3" Compacted Aggregate No. 53
  Subgrade Treatment, Type ID
- (R) Mill and Overlay
  220#/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on
  Asphalt Millling, 2"
- (T) Curb Transition
- (W) 880 lbs/SYD Widening with HMA, Type B Consisting of:
  220 lbs/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on
  275 lbs/SYD QC/QA-HMA, 2, 70, Intermediate, 19.0 mm, on
  385 lbs/SYD QC/QA-HMA, 2, 64, Base, 19.0 mm, on
  3" Compacted Aggregate, No. 53, on
  Subgrade Treatment, Type ID

204 N=1755248.23 E=204236.0326

MAG SPIKE
STA. 75+38.82 LINE 'A', 22.18' RT.

TBM 4 Elev. = 883.480' NAVD88
Cut "x" S. Bonnet Bolt of Fire Hydrant at the N.E. Quadrant of 191st Street and Grassy Branch Road
STA. 70+04.25, Line 'A' 28.06' RT.
STA. 17+55.22, Line 'B' 51.77' LT.

TBM 5 Elev. = 885.230' NAVD88
Mag Spike E. Face Power Pole #075-381, W. Side Grassy Branch Road +/-585' N. of 191st Street
STA. 75+39.12, Line 'A' 16.22' LT.

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NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

| | | | |
|---|---|---|---|
| RECOMMENDED FOR APPROVAL | DESIGN ENGINEER | DATE | |
| DESIGNED: PH | 1/2020 | DRAWN: DPH | 1/2020 |
| CHECKED: RAC | 1/2020 | CHECKED: PH | 1/2020 |

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN
LINE 'PRA'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1" = 20' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 21 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

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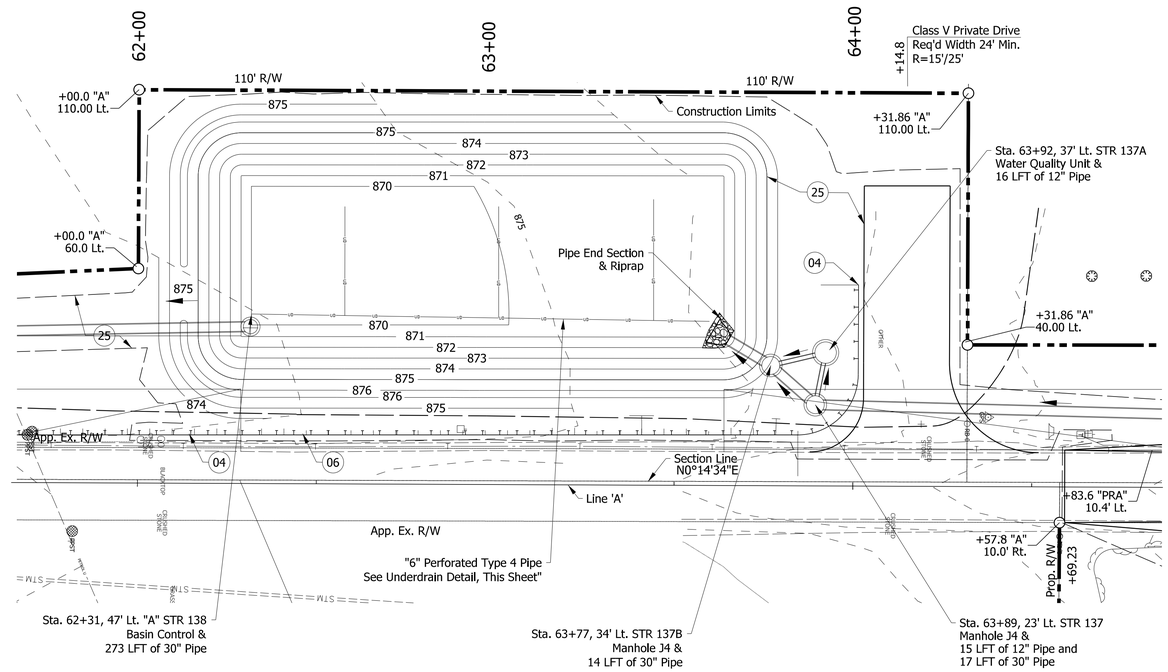


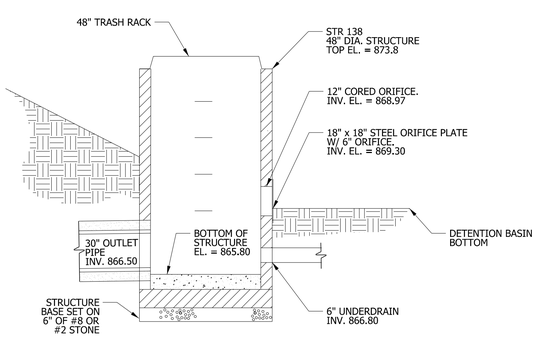

1. DETENTION BASIN OUTLET CONTROL MANHOLE SHALL BE FURNISHED WITH A DOME TOP-MOUNT TRASH RACK SUCH AS:

   TRASHRACKS.COM MODEL LDR-48
   CONTECH RS-48
   PHOENIX PRE-CAST PRODUCTS TOP GRATE DOMED
   OR APPROVED EQUAL

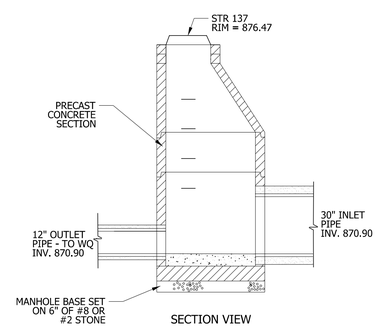
2. TRASH RACK TO BE BOLTED TO TOP FLANGE OF MANHOLE RIM AND TO BE REMOVEABLE FOR MAINTENANCE ACCESS.

## LEGEND:

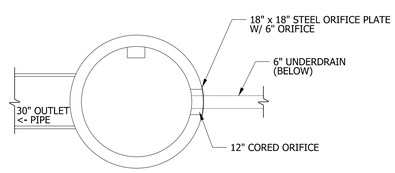
- (04) Guardrail, MGS, W-Beam, Cable Terminal Anchor
- (06) Guardrail, W-Beam, MGS 6'-3" Spacing
- (25) Seed Mixture, U




SECTION VIEW

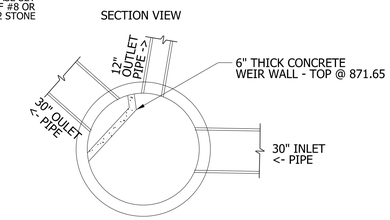



SECTION VIEW




RELEASE STRUCTURE #138 DETAIL

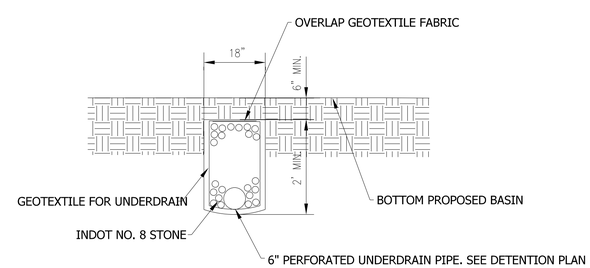
N.T.S.




PLAN VIEW

DIVERSION STRUCTURE #137 DETAIL

N.T.S.




DETENTION BASIN UNDERDRAIN DETAIL

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DLZ

NOT FOR CONSTRUCTION

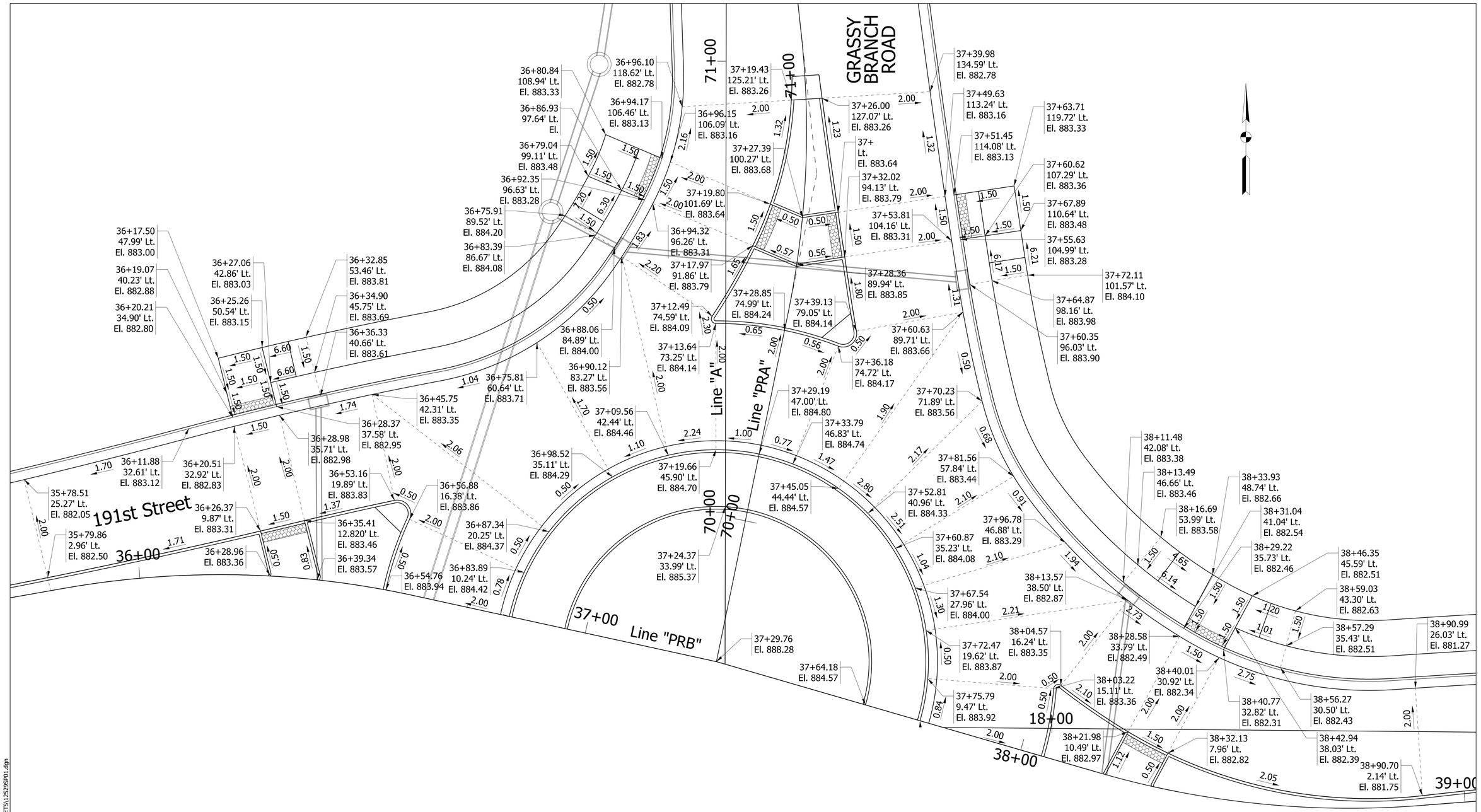
DLZ INDIANA, LLC

| | | | |
|---|---|---|---|
| RECOMMENDED FOR APPROVAL | DESIGN ENGINEER | DATE | |
| DESIGNED: BM 1/2020 | DRAWN: DH 1/2020 | | |
| CHECKED: MM 1/2020 | CHECKED: MM 1/2020 | | |

INDIANA
DEPARTMENT OF TRANSPORTATION

BASIN DETAILS

| SCALE | ROAD FILE |
|---|---|
| 1" = 20' | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 22 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




NOTES:

1. All Stations and Offsets are from Line "PR-B".

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DLZ

NOT FOR CONSTRUCTION

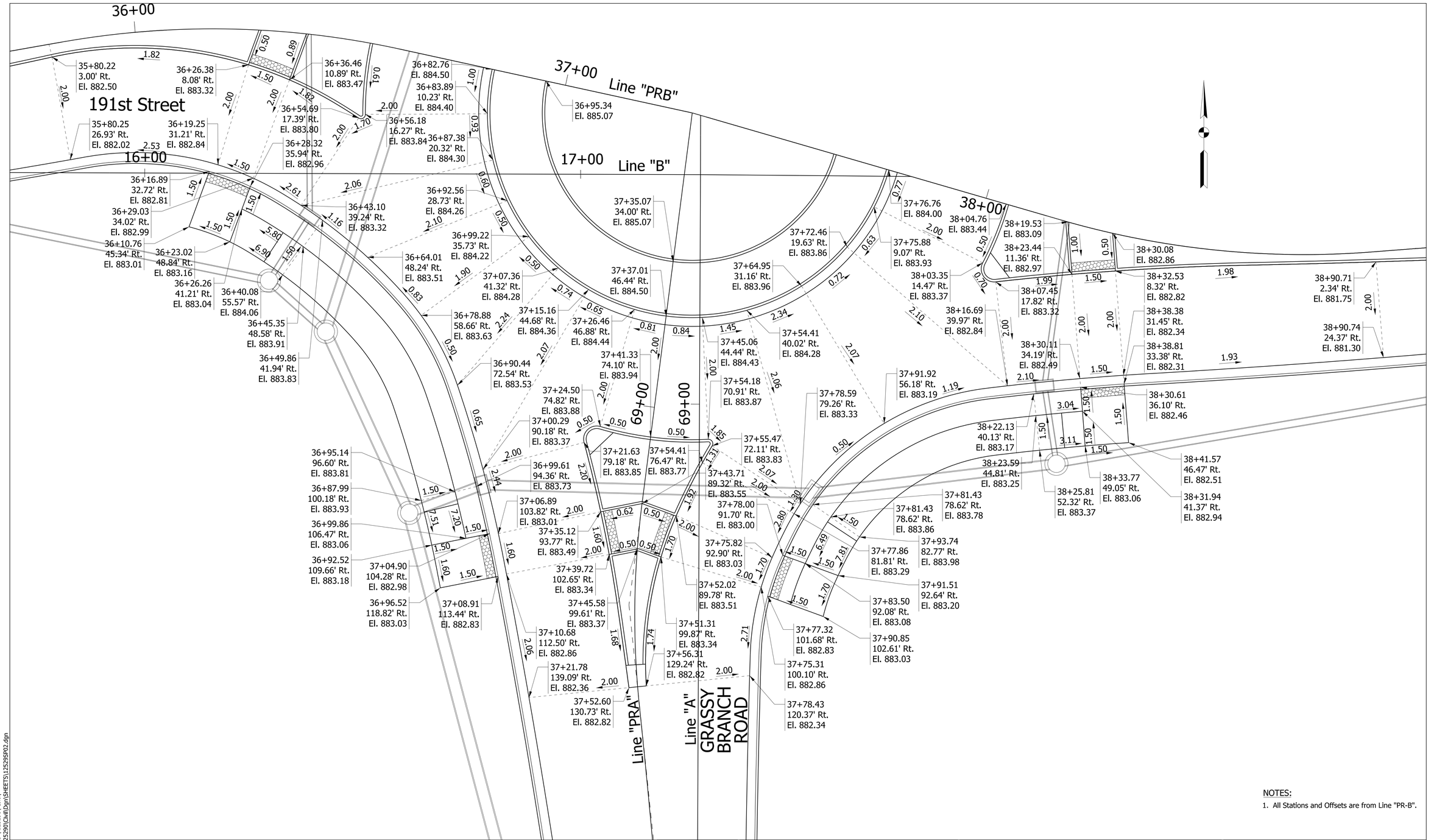
DLZ INDIANA, LLC

| | | | |
|---|---|---|---|
| RECOMMENDED FOR APPROVAL | DESIGN ENGINEER | | DATE |
| DESIGNED: PH 1/2020 | DRAWN: DPH 1/2020 | | |
| CHECKED: RAC 1/2020 | CHECKED: PH 1/2020 | | |

INDIANA
DEPARTMENT OF TRANSPORTATION

SPOT DETAILS

| SCALE | ROAD FILE |
|---|---|
| 1"=10' | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 23 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




NOTES:

1. All Stations and Offsets are from Line "PR-B".

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X:\Projects\GFL\2017\1763\125290\Civil\Dgn\SHEETS\125295P02.dgn

DLZ

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

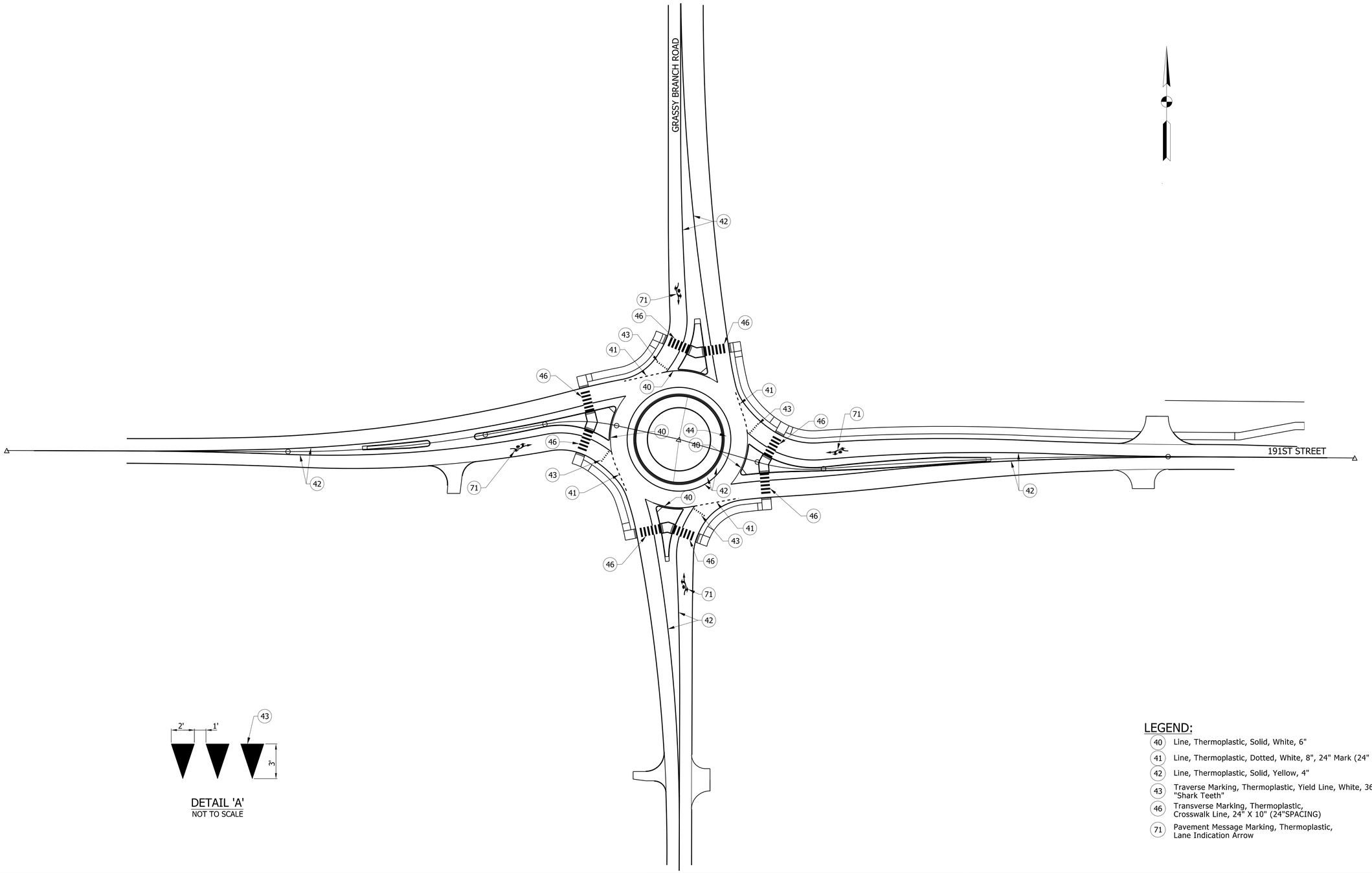
DESIGNED: PH 1/2020 DRAWN: DPH 1/2020

CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

SPOT DETAILS

| SCALE | ROAD FILE |
|---|---|
| 1"=10' | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 24 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |







DETAIL 'A'
NOT TO SCALE

## LEGEND:

- (40) Line, Thermoplastic, Solid, White, 6"
- (41) Line, Thermoplastic, Dotted, White, 8", 24" Mark (24" Spacing)
- (42) Line, Thermoplastic, Solid, Yellow, 4"
- (43) Traverse Marking, Thermoplastic, Yield Line, White, 36" "Shark Teeth"
- (46) Transverse Marking, Thermoplastic, Crosswalk Line, 24" X 10" (24"SPACING)
- (71) Pavement Message Marking, Thermoplastic, Lane Indication Arrow

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DLZ

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

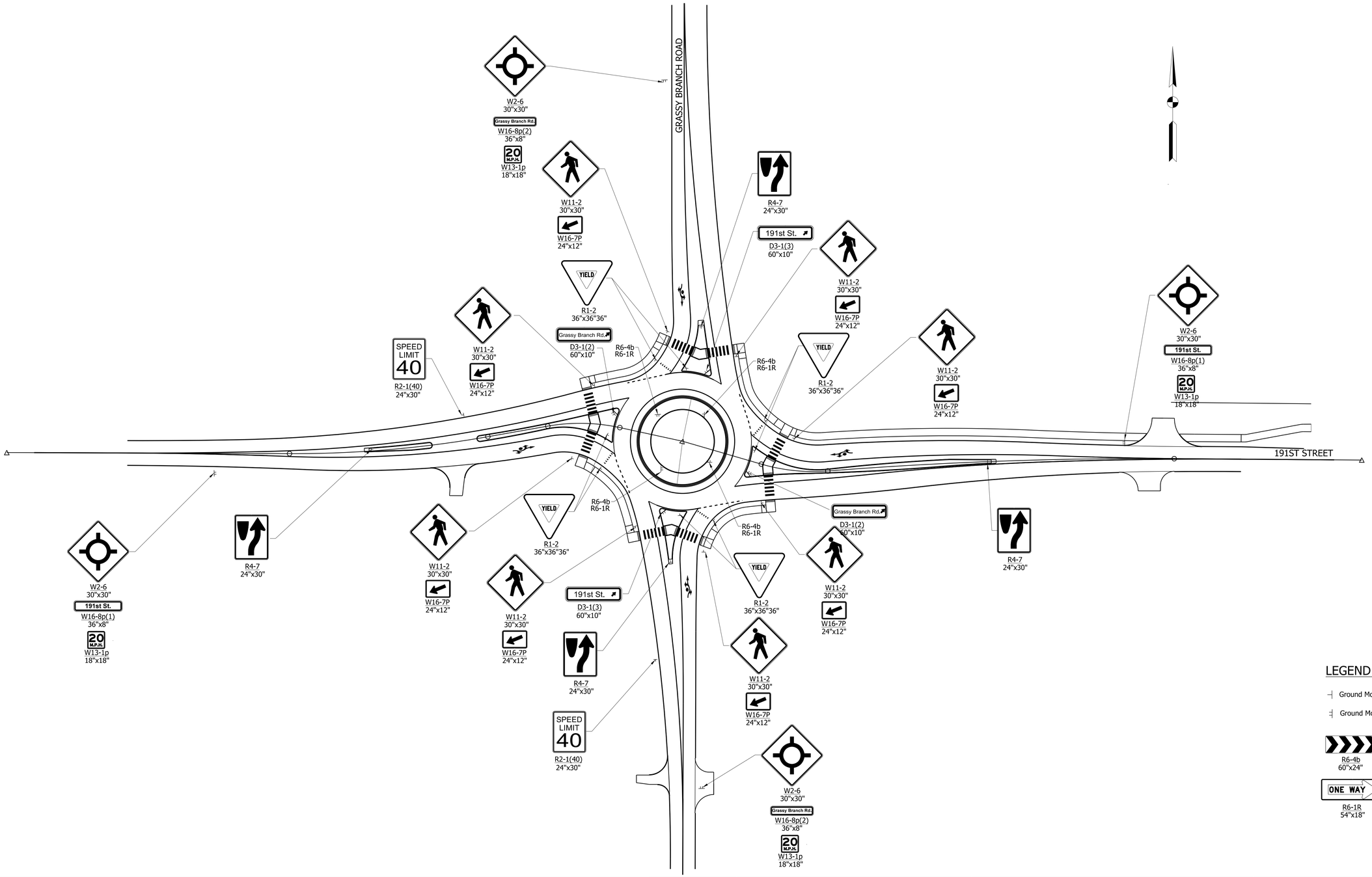
| | | | |
|---|---|---|---|
| DESIGNED: | PH 1/2020 | DRAWN: | DPH 1/2020 |
| CHECKED: | RAC 1/2020 | CHECKED: | PH 1/2020 |

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN

| SCALE | ROAD FILE |
|---|---|
| 1" = 50' | N/A |
| | DESIGNATION |
| | 1700731 |

| SURVEY BOOK | SHEETS | | |
|---|---|---|---|
| ELECTRONIC | 25 | of | 68 |
| CONTRACT | PROJECT | | |
| R-40286 | 1700731 | | |




## LEGEND:

- Ground Mounted Sheet Sign
- Ground Mounted Sheet Sign, 2 post

R6-4b
60"x24"

ONE WAY
R6-1R
54"x18"

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NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: JWH 1/2020 DRAWN: DPH 1/2020

CHECKED: RAC 1/2020 CHECKED: JWH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

SIGNING PLAN

| SCALE | ROAD FILE |
|---|---|
| 1" = 50' | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 26 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

SIGN DETAIL
1:10

| | |
|---|---|
| SIGN NUMBER | D3-1(1) |
| WIDTH x HGHT. | 4'-0" x 0'-10" |
| BORDER WIDTH | 0.75" |
| CORNER RADIUS | 0" |
| MOUNTING | Ground |
| BACKGROUND | TYPE: Reflective |
| | COLOR: Yellow |
| LEGEND/BORDER | TYPE: Reflective |
| | COLOR: Black/Black |

| SYMBOL | ROT | X | Y | WID | HT |
|---|---|---|---|---|---|
| AR_Type D | 315 | 37.9 | 2 | 5.1 | 7.7 |

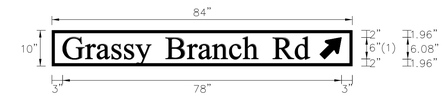
Panel Style: Carmel Street Signs.ssi
Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)

| 1 | 9 | 1 | s | t | S | t | | | | | | | | | | | | | | | LENGTH | SERIES/SIZE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 7.8 | 13.1 | 17 | 20.2 | 26.6 | 31.2 | | | | | | | | | | | | | | | 29.6 | Times New Roman 6/4 |

SIGN DETAIL
1:20




| | |
|---|---|
| SIGN NUMBER | D3-1(2) |
| WIDTH x HGHT. | 7'-0" x 0'-10" |
| BORDER WIDTH | 0.75" |
| CORNER RADIUS | 0" |
| MOUNTING | Ground |
| BACKGROUND | TYPE: Reflective |
| | COLOR: Yellow |
| LEGEND/BORDER | TYPE: Reflective |
| | COLOR: Black/Black |

| SYMBOL | ROT | X | Y | WID | HT |
|---|---|---|---|---|---|
| AR_Type D | 315 | 74.9 | 2 | 5.1 | 7.7 |

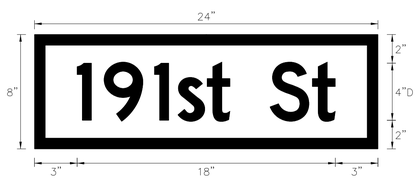
Panel Style: Carmel Street Signs.ssi
Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)

| G | r | a | s | s | y | B | r | a | n | c | h | R | d | | | | | | | | LENGTH | SERIES/SIZE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 9.3 | 12.6 | 16.7 | 20.2 | 23.4 | 31.8 | 37.7 | 41 | 44.8 | 49.6 | 53.3 | 61.8 | 67.9 | | | | | | | | 69.2 | Times New Roman 6/4 |

SIGN DETAIL
1:5




| | |
|---|---|
| SIGN NUMBER | W16-8p(1) |
| WIDTH x HGHT. | 2'-0" x 0'-8" |
| BORDER WIDTH | 0.75" |
| CORNER RADIUS | 0" |
| MOUNTING | Overhead |
| BACKGROUND | TYPE: Reflective |
| | COLOR: Yellow |
| LEGEND/BORDER | TYPE: Reflective |
| | COLOR: Black/Black |

| SYMBOL | ROT | X | Y | WID | HT |
|---|---|---|---|---|---|

Panel Style: Carmel Street Signs.ssi
Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)

| 1 | 9 | 1 | s | t | S | t | | | | | | | | | | | | | | | LENGTH | SERIES/SIZE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 4.9 | 8.4 | 10 | 12.1 | 16.5 | 19.4 | | | | | | | | | | | | | | | 18 | D 2000 4/3 |

SIGN DETAIL
1:10

| | |
|---|---|
| SIGN NUMBER | W16-8p(2) |
| WIDTH x HGHT. | 4'-0" x 0'-8" |
| BORDER WIDTH | 0.75" |
| CORNER RADIUS | 0" |
| MOUNTING | Overhead |
| BACKGROUND | TYPE: Reflective |
| | COLOR: Yellow |
| LEGEND/BORDER | TYPE: Reflective |
| | COLOR: Black/Black |

| SYMBOL | ROT | X | Y | WID | HT |
|---|---|---|---|---|---|

Panel Style: Carmel Street Signs.ssi
Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)

| G | r | a | s | s | y | B | r | a | n | c | h | R | d | | | | | | | | LENGTH | SERIES/SIZE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.5 | 6 | 7.8 | 10.6 | 12.8 | 14.9 | 20.7 | 24 | 25.8 | 28.9 | 31.8 | 34.7 | 39.9 | 43.1 | | | | | | | | 43 | D 2000 4/3 |

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X:\Projects\GFL\2017\1763\125290\Civil\Dgn\SHEETS\125290N02.dgn

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

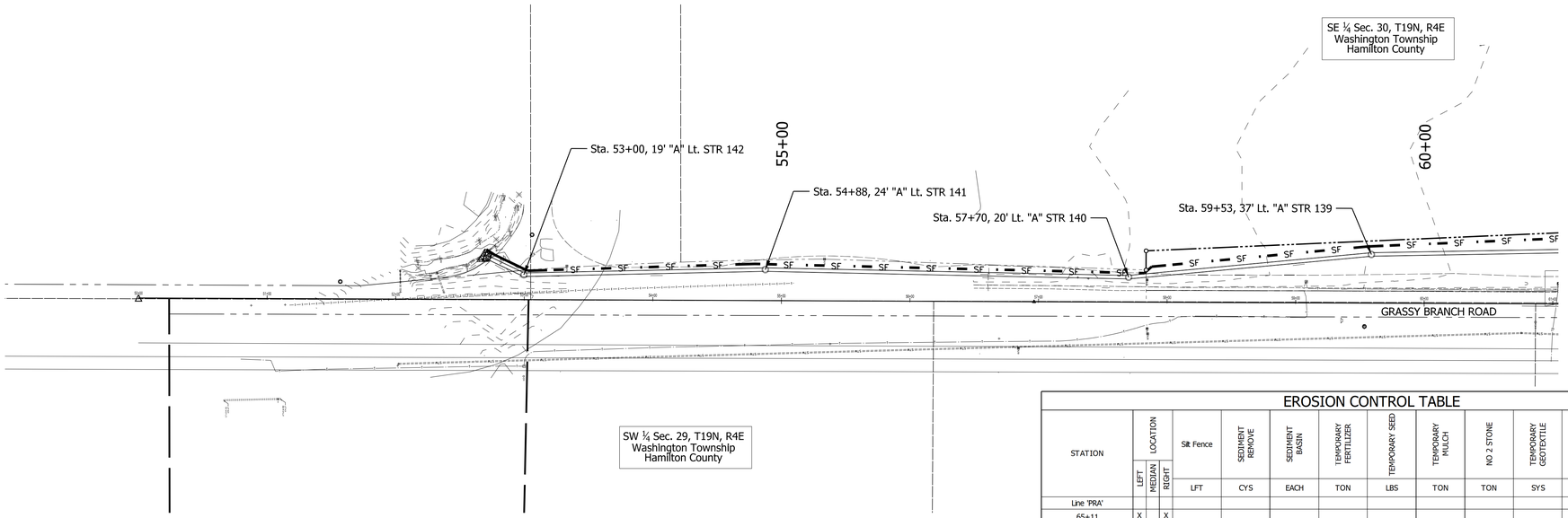
DESIGNED: PH 1/2020 DRAWN: DPH 1/2020

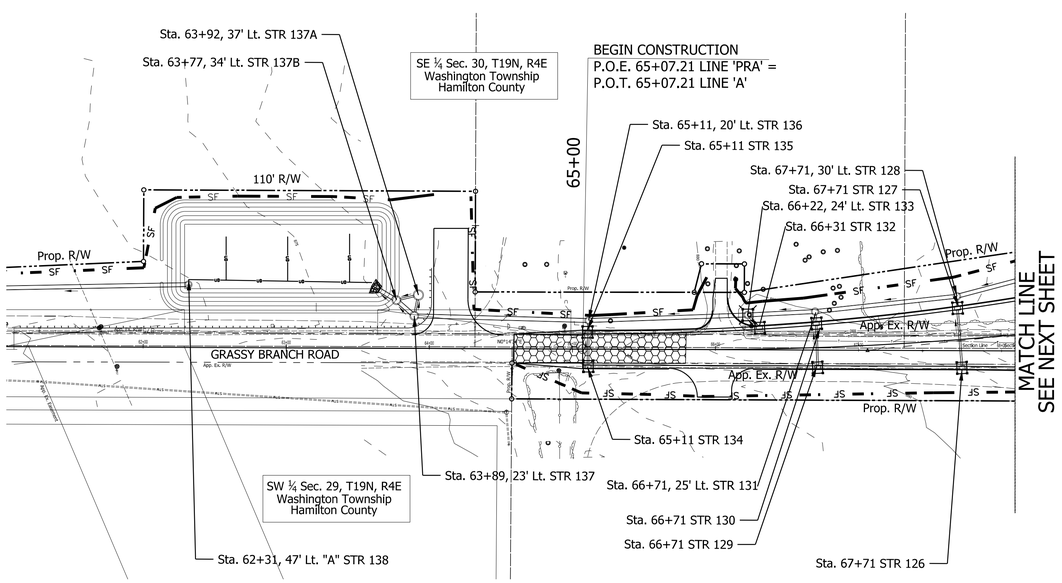
CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

SIGN DETAILS

| SCALE | ROAD FILE |
|---|---|
| NONE | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 27 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




## EROSION CONTROL TABLE

| STATION | | LOCATION LEFT | LOCATION MEDIAN | LOCATION RIGHT | Silt Fence | SEDIMENT REMOVE | SEDIMENT BASIN | TEMPORARY FERTILIZER | TEMPORARY SEED | TEMPORARY MULCH | NO 2 STONE | TEMPORARY GEOTEXTILE | CURB INLET PROTECTION | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | LFT | CYS | EACH | TON | LBS | TON | TON | SYS | EACH | |
| Line 'PRA' | | | | | | | | | | | | | | |
| 65+11 | | X | | X | | | | | | | | | 2 | |
| 66+71 | | X | | X | | | | | | | | | 2 | |
| 67+71 | | X | | X | | | | | | | | | 2 | |
| 68+76 | | X | | | | | | | | | | | 1 | |
| 68+77 | | | | X | | | | | | | | | 1 | |
| 70+61 | | | | X | | | | | | | | | 1 | |
| 70+62 | | X | | | | | | | | | | | 1 | |
| 71+07 | | X | | | | | | | | | | | 1 | Beehive |
| 71+56 | | X | | X | | | | | | | | | 2 | |
| 71+66 | | X | | X | | | | | | | | | 2 | |
| 72+15 | | X | | X | | | | | | | | | 2 | |
| 73+20 | | X | | X | | | | | | | | | 2 | |
| | | | | | | | | | | | | | | |
| 52+80 | 66+00 | X | | | 1452 | | | | | | | | | |
| 64+83 | 68+80 | | | X | 383 | | | | | | | | | |
| 66+09 | 69+07 | X | | | 336 | | | | | | | | | |
| 70+20 | 74+68 | | | X | 470 | | | | | | | | | |
| 70+53 | 74+68 | X | | | 387 | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Construction Entrance | | | X | | | | | | | | 200 | 235 | | |
| | | | | | | | | | | | | | | |
| Line 'PRB' | | | | | | | | | | | | | | |
| 31+35 | | X | | X | | | | | | | | | 2 | |
| 31+85 | | X | | | | | | | | | | | 1 | |
| 33+05 | | X | | X | | | | | | | | | 2 | |
| 34+09 | | X | | X | | | | | | | | | 2 | |
| 35+04 | | X | | | | | | | | | | | 1 | |
| 35+06 | | | | X | | | | | | | | | 1 | |
| 35+54 | | X | | X | | | | | | | | | 2 | |
| 36+34 | | X | | X | | | | | | | | | 2 | |
| 38+21 | | X | | | | | | | | | | | 1 | |
| 38+25 | | | | X | | | | | | | | | 1 | |
| 39+15 | | X | | X | | | | | | | | | 2 | |
| 40+05 | | X | | X | | | | | | | | | 2 | |
| 40+91 | | X | | X | | | | | | | | | 2 | |
| 41+36 | | X | | X | | | | | | | | | 2 | |
| 41+88 | | X | | X | | | | | | | | | 2 | |
| 42+02 | | X | | | | | | | | | | | 1 | Beehive |
| 43+31 | | X | | X | | | | | | | | | 2 | |
| 43+66 | | X | | | | | | | | | | | 1 | Beehive |
| | | | | | | | | | | | | | | |
| 31+05 | 36+60 | X | | | 570 | | | | | | | | | |
| 31+05 | 34+69 | | | X | 371 | | | | | | | | | |
| 34+83 | 36+08 | | | X | 132 | | | | | | | | | |
| 38+09 | 43+58 | | | X | 565 | | | | | | | | | |
| 38+36 | 43+58 | X | | | 505 | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Construction Entrance | | | X | | | | | | | | 200 | 235 | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| TOTAL COLUMN | | | | | 5171 | 72 | | 2 | 750 | 10.0 | 400.00 | 470.00 | 48 | |

## LEGEND:

- —SF— Temporary Silt Fence (See INDOT Standard Drawing No. E 205-TECD-11)
- Temporary Ditch Inlet Protection, Geotextile Box (See INDOT Standard Drawing No. E 205-TECD-04)
- Temporary Inlet Protection, Filter Sock (See INDOT Standard Drawing No. 205-TECD-02)
- Temporary Gravel Construction Entrance (See INDOT Standard Drawing No. E205-TECD-12
- Permanent Riprap

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DLZ

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: PH 1/2020 DRAWN: DPH 1/2020

CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=50' | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 28 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

1. CONTRACTOR SHALL KEEP AN UP-TO-DATE RECORD ONSITE OF ANY ALTERATIONS TO THE SOTRMWATER POLLUTION PREVENTIONS PLAN.

2. CONTRACTOR SHALL NOTIFY THE HAMILTON COUNTY SOIL AND WATER CONSERVATION DISTRICT AT LEAST 48 HOURS TO THE BEGINNING OF CONSTRUCTION.

3. THE CONTRACTOR HAS FULL RESPONSIBILITY OF INSPECTING THE EROSIONS CONTROL MEASURES DAILY BASIS, AT A MINIMUM. PRACTICES NEED TO BE INSPECTED WEEKLY, WITH IN 24 HOURS AFTER EACH STORM EVENT OVER ½ INCH AND DAILY DURING PROLONGED STORM EVENTS. FAILING PRACTICES SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

4. ANY SEDIMENT TRACKED OUT OF PROJECT AREA ONTO PUBLIC STREETS MUST BE CLEANED UP THE SAME DAY IT OCCURS.

5. CONTRACTOR SHALL SUBMIT CONSTRUCTION STAGING PLAN DETAILING ALL VEHICLE AND EQUIPMENT PARKING AREAS, FUELING LOCATIONS, CONSTRUCTION TRAILER PLACEMENT, AND DESIGNATED CONCRETE TRUCK WASHOUT AREAS.

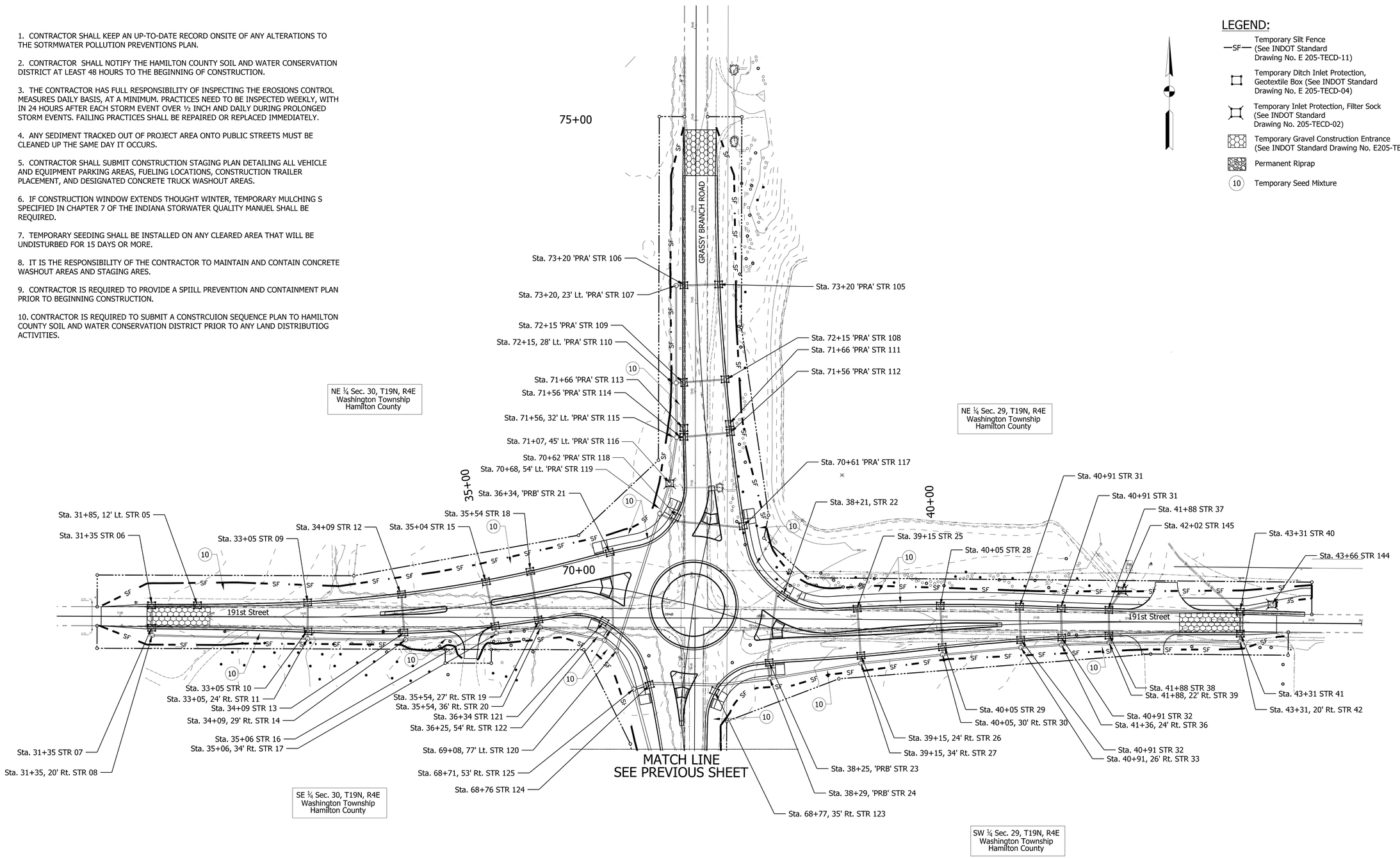
6. IF CONSTRUCTION WINDOW EXTENDS THOUGHT WINTER, TEMPORARY MULCHING S SPECIFIED IN CHAPTER 7 OF THE INDIANA STORWATER QUALITY MANUEL SHALL BE REQUIRED.

7. TEMPORARY SEEDING SHALL BE INSTALLED ON ANY CLEARED AREA THAT WILL BE UNDISTURBED FOR 15 DAYS OR MORE.

8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN AND CONTAIN CONCRETE WASHOUT AREAS AND STAGING ARES.

9. CONTRACTOR IS REQUIRED TO PROVIDE A SPIILL PREVENTION AND CONTAINMENT PLAN PRIOR TO BEGINNING CONSTRUCTION.

10. CONTRACTOR IS REQUIRED TO SUBMIT A CONSTRCUION SEQUENCE PLAN TO HAMILTON COUNTY SOIL AND WATER CONSERVATION DISTRICT PRIOR TO ANY LAND DISTRIBUTIOG ACTIVITIES.




## LEGEND:

- —SF— Temporary Silt Fence (See INDOT Standard Drawing No. E 205-TECD-11)
- Temporary Ditch Inlet Protection, Geotextile Box (See INDOT Standard Drawing No. E 205-TECD-04)
- Temporary Inlet Protection, Filter Sock (See INDOT Standard Drawing No. 205-TECD-02)
- Temporary Gravel Construction Entrance (See INDOT Standard Drawing No. E205-TECD-12
- Permanent Riprap
- (10) Temporary Seed Mixture

DLZ

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

| | | | |
|---|---|---|---|
| DESIGNED: | PH 1/2020 | DRAWN: | DPH 1/2020 |
| CHECKED: | RAC 1/2020 | CHECKED: | PH 1/2020 |

INDIANA
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=50' | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 29 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

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# SHEET SIGN AND POST SUMMARY TABLE

| SIGN | | | | | | | | | | POST | | | | | | | | | | | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | HIGH INTENSITY PRISMATIC SHEETING METAL THICKNESS | | | ENCLOSED LENS METAL THICKNESS | | | U CHANNEL | | | | SQUARE | | | | | | | | | | |
| | | | | | | | | | | | | | | 2" x 2" x 14 GAUGE | | | | | | 2 1/4" x 2 1/4" x 12 GAUGE | | | | |
| | | | | | | | | | | POST LENGTH | | POST TYPE | | REINFORCED | | | UNREINFORCED | | | REINFORCED | | UNREINFORCED | | |
| | | | | | | | | | | | | | | POST LENGTH (ft) | | | POST LENGTH (ft) | | | POST LENGTH (ft) | | POST LENGTH (ft) | | |
| PLAN SHEET NO./ LINE | SIGN STATION LOCATION | SIGN CODE | SIGN SIZE | 0.080 | 0.100 | 0.125 | 0.080 | 0.100 | 0.125 | 1 | 2 | TYPE A | TYPE B | | | | | | | | | | | |
| | | | in x in | ft² | ft² | ft² | ft² | ft² | ft² | ft | ft | ft | ft | 1 | 2 | TOTAL | 1 | 2 | TOTAL | 1 | TOTAL | 1 | TOTAL | |
| LINE 'PRA' | | | | | | | | | | | | | | | | | | | | | | | | |
| | 67+00, RT. | W2-6 | 30 X 30 | 6.25 | | | | | | | | | | 13.75 | 13.75 | 27.50 | | | 0.00 | | | | | |
| | | W16-8p(2) | 36 X 8 | | 2.00 | | | | | | | | | | | | | | | | | | | STREET IDENTIFICATION SIGN FOR "191ST STREET", SEE SHEET NO. 27 |
| | | W13-1p | 18 X 18 | 2.25 | | | | | | | | | | | | | | | | | | | | |
| | 67+30, LT. | R2-1(40) | 24 X 30 | 5.00 | | | | | | | | | | | | | | | | 10.5 | 10.5 | | | |
| | 68+40, CL. | R4-7 | 24 X 30 | 5.00 | | | | | | | | | | | | | | | | 10.0 | 10.0 | | | |
| | 68+55, RT. | W11-2 | 30 X 30 | 6.25 | | | | | | | | | | | | | | | | 11.5 | 11.5 | | | |
| | | W16-7P | 24 X 12 | 2.00 | | | | | | | | | | | | | | | | | | | | |
| | 68+77, LT. | W11-2 | 30 X 30 | 6.25 | | | | | | | | | | | | | | | | 11.5 | 11.5 | | | |
| | | W16-7P | 24 X 12 | 2.00 | | | | | | | | | | | | | | | | | | | | |
| | 68+85, RT. | R1-2 | 36X36X36 | | 9.00 | | | | | | | | | | | | | | | 10.0 | 10.0 | | | |
| | 68+90, CL. | R1-2 | 36X36X36 | | 9.00 | | | | | | | | | | | | | | | 10.0 | 10.0 | | | |
| | 68+92, CL. | D3-1(3) | 60 X 10 | 4.17 | | | | | | | | | | | | | | | | | | | | STREET IDENTIFICATION SIGN FOR "GRASSY BRANCH ROAD", SEE SHEET NO. 27 |
| | 70+45, CL. | D3-1(1) | 66 X 10 | 4.5800 | | | | | | | | | | | | | | | | | | | | STREET IDENTIFICATION SIGN FOR "GRASSY BRANCH ROAD", SEE SHEET NO. 27 |
| | 70+45, CL | R1-2 | 36X36X36 | | 9.00 | | | | | | | | | | | | | | | 10.0 | 10.0 | | | |
| | 70+50, LT | R1-2 | 36X36X36 | | 9.00 | | | | | | | | | | | | | | | 10.0 | 10.0 | | | |
| | 70+65, RT. | W11-2 | 30 X 30 | 6.25 | | | | | | | | | | | | | | | | 11.5 | 11.5 | | | |
| | | W16-7P | 24 X 12 | 2.00 | | | | | | | | | | | | | | | | | | | | |
| | 70+78, LT. | W11-2 | 30 X 30 | 6.25 | | | | | | | | | | | | | | | | 11.5 | 11.5 | | | |
| | | W16-7P | 24 X 12 | 2.00 | | | | | | | | | | | | | | | | | | | | |
| | 71+00, CL. | R4-7 | 24 X 30 | 5.00 | | | | | | | | | | | | | | | | 10.0 | 10.0 | | | |
| | 72+50. LT. | W2-6 | 30 X 30 | 6.25 | | | | | | | | | | 13.75 | 13.75 | 27.50 | | | | | | | | |
| | | W16-8p(2) | 36 X 8 | | 2.00 | | | | | | | | | | | | | | | | | | | STREET IDENTIFICATION SIGN FOR "191ST STREET", SEE SHEET NO. 27 |
| | | W13-1p | 18 X 18 | 2.25 | | | | | | | | | | | | | | | | | | | | |
| TOTAL THIS SHEET | | | | 60.25 | 38.00 | | | | | | | | | 13.75 | 13.75 | 27.50 | | | | 106.0 | 106.0 | | | |

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: PH 1/2020 DRAWN: DPH 1/2020

CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

SIGN DETAILS

| SCALE | ROAD FILE |
|---|---|
| NONE | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 30 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

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# SHEET SIGN AND POST SUMMARY TABLE

| SIGN | | | | | | | | | | POST | | | | | | | | | | | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | HIGH INTENSITY PRISMATIC SHEETING METAL THICKNESS | | | ENCLOSED LENS METAL THICKNESS | | | U CHANNEL | | | | SQUARE | | | | | | | | | | |
| | | | | | | | | | | | | | | 2" x 2" x 14 GAUGE | | | | | | 2 1/4" x 2 1/4" x 12 GAUGE | | | | |
| | | | | | | | | | | POST LENGTH | | POST TYPE | | REINFORCED | | | UNREINFORCED | | | REINFORCED | | UNREINFORCED | | |
| PLAN SHEET NO./ LINE | SIGN STATION LOCATION | SIGN CODE | SIGN SIZE | 0.080 | 0.100 | 0.125 | 0.080 | 0.100 | 0.125 | 1 | 2 | TYPE A | TYPE B | POST LENGTH (ft) | | | POST LENGTH (ft) | | | POST LENGTH (ft) | | POST LENGTH (ft) | | |
| | | | in x in | ft² | ft² | ft² | ft² | ft² | ft² | ft | ft | ft | ft | 1 | 2 | TOTAL | 1 | 2 | TOTAL | 1 | TOTAL | 1 | TOTAL | |
| LINE "PRB" | | | | | | | | | | | | | | | | | | | | | | | | |
| | 32+00, RT. | W2-6 | 30 X 30 | 6.25 | | | | | | | | | | 13.75 | 13.75 | 27.50 | | | 0.00 | | | | | |
| | | W16-8p(3) | 36 X 8 | | 2.00 | | | | | | | | | | | | | | | | | | | STREET IDENTIFICATION SIGN FOR "GRASSY BRANCH ROAD", SEE SHEET NO. 27 |
| | | W13-1p | 18 X 18 | 2.25 | | | | | | | | | | | | | | | | | | | | |
| | 33+86, CL. | R4-7 | 24 X 30 | 5.00 | | | | | | | | | | | | | | | | 10.0 | 10.0 | | | |
| | 35+00, LT. | R2-1(40) | 24 X 30 | 5.00 | | | | | | | | | | | | | | | | 10.5 | 10.5 | | | |
| | 36+15, RT. | W11-2 | 30 X 30 | 6.25 | | | | | | | | | | | | | | | | 11.5 | 11.5 | | | |
| | | W16-7P | 24 X 12 | 2.00 | | | | | | | | | | | | | | | | | | | | |
| | 36+35, LT. | W11-2 | 30 X 30 | 6.25 | | | | | | | | | | | | | | | | 11.5 | 11.5 | | | |
| | | W16-7P | 24 X 12 | 2.00 | | | | | | | | | | | | | | | | | | | | |
| | 36+45. RT. | R1-2 | 36X36X36 | | 9.00 | | | | | | | | | | | | | | | 10.0 | 10.0 | | | |
| | 36+50, CL. | R1-2 | 36X36X36 | | 9.00 | | | | | | | | | | | | | | | 10.0 | 10.0 | | | |
| | 36+53, CL. | D3-1(2) | 60 X 10 | 4.17 | | | | | | | | | | | | | | | | | | | | STREET IDENTIFICATION SIGN FOR "191ST STREET", SEE SHEET NO. 27 |
| | 37+00. CL. | R6-4b | 60 X 24 | 10 | | | | | | | | | | | | | | | | 10.0 | 10.0 | | | |
| | | R6-1R | 54 X 18 | 6.75 | | | | | | | | | | | | | | | | | | | | |
| | 37+05, CL. | R6-4b | 60 X 24 | 10 | | | | | | | | | | | | | | | | 10.0 | 10.0 | | | |
| | | R6-1R | 54 X 18 | 6.75 | | | | | | | | | | | | | | | | | | | | |
| | 37+50, CL. | R6-4b | 60 X 24 | 10 | | | | | | | | | | | | | | | | 10.0 | 10.0 | | | |
| | | R6-1R | 54 X 18 | 6.75 | | | | | | | | | | | | | | | | | | | | |
| | 37+55, CL. | R6-4b | 60 X 24 | 10 | | | | | | | | | | | | | | | | 10.0 | 10.0 | | | |
| | | R6-1R | 54 X 18 | 6.75 | | | | | | | | | | | | | | | | | | | | |
| | 38+06, CL. | R1-2 | 36X36X36 | | 9.00 | | | | | | | | | | | | | | | 10.0 | 10.0 | | | |
| | 38+08, CL. | D3-1(2) | 60 X 10 | 4.17 | | | | | | | | | | | | | | | | | | | | STREET IDENTIFICATION SIGN FOR "191ST STREET", SEE SHEET NO. 27 |
| | 38+10, LT. | R1-2 | 36X36X36 | | 9.00 | | | | | | | | | | | | | | | 10.0 | 10.0 | | | |
| | 38+30, RT. | W11-2 | 30 X 30 | 6.25 | | | | | | | | | | | | | | | | 11.5 | 11.5 | | | |
| | | W16-7P | 24 X 12 | 2.00 | | | | | | | | | | | | | | | | | | | | |
| | 38+40, LT. | W11-2 | 30 X 30 | 6.25 | | | | | | | | | | | | | | | | 11.5 | 11.5 | | | |
| | | W16-7P | 24 X 12 | 2.00 | | | | | | | | | | | | | | | | | | | | |
| | 40+65, CL. | R4-7 | 24 X 30 | 5.00 | | | | | | | | | | | | | | | | 10.0 | 10.0 | | | |
| | 42+00, LT. | W2-6 | 30 X 30 | 6.25 | | | | | | | | | | 13.75 | 13.75 | 27.50 | | | | | | | | |
| | | W16-8P(1) | 36 X 8 | | 2.00 | | | | | | | | | | | | | | | | | | | STREET IDENTIFICATION SIGN FOR "GRASSY BRANCH ROAD", SEE SHEET NO. 27 |
| | | W13-1p | 18 X 18 | 2.25 | | | | | | | | | | | | | | | | | | | | |
| TOTAL THIS SHEET | | | | 140.34 | 40.00 | | | | | | | | | 27.50 | 27.50 | 55.00 | | | | 156.5 | 156.5 | | | |

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: PH 1/2020 DRAWN: DPH 1/2020

CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

SIGN DETAILS

| SCALE | ROAD FILE |
|---|---|
| NONE | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 31 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

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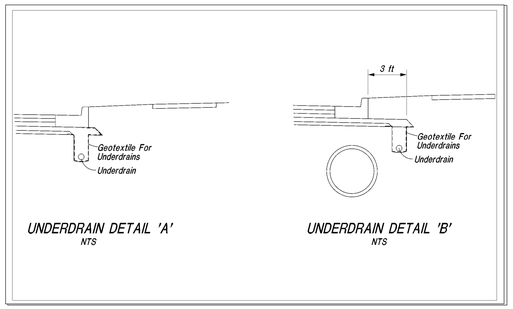
# UNDERDRAIN TABLE

| UNDERDRAIN PIPE | | | | | | | | | | | | | OUTLET PIPE | | | | | | | | | | OUTLET PROTECTORS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Underdrain Pipe Limits | | | TYPE 4 PIPE | | | | | | | | | | | | | | | | | | | | | | | Location | | | | |
| LT | RT | STATION | 4 inches (ft) | 6 inches (ft) | Outlet Station | Geotextile for Underdrains (SYS) | Aggregate for Underdrains (CYS) | HMA for Underdrains (Tons) | Special Grade % | Flow Line Elevation @ Outlet Station | Outlet Pipe Required (Y/N) | Connect Underdrain Pipe to Structure No. ___ | Structure Invert Elevation | 45 Degree Elbows Required (1 or 2) | 6 inch Outlet Pipe (ft) | Outlet Station | Outlet Elevation | Outlet Protector No. ___ Ditch Flow Line Elevation at Outlet Protector | Connect Outlet Pipe to Structure No. ___ | Underdrain Outlet Elevation | Structure Backfill (CYS) | HMA for Underdrains (Tons) | Outlet Protector Type 1 (EACH) | Outlet Protector Type 2 (EACH) | Outlet Protector Type 3 (EACH) | Outside Left | Outside Right | Underdrain Detail (A or B) | Video Inspection for Underdrains (ft) | Remarks |
| | | LINE 'PRA' | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 65+11 | | 120 | 65+11 | 143 | 14 | | | 876.33 | N | 135 | 873.25 | | | | | | | | | | | | | | | A | 120 | |
| X | | 66+31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 65+11 | | 160 | 65+11 | 190 | 18 | | | 876.31 | N | 134 | 873.93 | | | | | | | | | | | | | | | A | 160 | |
| | X | 66+71 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 66+31 | | 40 | 66+31 | 48 | 5 | | | 878.01 | N | 132 | 876.95 | | | | | | | | | | | | | | | A | 40 | |
| X | | 66+71 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 66+71 | | 100 | 66+71 | 119 | 11 | | | 878.22 | N | 130 | 874.65 | | | | | | | | | | | | | | | A | 100 | |
| X | | 67+71 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 66+71 | | 100 | 66+71 | 119 | 11 | | | 878.28 | N | 129 | 874.79 | | | | | | | | | | | | | | | A | 100 | |
| | X | 67+71 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 67+71 | | 105 | 67+71 | 125 | 12 | | | 878.74 | N | 127 | 874.14 | | | | | | | | | | | | | | | A | 105 | |
| X | | 68+76 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 67+71 | | 106 | 67+71 | 126 | 12 | | | 878.78 | N | 126 | 874.34 | | | | | | | | | | | | | | | A | 106 | |
| | X | 68+77 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 68+76 | | 64 | 68+76 | 76 | 7 | | | 880.30 | N | 124 | 871.94 | | | | | | | | | | | | | | | A | 64 | |
| X | | 69+40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 68+77 | | 42 | 68+77 | 50 | 5 | | | 880.41 | N | 123 | 872.08 | | | | | | | | | | | | | | | A | 42 | |
| | X | 69+19 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 70+62 | | 94 | 71+56 | 112 | 11 | | | 879.70 | N | 114 | 878.62 | | | | | | | | | | | | | | | A | 94 | |
| X | | 71+56 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 70+61 | | 95 | 71+56 | 113 | 11 | | | 879.64 | N | 112 | 878.77 | | | | | | | | | | | | | | | A | 95 | |
| | X | 71+56 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 71+56 | | 10 | 71+56 | 12 | 1 | | | 879.70 | N | 114 | 878.61 | | | | | | | | | | | | | | | B | 10 | |
| X | | 71+66 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 71+56 | | 10 | 71+56 | 12 | 1 | | | 879.64 | N | 112 | 878.77 | | | | | | | | | | | | | | | B | 10 | |
| | X | 71+66 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 71+66 | | 49 | 71+66 | 58 | 6 | | | 879.82 | N | 113 | 878.56 | | | | | | | | | | | | | | | A | 49 | |
| X | | 72+15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 71+66 | | 49 | 71+66 | 58 | 6 | | | 879.69 | | 111 | 878.80 | | | | | | | | | | | | | | | A | 49 | |
| | X | 72+15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 72+15 | | 105 | 72+15 | 125 | 12 | | | 880.06 | N | 109 | 878.79 | | | | | | | | | | | | | | | A | 105 | |
| X | | 73+20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 72+15 | | 105 | 72+15 | 125 | 12 | | | 879.95 | N | 108 | 879.00 | | | | | | | | | | | | | | | A | 105 | |
| | X | 73+20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 73+20 | | 119 | 73+20 | 141 | 14 | | | 880.89 | N | 106 | 879.45 | | | | | | | | | | | | | | | A | 119 | |
| X | | 74+39 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 73+20 | | 119 | 73+20 | 141 | 14 | | | 880.71 | N | 105 | 879.64 | | | | | | | | | | | | | | | A | 119 | |
| | X | 74+39 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | SUB TOTAL | | 1592 | | 1891 | 182 | | | | | | | | | | | | | | | | | | | | | | 1592 | |

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DLZ

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: PH 1/2020 DRAWN: LJS 1/2020

CHECKED: PH 1/2020 CHECKED: PH 1/2020

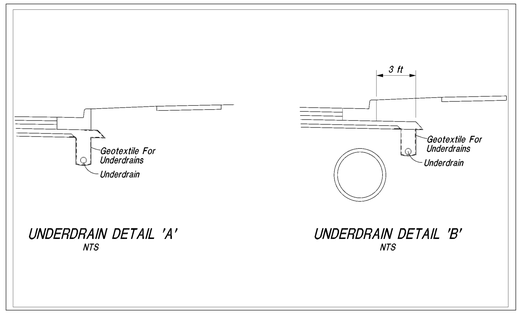
INDIANA
DEPARTMENT OF TRANSPORTATION

UNDERDRAIN TABLES

| SCALE | ROAD FILE |
|---|---|
| NOT TO SCALE | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 32 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

# UNDERDRAIN TABLE

| UNDERDRAIN PIPE | | | | | | | | | | | | | | OUTLET PIPE | | | | | | | | | | OUTLET PROTECTORS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Underdrain Pipe Limits | | | Type 4 Pipe | | | | | | | | | | | | | | | | | | | | | | | | Location | | | | |
| LT | RT | STATION | 4 inches (ft) | 6 inches (ft) | Outlet Station | Geotextile for Underdrains (SYS) | Aggregate for Underdrains (CYS) | HMA for Underdrains (Tons) | Special Grade % | Flow Line Elevation @ Outlet Station | Outlet Pipe Required (Y/N) | Connect Underdrain Pipe to Structure No. __ | Structure Invert Elevation | 45 Degree Elbows Required (1 or 2) | 6 inch Outlet Pipe (ft) | Outlet Station | Outlet Elevation | Outlet Protector No. __ | Ditch Flow Line Elevation at Outlet Protector | Connect Outlet Pipe to Structure No. __ | Underdrain Outlet Elevation | Structure Backfill (CYS) | HMA for Underdrains (Tons) | Outlet Protector Type 1 (EACH) | Outlet Protector Type 2 (EACH) | Outlet Protector Type 3 (EACH) | Outside Left | Outside Right | Underdrain Detail (A or B) | Video Inspection for Underdrains (ft) | Remarks |
| | | LINE 'PRB' | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 31+35 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 31+85 | | 50 | 31+35. | 50 | 7 | | | 875.29 | N | 6 | 874.61 | | | | | | | | | | | | | | | | B | 50 | |
| | X | 31+35 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 33+05 | | 170 | 31+35. | 170 | 25 | | | 875.29 | N | 7 | 874.54 | | | | | | | | | | | | | | | | A | 170 | |
| X | | 31+85 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 33+05 | | 120 | 31+85. | 120 | 18 | | | 875.67 | N | 5 | 874.75 | | | | | | | | | | | | | | | | A | 120 | |
| | X | 33+05 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 34+09 | | 104 | 33+05. | 104 | 15 | | | 876.72 | N | 10 | 875.54 | | | | | | | | | | | | | | | | A | 104 | |
| X | | 33+05 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 34+09 | | 104 | 33+05. | 104 | 15 | | | 876.74 | N | 9 | 875.70 | | | | | | | | | | | | | | | | A | 104 | |
| | X | 34+09 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 35+06 | | 97 | 34+09. | 97 | 14 | | | 877.61 | N | 13 | 876.55 | | | | | | | | | | | | | | | | A | 97 | |
| X | | 34+09 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 35+04 | | 95 | 34+09. | 95 | 14 | | | 877.54 | N | 12 | 876.75 | | | | | | | | | | | | | | | | A | 95 | |
| | X | 35+06 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 35+54 | | 48 | 35+06. | 48 | 7 | | | 878.37 | N | 16 | 877.21 | | | | | | | | | | | | | | | | A | 48 | |
| X | | 35+04 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 35+54 | | 50 | 35+04. | 50 | 7 | | | 878.35 | N | 15 | 877.45 | | | | | | | | | | | | | | | | A | 50 | |
| | X | 35+54 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 36+34 | | 80 | 35+54. | 80 | 12 | | | 878.86 | N | 19 | 877.89 | | | | | | | | | | | | | | | | A | 80 | |
| X | | 35+54 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 36+47 | | 93 | 35+54. | 93 | 14 | | | 879.04 | N | 18 | 878.96 | | | | | | | | | | | | | | | | A | 93 | |
| X | | 36+34 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 36+93 | | 59 | 36+34. | 59 | 9 | | | 880.21 | N | 21 | 878.78 | | | | | | | | | | | | | | | | A | 59 | |
| X | | 37+55 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 38+21 | | 66 | 38+21. | 66 | 10 | | | 880.06 | N | 22 | 878.90 | | | | | | | | | | | | | | | | A | 66 | |
| | X | 38+25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 39+15 | | 90 | 39+15. | 90 | 13 | | | 877.83 | N | 26 | 876.65 | | | | | | | | | | | | | | | | A | 90 | |
| X | | 38+21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 39+15 | | 94 | 39+15. | 94 | 14 | | | 877.80 | N | 25 | 876.90 | | | | | | | | | | | | | | | | A | 94 | |
| | X | 39+15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 40+05 | | 90 | 40+05. | 90 | 13 | | | 876.13 | N | 29 | 875.29 | | | | | | | | | | | | | | | | A | 90 | |
| X | | 39+15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 40+05 | | 90 | 40+05. | 90 | 13 | | | 876.08 | N | 28 | 875.50 | | | | | | | | | | | | | | | | A | 90 | |
| | X | 40+05 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 40+91 | | 86 | 40+91. | 86 | 13 | | | 874.89 | N | 32 | 874.23 | | | | | | | | | | | | | | | | A | 86 | |
| X | | 40+05 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 40+91 | | 86 | 40+91. | 86 | 13 | | | 874.97 | N | 31 | 874.40 | | | | | | | | | | | | | | | | A | 86 | |
| | X | 40+91 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 41+36 | | 45 | 41+36. | 45 | 7 | | | 874.76 | N | 35 | 874.45 | | | | | | | | | | | | | | | | A | 45 | |
| X | | 40+91 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 41+36 | | 45 | 41+36. | 45 | 7 | | | 874.88 | N | 34 | 874.59 | | | | | | | | | | | | | | | | A | 45 | |
| | X | 41+36 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 41+88 | | 52 | 41+36. | 52 | 8 | | | 874.76 | N | 35 | 874.45 | | | | | | | | | | | | | | | | A | 52 | |
| X | | 41+36 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 41+88 | | 52 | 41+36. | 52 | 8 | | | 874.88 | N | 34 | 874.59 | | | | | | | | | | | | | | | | A | 52 | |
| | X | 41+88 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 43+31 | | 143 | 41+88. | 143 | 21 | | | 874.96 | N | 38 | 874.05 | | | | | | | | | | | | | | | | A | 143 | |
| X | | 41+88 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | 43+31 | | 143 | 41+88. | 143 | 21 | | | 875.08 | N | 37 | 874.23 | | | | | | | | | | | | | | | | A | 143 | |
| | | SUB TOTAL | | 2152 | | 2152 | 319 | | | | | | | | | | | | | | | | | | | | | | | 2152 | |
| | | TOTAL | | 3744 | | 4043 | 501 | | | | | | | | | | | | | | | | | | | | | | | 3744 | |




UNDERDRAIN DETAIL 'A'
NTS

UNDERDRAIN DETAIL 'B'
NTS

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X:\Projects\GFL\2017\1763\125290\Civil\Dgn\SHEETS\1252TB02.dgn

DLZ

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: PH 1/2020 DRAWN: LJS 1/2020

CHECKED: PH 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

UNDERDRAIN TABLES

| SCALE | ROAD FILE |
|---|---|
| NOT TO SCALE | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 33 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | STRUCTURE NUMBER - **LINE PRA** | | **105** | **106** | **107** | **108** | **109** | **110** | **111** | **112** | **113** | **114** | **115** | **116** | **117** | **118** | **119** | **120** | **123** | **124** | **125** | **126** | **127** |
| | PIPE TYPE / SHAPE (CIR or DEF) | | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** |
| INT. DES. | SMOOTH PIPE SIZE | | **12"** | **12"** | **12"** | **12"** | **12"** | **15"** | **12"** | **12"** | **12"** | **12"** | **18"** | **18"** | **12"** | **12"** | **24"** | **24"** | **24"** | **24"** | **30"** | **12"** | **12"** |
| | CORRUGATED PIPE SIZE | | | | | | | | | | | | | | | | | | | | | | |
| | SEMI-SMOOTH PIPE SIZE | | | | | | | | | | | | | | | | | | | | | | |
| CONC. | RCP/RCHEP (S) | CLASS | II | II | II | II | II | II | II | II | II | II | II | II | II | II | II | II | II | II | II | II | II |
| | | $D_{0.01}$ RATING | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| | NON-REINFORCED CONCRETE PIPE, CLASS 3 (S) | | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| PLASTIC PIPE | CORRUGATED PE PIPE, TYPE S (S)* | | | OK | OK | | OK | OK | | | | | OK | OK | | OK | OK | OK | OK | OK | OK | OK | OK |
| | PROFILE WALL (RIBBED) PE PIPE (S)* | | | | | | | | | | | | OK | OK | | | OK | OK | OK | OK | OK | | |
| | PROFILE WALL (CLOSED) PE PIPE (S)* | | | | | | | | | | | | OK | OK | | | OK | OK | OK | OK | | | |
| | SMOOTH WALL PE PIPE (S)* / MAXIMUM DR | | | 26 | 26 | | 26 | 26 | | | | | 26 | 26 | | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 |
| | CORRUGATED PP PIPE (S) | | | OK | OK | | OK | OK | | | | | OK | OK | | OK | OK | OK | OK | OK | OK | OK | OK |
| | PROFILE WALL PVC PIPE (S) | | | OK | OK | | OK | OK | | | | | OK | OK | | OK | OK | OK | OK | OK | OK | OK | OK |
| | SMOOTH WALL PVC PIPE (S)* | | | OK | OK | | OK | OK | | | | | OK | OK | | OK | OK | OK | OK | OK | | OK | OK |
| CLAY | VITRIFIED CLAY PIPE, EXTRA STRENGTH (S) | | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| CORRUGATED STEEL PIPE / PIPE-ARCH | FULLY BIT. PAVED & LINED (S) | CORR.PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| | ZINC COATED (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| | ZINC COATED W/ BPI (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| | ALUM. COATED TYPE 2 (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| | POLYMER PRECOATED GALVANIZED (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| | POLYMER PRECOATED GALVANIZED CORRUGATED STEEL PIPE TYPE 1A (S) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| COR. ALUM. PIPE/ P-ARCH | CORRUGATED ALUM. ALLOY (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| | CORRUGATED ALUM. ALLOY W/ BPI (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| SPIRAL RIB STEEL PIPE | ZINC COATED (SS) | RIB PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| | ZINC COATED W/ BPI (SS) | RIB PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| | ALUM. COATED TYPE 2 (SS) | RIB PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| | POLYMER PRECOATED GALVANIZED (SS) | RIB PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| STRUCTURAL PLATE PIPE / PIPE-ARCH | STR. PLATE ALUMINUM ALLOY (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| | STR. PLATE ALUMINUM ALLOY W/ CFP (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| | STR. PLATE STEEL (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS ** | | | | | | | | | | | | | | | | | | | | | |
| | STR. PLATE STEEL W/ CFP (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS ** | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | STRUCTURE NUMBER - **LINE PRA** | | **128** | **129** | **130** | **131** | **132** | **133** | **134** | **135** | **137** | **137** | **137A** | **137B** | **138** | **139** |
| | PIPE TYPE / SHAPE (CIR or DEF) | | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** |
| INT. DES. | SMOOTH PIPE SIZE | | **30"** | **12"** | **12"** | **30"** | **12"** | **30"** | **12"** | **12"** | **12"** | **30"** | **12"** | **30"** | **30"** | **30"** |
| | CORRUGATED PIPE SIZE | | | | | | | | | | | | | | | |
| | SEMI-SMOOTH PIPE SIZE | | | | | | | | | | | | | | | |
| CONC. | RCP/RCHEP (S) | CLASS | II | II | II | II | II | II | II | II | II | II | II | II | II | II |
| | | $D_{0.01}$ RATING | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| | NON-REINFORCED CONCRETE PIPE, CLASS 3 (S) | | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | | OK | OK |
| PLASTIC PIPE | CORRUGATED PE PIPE, TYPE S (S)* | | OK | OK | OK | OK | | OK | OK | OK | OK | OK | OK | | OK | OK |
| | PROFILE WALL (RIBBED) PE PIPE (S)* | | OK | | | OK | | OK | | | | OK | | | OK | OK |
| | PROFILE WALL (CLOSED) PE PIPE (S)* | | | | | | | | | | | | | | | |
| | SMOOTH WALL PE PIPE (S)* / MAXIMUM DR | | 26 | 26 | 26 | 26 | | 26 | 26 | 26 | 26 | 26 | 26 | | 26 | 26 |
| | CORRUGATED PP PIPE (S) | | OK | OK | OK | OK | | OK | OK | OK | OK | OK | OK | | OK | OK |
| | PROFILE WALL PVC PIPE (S) | | OK | OK | OK | OK | | OK | OK | OK | OK | OK | OK | | OK | OK |
| | SMOOTH WALL PVC PIPE (S)* | | | OK | OK | | | | OK | OK | OK | | OK | | | |
| CLAY | VITRIFIED CLAY PIPE, EXTRA STRENGTH (S) | | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | | OK | OK |
| CORRUGATED STEEL PIPE / PIPE-ARCH | FULLY BIT. PAVED & LINED (S) | CORR.PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| | ZINC COATED (C) | CORR. PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| | ZINC COATED W/ BPI (C) | CORR. PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| | ALUM. COATED TYPE 2 (C) | CORR. PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| | POLYMER PRECOATED GALVANIZED (C) | CORR. PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| | POLYMER PRECOATED GALVANIZED CORRUGATED STEEL PIPE TYPE 1A (S) | CORR. PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| COR. ALUM. PIPE/ P-ARCH | CORRUGATED ALUM. ALLOY (C) | CORR. PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| | CORRUGATED ALUM. ALLOY W/ BPI (C) | CORR. PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| SPIRAL RIB STEEL PIPE | ZINC COATED (SS) | RIB PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| | ZINC COATED W/ BPI (SS) | RIB PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| | ALUM. COATED TYPE 2 (SS) | RIB PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| | POLYMER PRECOATED GALVANIZED (SS) | RIB PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| STRUCTURAL PLATE PIPE / PIPE-ARCH | STR. PLATE ALUMINUM ALLOY (C) | CORR. PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| | STR. PLATE ALUMINUM ALLOY W/ CFP (C) | CORR. PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| | STR. PLATE STEEL (C) | CORR. PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS ** | | | | | | | | | | | | | | |
| | STR. PLATE STEEL W/ CFP (C) | CORR. PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS ** | | | | | | | | | | | | | | |

## LEGEND

PIPE MATERIAL

| | |
|---|---|
| RCP | Reinforced Concrete Pipe |
| RCHEP | Reinforced Concrete Horizontal Elliptical Pipe |
| PE | Polyethylene |
| DR | Dimension Ratio |
| PVC | Polyvinyl Chloride |
| PP | Polypropylene |
| CORR | Corrugation |
| ALUM | Aluminum |
| STR | Structural |
| (LS) | Lock Seam Pipe Required |

PIPE PROTECTION

| | |
|---|---|
| BPI | Bituminous Paved Invert |
| CFP | Concrete Field Paving |
| BIT | Bituminous |

SHAPE

| | |
|---|---|
| CIR | Circular Pipe |
| DEF | Deformed Pipe |

INTERIOR DESIGNATION

| | |
|---|---|
| (S) | Smooth Pipe Material |
| (C) | Corrugated Pipe Material |
| (SS) | Semi-Smooth Pipe Material |

PIPE SIZE

Circular pipe is shown as diameter in inches
Deformed pipe is shown as area in square feet

* Refer to Standard Drawings 715-PHCL-20 through -22 for nominal diameter appropriate for pay item diameter.

** Tabulated thickness refers to top and side plates. For pipes and pipe-arches with a thickness less than .280 in., bottom plates shall be of next greater available thickness.

DLZ

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DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: PH 1/2020 DRAWN: LJS 1/2020

CHECKED: PH 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

PIPE MATERIALS

| SCALE | ROAD FILE |
|---|---|
| NOT TO SCALE | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 34 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

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| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | STRUCTURE NUMBER - **LINE PRA** | | **140** | **141** | **142** | | | | | | | | | | | | | | | | | | | |
| | PIPE TYPE / SHAPE (CIR or DEF) | | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | | | | | | | | | | | | | | | | | | | |
| INT. DES. | SMOOTH PIPE SIZE | | **30"** | **30"** | **30"** | | | | | | | | | | | | | | | | | | | |
| | CORRUGATED PIPE SIZE | | | | | | | | | | | | | | | | | | | | | | | |
| | SEMI-SMOOTH PIPE SIZE | | | | | | | | | | | | | | | | | | | | | | | |
| CONC. | RCP/RCHEP (S) | CLASS | II | II | II | | | | | | | | | | | | | | | | | | | |
| | | $D_{0.01}$ RATING | 1000 | 1000 | 1000 | | | | | | | | | | | | | | | | | | | |
| | NON-REINFORCED CONCRETE PIPE, CLASS 3 (S) | | OK | OK | | | | | | | | | | | | | | | | | | | | |
| PLASTIC PIPE | CORRUGATED PE PIPE, TYPE S (S)* | | OK | OK | | | | | | | | | | | | | | | | | | | | |
| | PROFILE WALL (RIBBED) PE PIPE (S)* | | OK | OK | | | | | | | | | | | | | | | | | | | | |
| | PROFILE WALL (CLOSED) PE PIPE (S)* | | | | | | | | | | | | | | | | | | | | | | | |
| | SMOOTH WALL PE PIPE (S)* / MAXIMUM DR | | 26 | 26 | | | | | | | | | | | | | | | | | | | | |
| | CORRUGATED PP PIPE (S) | | OK | OK | | | | | | | | | | | | | | | | | | | | |
| | PROFILE WALL PVC PIPE (S) | | OK | OK | | | | | | | | | | | | | | | | | | | | |
| | SMOOTH WALL PVC PIPE (S)* | | | | | | | | | | | | | | | | | | | | | | | |
| CLAY | VITRIFIED CLAY PIPE, EXTRA STRENGTH (S) | | OK | OK | | | | | | | | | | | | | | | | | | | | |
| CORRUGATED STEEL PIPE / PIPE-ARCH | FULLY BIT. PAVED & LINED (S) | CORR.PROFILE | | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | | |
| | ZINC COATED (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | | |
| | ZINC COATED W/ BPI (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | | |
| | ALUM. COATED TYPE 2 (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | | |
| | POLYMER PRECOATED GALVANIZED (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | | |
| | POLYMER PRECOATED GALVANIZED CORRUGATED STEEL PIPE TYPE 1A (S) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | | |
| COR. ALUM. PIPE/ P-ARCH | CORRUGATED ALUM. ALLOY (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | | |
| | CORRUGATED ALUM. ALLOY W/ BPI (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | | |
| SPIRAL RIB STEEL PIPE | ZINC COATED (SS) | RIB PROFILE | | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | | |
| | ZINC COATED W/ BPI (SS) | RIB PROFILE | | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | | |
| | ALUM. COATED TYPE 2 (SS) | RIB PROFILE | | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | | |
| | POLYMER PRECOATED GALVANIZED (SS) | RIB PROFILE | | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | | |
| STRUCTURAL PLATE PIPE / PIPE-ARCH | STR. PLATE ALUMINUM ALLOY (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | | |
| | STR. PLATE ALUMINUM ALLOY W/ CFP (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | | |
| | STR. PLATE STEEL (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS ** | | | | | | | | | | | | | | | | | | | | | | |
| | STR. PLATE STEEL W/ CFP (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS ** | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | STRUCTURE NUMBER - **LINE PRA** | | | | | | | | | | | | | | |
| | PIPE TYPE / SHAPE (CIR or DEF) | | | | | | | | | | | | | | |
| INT. DES. | SMOOTH PIPE SIZE | | | | | | | | | | | | | | |
| | CORRUGATED PIPE SIZE | | | | | | | | | | | | | | |
| | SEMI-SMOOTH PIPE SIZE | | | | | | | | | | | | | | |
| CONC. | RCP/RCHEP (S) | CLASS | | | | | | | | | | | | | |
| | | $D_{0.01}$ RATING | | | | | | | | | | | | | |
| | NON-REINFORCED CONCRETE PIPE, CLASS 3 (S) | | | | | | | | | | | | | | |
| PLASTIC PIPE | CORRUGATED PE PIPE, TYPE S (S)* | | | | | | | | | | | | | | |
| | PROFILE WALL (RIBBED) PE PIPE (S)* | | | | | | | | | | | | | | |
| | PROFILE WALL (CLOSED) PE PIPE (S)* | | | | | | | | | | | | | | |
| | SMOOTH WALL PE PIPE (S)* / MAXIMUM DR | | | | | | | | | | | | | | |
| | CORRUGATED PP PIPE (S) | | | | | | | | | | | | | | |
| | PROFILE WALL PVC PIPE (S) | | | | | | | | | | | | | | |
| | SMOOTH WALL PVC PIPE (S)* | | | | | | | | | | | | | | |
| CLAY | VITRIFIED CLAY PIPE, EXTRA STRENGTH (S) | | | | | | | | | | | | | | |
| CORRUGATED STEEL PIPE / PIPE-ARCH | FULLY BIT. PAVED & LINED (S) | CORR.PROFILE | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | |
| | ZINC COATED (C) | CORR. PROFILE | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | |
| | ZINC COATED W/ BPI (C) | CORR. PROFILE | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | |
| | ALUM. COATED TYPE 2 (C) | CORR. PROFILE | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | |
| | POLYMER PRECOATED GALVANIZED (C) | CORR. PROFILE | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | |
| | POLYMER PRECOATED GALVANIZED CORRUGATED STEEL PIPE TYPE 1A (S) | CORR. PROFILE | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | |
| COR. ALUM. PIPE/ P-ARCH | CORRUGATED ALUM. ALLOY (C) | CORR. PROFILE | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | |
| | CORRUGATED ALUM. ALLOY W/ BPI (C) | CORR. PROFILE | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | |
| SPIRAL RIB STEEL PIPE | ZINC COATED (SS) | RIB PROFILE | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | |
| | ZINC COATED W/ BPI (SS) | RIB PROFILE | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | |
| | ALUM. COATED TYPE 2 (SS) | RIB PROFILE | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | |
| | POLYMER PRECOATED GALVANIZED (SS) | RIB PROFILE | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | |
| STRUCTURAL PLATE PIPE / PIPE-ARCH | STR. PLATE ALUMINUM ALLOY (C) | CORR. PROFILE | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | |
| | STR. PLATE ALUMINUM ALLOY W/ CFP (C) | CORR. PROFILE | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | |
| | STR. PLATE STEEL (C) | CORR. PROFILE | | | | | | | | | | | | | |
| | | THICKNESS ** | | | | | | | | | | | | | |
| | STR. PLATE STEEL W/ CFP (C) | CORR. PROFILE | | | | | | | | | | | | | |
| | | THICKNESS ** | | | | | | | | | | | | | |

## LEGEND

PIPE MATERIAL

| | |
|---|---|
| RCP | Reinforced Concrete Pipe |
| RCHEP | Reinforced Concrete Horizontal Elliptical Pipe |
| PE | Polyethylene |
| DR | Dimension Ratio |
| PVC | Polyvinyl Chloride |
| PP | Polypropylene |
| CORR | Corrugation |
| ALUM | Aluminum |
| STR | Structural |
| (LS) | Lock Seam Pipe Required |

PIPE PROTECTION

| | |
|---|---|
| BPI | Bituminous Paved Invert |
| CFP | Concrete Field Paving |
| BIT | Bituminous |

SHAPE

| | |
|---|---|
| CIR | Circular Pipe |
| DEF | Deformed Pipe |

INTERIOR DESIGNATION

| | |
|---|---|
| (S) | Smooth Pipe Material |
| (C) | Corrugated Pipe Material |
| (SS) | Semi-Smooth Pipe Material |

PIPE SIZE

Circular pipe is shown as diameter in inches
Deformed pipe is shown as area in square feet

* Refer to Standard Drawings 715-PHCL-20 through -22 for nominal diameter appropriate for pay item diameter.

** Tabulated thickness refers to top and side plates. For pipes and pipe-arches with a thickness less than .280 in., bottom plates shall be of next greater available thickness.

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DLZ

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: PH 1/2020 DRAWN: LJS 1/2020

CHECKED: PH 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

PIPE MATERIALS

| SCALE | ROAD FILE |
|---|---|
| NOT TO SCALE | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 35 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | STRUCTURE NUMBER - **LINE PRB** | | **144** | **40** | **41** | **42** | **145** | **37** | **38** | **39** | **34** | **35** | **36** | **31** | **32** | **33** | **28** | **29** | **30** | **25** | **26** | **27** | **22** |
| | PIPE TYPE / SHAPE (CIR or DEF) | | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** |
| INT. DES. | SMOOTH PIPE SIZE | | **12"** | **12"** | **12"** | **15"** | **12"** | **12"** | **12"** | **15"** | **12"** | **12"** | **15"** | **12"** | **12"** | **15"** | **12"** | **12"** | **18"** | **12"** | **12"** | **18"** | **12"** |
| | CORRUGATED PIPE SIZE | | | | | | | | | | | | | | | | | | | | | | |
| | SEMI-SMOOTH PIPE SIZE | | | | | | | | | | | | | | | | | | | | | | |
| CONC. | RCP/RCHEP (S) CLASS | | II | II | II | II | II | II | II | II | II | II | II | II | II | II | II | II | II | II | II | II | II |
| | RCP/RCHEP (S) $D_{0.01}$ RATING | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| | NON-REINFORCED CONCRETE PIPE, CLASS 3 (S) | | | | OK | OK | | OK | OK | OK | | OK | OK | | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| PLASTIC PIPE | CORRUGATED PE PIPE, TYPE S (S)* | | | | | OK | | | | OK | | | OK | | | OK | | | OK | | | OK | |
| | PROFILE WALL (RIBBED) PE PIPE (S)* | | | | | | | | | | | | | | | | | | OK | | | OK | |
| | PROFILE WALL (CLOSED) PE PIPE (S)* | | | | | | | | | | | | | | | | | | OK | | | OK | |
| | SMOOTH WALL PE PIPE (S)* / MAXIMUM DR | | | | | 26 | | | | 26 | | | 26 | | | 26 | | | 26 | | | 26 | |
| | CORRUGATED PP PIPE (S) | | | | | OK | | | | OK | | | OK | | | OK | | | OK | | | OK | |
| | PROFILE WALL PVC PIPE (S) | | | | | OK | | | | OK | | | OK | | | OK | | | OK | | | OK | |
| | SMOOTH WALL PVC PIPE (S)* | | | | | OK | | | | OK | | | OK | | | OK | | | OK | | | OK | |
| CLAY | VITRIFIED CLAY PIPE, EXTRA STRENGTH (S) | | | | OK | OK | OK | OK | OK | OK | | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| CORRUGATED STEEL PIPE / PIPE-ARCH | FULLY BIT. PAVED & LINED (S) | CORR.PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| | ZINC COATED (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| | ZINC COATED W/ BPI (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| | ALUM. COATED TYPE 2 (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| | POLYMER PRECOATED GALVANIZED (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| | POLYMER PRECOATED GALVANIZED CORRUGATED STEEL PIPE TYPE 1A (S) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| COR. ALUM. PIPE/ P-ARCH | CORRUGATED ALUM. ALLOY (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| | CORRUGATED ALUM. ALLOY W/ BPI (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| SPIRAL RIB STEEL PIPE | ZINC COATED (SS) | RIB PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| | ZINC COATED W/ BPI (SS) | RIB PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| | ALUM. COATED TYPE 2 (SS) | RIB PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| | POLYMER PRECOATED GALVANIZED (SS) | RIB PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| STRUCTURAL PLATE PIPE / PIPE-ARCH | STR. PLATE ALUMINUM ALLOY (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| | STR. PLATE ALUMINUM ALLOY W/ CFP (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | | | | | | | | |
| | STR. PLATE STEEL (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS ** | | | | | | | | | | | | | | | | | | | | | |
| | STR. PLATE STEEL W/ CFP (C) | CORR. PROFILE | | | | | | | | | | | | | | | | | | | | | |
| | | THICKNESS ** | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | STRUCTURE NUMBER - **LINE PRB** | | **23** | **24** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** |
| | PIPE TYPE / SHAPE (CIR or DEF) | | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** |
| INT. DES. | SMOOTH PIPE SIZE | | **12"** | **24"** | **12"** | **12"** | **12"** | **12"** | **12"** | **12"** | **15"** | **12"** | **12"** | **15"** | **12"** | **12"** |
| | CORRUGATED PIPE SIZE | | | | | | | | | | | | | | | |
| | SEMI-SMOOTH PIPE SIZE | | | | | | | | | | | | | | | |
| CONC. | RCP/RCHEP (S) CLASS | | II | II | II | II | II | II | II | II | II | II | II | II | II | II |
| | RCP/RCHEP (S) $D_{0.01}$ RATING | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| | NON-REINFORCED CONCRETE PIPE, CLASS 3 (S) | | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| PLASTIC PIPE | CORRUGATED PE PIPE, TYPE S (S)* | | OK | OK | | | | OK | | OK | OK | | OK | OK | | OK |
| | PROFILE WALL (RIBBED) PE PIPE (S)* | | | OK | | | | | | | | | | | | |
| | PROFILE WALL (CLOSED) PE PIPE (S)* | | | OK | | | | | | | | | | | | |
| | SMOOTH WALL PE PIPE (S)* / MAXIMUM DR | | 26 | 26 | | | | 26 | | 26 | 26 | | 26 | 26 | | 26 |
| | CORRUGATED PP PIPE (S) | | OK | OK | | | | OK | | OK | OK | | OK | OK | | OK |
| | PROFILE WALL PVC PIPE (S) | | OK | OK | | | | OK | | OK | OK | | OK | OK | | OK |
| | SMOOTH WALL PVC PIPE (S)* | | OK | OK | | | | OK | | OK | OK | | OK | OK | | OK |
| CLAY | VITRIFIED CLAY PIPE, EXTRA STRENGTH (S) | | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| CORRUGATED STEEL PIPE / PIPE-ARCH | FULLY BIT. PAVED & LINED (S) | CORR.PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| | ZINC COATED (C) | CORR. PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| | ZINC COATED W/ BPI (C) | CORR. PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| | ALUM. COATED TYPE 2 (C) | CORR. PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| | POLYMER PRECOATED GALVANIZED (C) | CORR. PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| | POLYMER PRECOATED GALVANIZED CORRUGATED STEEL PIPE TYPE 1A (S) | CORR. PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| COR. ALUM. PIPE/ P-ARCH | CORRUGATED ALUM. ALLOY (C) | CORR. PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| | CORRUGATED ALUM. ALLOY W/ BPI (C) | CORR. PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| SPIRAL RIB STEEL PIPE | ZINC COATED (SS) | RIB PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| | ZINC COATED W/ BPI (SS) | RIB PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| | ALUM. COATED TYPE 2 (SS) | RIB PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| | POLYMER PRECOATED GALVANIZED (SS) | RIB PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| STRUCTURAL PLATE PIPE / PIPE-ARCH | STR. PLATE ALUMINUM ALLOY (C) | CORR. PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| | STR. PLATE ALUMINUM ALLOY W/ CFP (C) | CORR. PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS | | | | | | | | | | | | | | |
| | STR. PLATE STEEL (C) | CORR. PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS ** | | | | | | | | | | | | | | |
| | STR. PLATE STEEL W/ CFP (C) | CORR. PROFILE | | | | | | | | | | | | | | |
| | | THICKNESS ** | | | | | | | | | | | | | | |

## LEGEND

PIPE MATERIAL

| | |
|---|---|
| RCP | Reinforced Concrete Pipe |
| RCHEP | Reinforced Concrete Horizontal Elliptical Pipe |
| PE | Polyethylene |
| DR | Dimension Ratio |
| PVC | Polyvinyl Chloride |
| PP | Polypropylene |
| CORR | Corrugation |
| ALUM | Aluminum |
| STR | Structural |
| (LS) | Lock Seam Pipe Required |

PIPE PROTECTION

| | |
|---|---|
| BPI | Bituminous Paved Invert |
| CFP | Concrete Field Paving |
| BIT | Bituminous |

SHAPE

| | |
|---|---|
| CIR | Circular Pipe |
| DEF | Deformed Pipe |

INTERIOR DESIGNATION

| | |
|---|---|
| (S) | Smooth Pipe Material |
| (C) | Corrugated Pipe Material |
| (SS) | Semi-Smooth Pipe Material |

PIPE SIZE

Circular pipe is shown as diameter in inches
Deformed pipe is shown as area in square feet

* Refer to Standard Drawings 715-PHCL-20 through -22 for nominal diameter appropriate for pay item diameter.

** Tabulated thickness refers to top and side plates. For pipes and pipe-arches with a thickness less than .280 in., bottom plates shall be of next greater available thickness.

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DLZ

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DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: PH 1/2020 DRAWN: LJS 1/2020

CHECKED: PH 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

PIPE MATERIALS

| SCALE | ROAD FILE |
|---|---|
| NOT TO SCALE | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 36 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | STRUCTURE NUMBER - **LINE PRB** | | **17** | **18** | **19** | **20** | **122** | **121** | **21** | |
| | PIPE TYPE / SHAPE (CIR or DEF) | | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | **2 / Cir.** | |
| INT. DES. | SMOOTH PIPE SIZE | | **18"** | **12"** | **12"** | **18"** | **18"** | **12"** | **12"** | |
| | CORRUGATED PIPE SIZE | | | | | | | | | |
| | SEMI-SMOOTH PIPE SIZE | | | | | | | | | |
| CONC. | RCP/RCHEP (S) | CLASS | II | II | II | II | II | II | II | |
| | | $D_{0.01}$ RATING | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | |
| | NON-REINFORCED CONCRETE PIPE, CLASS 3 (S) | | OK | OK | OK | OK | OK | OK | OK | |
| PLASTIC PIPE | CORRUGATED PE PIPE, TYPE S (S)* | | OK | | OK | OK | OK | OK | OK | |
| | PROFILE WALL (RIBBED) PE PIPE (S)* | | OK | | | OK | OK | | | |
| | PROFILE WALL (CLOSED) PE PIPE (S)* | | OK | | | OK | OK | | | |
| | SMOOTH WALL PE PIPE (S)* / MAXIMUM DR | | 26 | | 26 | 26 | 26 | 26 | 26 | |
| | CORRUGATED PP PIPE (S) | | OK | | OK | OK | OK | OK | OK | |
| | PROFILE WALL PVC PIPE (S) | | OK | | OK | OK | OK | OK | OK | |
| | SMOOTH WALL PVC PIPE (S)* | | OK | | OK | OK | OK | OK | OK | |
| CLAY | VITRIFIED CLAY PIPE, EXTRA STRENGTH (S) | | OK | OK | OK | OK | OK | OK | OK | |
| CORRUGATED STEEL PIPE / PIPE-ARCH | FULLY BIT. PAVED & LINED (S) | CORR.PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| | ZINC COATED (C) | CORR. PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| | ZINC COATED W/ BPI (C) | CORR. PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| | ALUM. COATED TYPE 2 (C) | CORR. PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| | POLYMER PRECOATED GALVANIZED (C) | CORR. PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| | POLYMER PRECOATED GALVANIZED CORRUGATED STEEL PIPE TYPE 1A (S) | CORR. PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| COR. ALUM. PIPE/ P-ARCH | CORRUGATED ALUM. ALLOY (C) | CORR. PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| | CORRUGATED ALUM. ALLOY W/ BPI (C) | CORR. PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| SPIRAL RIB STEEL PIPE | ZINC COATED (SS) | RIB PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| | ZINC COATED W/ BPI (SS) | RIB PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| | ALUM. COATED TYPE 2 (SS) | RIB PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| | POLYMER PRECOATED GALVANIZED (SS) | RIB PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| STRUCTURAL PLATE PIPE / PIPE-ARCH | STR. PLATE ALUMINUM ALLOY (C) | CORR. PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| | STR. PLATE ALUMINUM ALLOY W/ CFP (C) | CORR. PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| | STR. PLATE STEEL (C) | CORR. PROFILE | | | | | | | | |
| | | THICKNESS ** | | | | | | | | |
| | STR. PLATE STEEL W/ CFP (C) | CORR. PROFILE | | | | | | | | |
| | | THICKNESS ** | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | STRUCTURE NUMBER - **LINE PRB** | | | | | | | | | |
| | PIPE TYPE / SHAPE (CIR or DEF) | | | | | | | | | |
| INT. DES. | SMOOTH PIPE SIZE | | | | | | | | | |
| | CORRUGATED PIPE SIZE | | | | | | | | | |
| | SEMI-SMOOTH PIPE SIZE | | | | | | | | | |
| CONC. | RCP/RCHEP (S) | CLASS | | | | | | | | |
| | | $D_{0.01}$ RATING | | | | | | | | |
| | NON-REINFORCED CONCRETE PIPE, CLASS 3 (S) | | | | | | | | | |
| PLASTIC PIPE | CORRUGATED PE PIPE, TYPE S (S)* | | | | | | | | | |
| | PROFILE WALL (RIBBED) PE PIPE (S)* | | | | | | | | | |
| | PROFILE WALL (CLOSED) PE PIPE (S)* | | | | | | | | | |
| | SMOOTH WALL PE PIPE (S)* / MAXIMUM DR | | | | | | | | | |
| | CORRUGATED PP PIPE (S) | | | | | | | | | |
| | PROFILE WALL PVC PIPE (S) | | | | | | | | | |
| | SMOOTH WALL PVC PIPE (S)* | | | | | | | | | |
| CLAY | VITRIFIED CLAY PIPE, EXTRA STRENGTH (S) | | | | | | | | | |
| CORRUGATED STEEL PIPE / PIPE-ARCH | FULLY BIT. PAVED & LINED (S) | CORR.PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| | ZINC COATED (C) | CORR. PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| | ZINC COATED W/ BPI (C) | CORR. PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| | ALUM. COATED TYPE 2 (C) | CORR. PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| | POLYMER PRECOATED GALVANIZED (C) | CORR. PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| | POLYMER PRECOATED GALVANIZED CORRUGATED STEEL PIPE TYPE 1A (S) | CORR. PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| COR. ALUM. PIPE/ P-ARCH | CORRUGATED ALUM. ALLOY (C) | CORR. PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| | CORRUGATED ALUM. ALLOY W/ BPI (C) | CORR. PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| SPIRAL RIB STEEL PIPE | ZINC COATED (SS) | RIB PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| | ZINC COATED W/ BPI (SS) | RIB PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| | ALUM. COATED TYPE 2 (SS) | RIB PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| | POLYMER PRECOATED GALVANIZED (SS) | RIB PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| STRUCTURAL PLATE PIPE / PIPE-ARCH | STR. PLATE ALUMINUM ALLOY (C) | CORR. PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| | STR. PLATE ALUMINUM ALLOY W/ CFP (C) | CORR. PROFILE | | | | | | | | |
| | | THICKNESS | | | | | | | | |
| | STR. PLATE STEEL (C) | CORR. PROFILE | | | | | | | | |
| | | THICKNESS ** | | | | | | | | |
| | STR. PLATE STEEL W/ CFP (C) | CORR. PROFILE | | | | | | | | |
| | | THICKNESS ** | | | | | | | | |

## LEGEND

PIPE MATERIAL

| | |
|---|---|
| RCP | Reinforced Concrete Pipe |
| RCHEP | Reinforced Concrete Horizontal Elliptical Pipe |
| PE | Polyethylene |
| DR | Dimension Ratio |
| PVC | Polyvinyl Chloride |
| PP | Polypropylene |
| CORR | Corrugation |
| ALUM | Aluminum |
| STR | Structural |
| (LS) | Lock Seam Pipe Required |

PIPE PROTECTION

| | |
|---|---|
| BPI | Bituminous Paved Invert |
| CFP | Concrete Field Paving |
| BIT | Bituminous |

SHAPE

| | |
|---|---|
| CIR | Circular Pipe |
| DEF | Deformed Pipe |

INTERIOR DESIGNATION

| | |
|---|---|
| (S) | Smooth Pipe Material |
| (C) | Corrugated Pipe Material |
| (SS) | Semi-Smooth Pipe Material |

PIPE SIZE

Circular pipe is shown as diameter in inches
Deformed pipe is shown as area in square feet

* Refer to Standard Drawings 715-PHCL-20 through -22 for nominal diameter appropriate for pay item diameter.

** Tabulated thickness refers to top and side plates. For pipes and pipe-arches with a thickness less than .280 in., bottom plates shall be of next greater available thickness.

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DLZ

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DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: PH 1/2020 DRAWN: LJS 1/2020

CHECKED: PH 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

PIPE MATERIALS

| SCALE | ROAD FILE |
|---|---|
| NOT TO SCALE | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 37 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

# PAVEMENT QUANTITIES AND APPROACH TABLE

| LOCATION | DESCRIPTION (APPROACH TYPE OR CLASS) | WIDTH | LENGTH | RADII | DISTANCE BEYOND R/W LINE | SURFACE BEYOND R/W LINE: COMPACTED AGGREGATE BASE | SURFACE BEYOND R/W LINE: HMA | SURFACE BEYOND R/W LINE: CONCRETE | GRADE | | HMA FOR SIDEWALK, TYPE B | | CONCRETE SIDEWALK, 4" | PCCP, COLORED AND STAMPED | PCCP FOR APPROACHES | | CLEAR ZONE AT DRIVE | HMA FOR APPROACHES, TYPE B | | | HMA FOR WIDENING, TYPE B | HMA MATERIALS: SURFACE, 9.5 mm | HMA MATERIALS: INTERMEDIATE, 19.0 mm | HMA MATERIALS: BASE, 25.0 mm | HMA MATERIALS: INTERMEDIATE OG, 19.0 mm | ASPHALT FOR TACK COAT | JOINT ADHESIVE, SURFACE | JOINT ADHESIVE, INTERMEDIATE | LIQUID ASPHALT SEALANT | COMPACTED AGGREGATE, NO. 53 | | | | COMPACTED AGGREGATE, NO. 73 | Dense Graded Subbase | SUBGRADE TREATMENT, TYPE ID | SUBGRADE TREATMENT, TYPE IC | SUBGRADE TREATMENT, TYPE II | SUBGRADE TREATMENT, TYPE III | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | LBS. PER SYD. | | | | | | | LBS. PER SYD. | | | LBS. PER | LBS. PER SYD. | | | | | | | | DEPTH | | | | | | | | | |
| | | | | | | | | | 1 | 2 | 330 | | | 7" | 6" | 9" | | 165 | 275 | 880 | 880 | 220 | 275 | 550 | 300 | | | | | 3" | 6" | 12.5" | 6" | | | | | | |
| | | FT | FT | FT | FT | SYS | SYS | SYS | % | % | TON | TON | SYS | SYS | SYS | SYS | FT | TON | TON | TON | TON | TON | TON | TON | TON | TON | LFT | LFT | LFT | CYS | CYS | CYS | TON | SYS | SYS | SYS | SYS | SYS | |
| Mainline | | | | | | | | | | | | | | | | | | | | | 20 | 1036 | 1256 | 2508 | 1725 | 8691 | | | | 831 | | | | | 9941 | | | | |
| Truck Apron | | | | | | | | | | | | | | 339 | | | | | | | | | | | | | | | | | | 139 | | | 399 | | | | |
| Trail Pavement | | | | | | | | | | | 38 | | | | | | | | | | | | | | | 1189 | | | | | 87 | | | | | 997 | | |
| Sidewalk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LINE 'PRB' | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 34+76, RT. | CLASS I | 13.8 | 27.0 | 20/15 | | | | | | | | | | | 86 | | | | | | | | | | | | | | | | | | | | 103 | | | | |
| 42+35, RT. | MOD. CLASS V | 24 | 21.0 | 20/15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 23 | | 68 | | | | |
| 42+50, LT. | MOD. CLASS III | 24 | 30.0 | 30/30 | | | | | | | | | | | | 126 | | | | | | | | | | | | | | | | | | 21 | 126 | | | | |
| LINE 'PRA' | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 64+15 | CLASS V | 24 | 98.0 | 15/25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 94 | | 354 | | | | |
| 66+00 | MOD. CLASS V | 24 | 20.0 | 20/15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 23 | | 68 | | | | |
| 66+04 | CLASS I | 10 | 35.0 | 15/20 | | | | | | | | | | | 69 | | | | | | | | | | | | | | | | | | | | 83 | | | | |
| TOTAL | | | | | | | | | | | 38 | | | 339 | 155 | | | | | | 20 | 1036 | 1256 | 2508 | 1725 | 9880 | | | | 831 | 87 | 139 | 140 | | 11142 | | 997 | | |

# R/W MARKERS

| STATION | OFFSET ft | EACH |
|---|---|---|
| LINE 'PRA' | | |
| 57+83.52 LT. | 21.10 | 1 |
| 57+83.52 LT. | 40.00 | 1 |
| 62+00.00 LT. | 60.00 | 1 |
| 62+00.00 LT. | 110.00 | 1 |
| 64+31.86 LT. | 40.00 | 1 |
| 64+31.86 LT. | 110.00 | 1 |
| 64+57.70 RT. | 35.00 | 1 |
| 64+57.80 RT. | 10.00 | 1 |
| 65+85.00 LT. | 40.00 | 1 |
| 66+20.00 LT. | 40.00 | 1 |
| 68+15.00 LT. | 70.00 | 1 |
| 68+40.00 RT. | 35.00 | 1 |
| 70+65.00 RT. | 80.00 | 1 |
| 71+25.00 LT. | 40.00 | 1 |
| 72+70.00 RT. | 50.00 | 1 |
| 75+00.00 LT. | 12.51 | 1 |
| 75+00.00 LT. | 40.00 | 1 |
| 75+00.00 RT. | 12.74 | 1 |
| 75+00.00 RT. | 50.00 | 1 |
| | | |
| LINE 'PRB' | | |
| 30+75.00 LT. | 10.60 | 1 |
| 30+75.00 LT. | 45.00 | 1 |
| 30+75.00 RT. | 10.39 | 1 |
| 33+55.00 LT. | 45.00 | 1 |
| 34+55.00 RT. | 35.00 | 1 |
| 35+05.00 RT. | 35.00 | 1 |
| 36+00.00 LT. | 90.00 | 1 |
| 36+06.00 RT. | 35.00 | 1 |
| 38+50.00 LT. | 45.00 | 1 |
| 38+85.00 RT. | 65.00 | 1 |
| 42+25.00 RT. | 35.00 | 1 |
| 43+75.00 RT. | 9.75 | 1 |
| 43+75.00 RT. | 35.00 | 1 |
| 44+00.50 LT. | 9.75 | 1 |
| 44+00.24 LT. | 45.00 | 1 |
| | | |
| TOTAL | | 34 |

# SURVEY MONUMENTS

| STATION | EACH: Type B | EACH: Section Corner |
|---|---|---|
| LINE 'PRA' | | |
| 65+07.21 | 1 | |
| P.C. 65+81.36 | 1 | |
| P.I. 67+06.34 | 1 | |
| P.R.C. 68+31.08 | 1 | |
| P.I. 68+54.35 | 1 | |
| P.T. 68+77.42 | 1 | |
| P.I. 69+68.12 | 1 | |
| P.C. 70+46.99 | 1 | |
| P.I. 70+78.38 | 1 | |
| P.R.C. 71+09.26 | 1 | |
| P.I. 72+60.14 | 1 | |
| P.T. 74+10.72 | 1 | |
| 74+39.43 | 1 | |
| | | |
| LINE 'PRB' | | |
| 31+29.45 | 1 | |
| P.C. 33+03.59 | 1 | |
| P.I. 34+10.91 | 1 | |
| P.T. 35+17.67 | 1 | |
| P.C. 35+82.97 | 1 | |
| P.I. 36+22.40 | 1 | |
| P.T. 36+60.84 | 1 | |
| P.I. 37+29.76 | 1 | |
| P.C. 38+17.86 | 1 | |
| P.I. 38+54.34 | 1 | |
| P.R.C. 38+90.02 | 1 | |
| P.I. 40+76.28 | 1 | |
| P.T. 42+62.32 | 1 | |
| 43+34.06 | 1 | |
| | | |
| TOTAL | 27 | |

# MAILBOXES

| LT./RT. | C/L BOX STATION | DESCRIPTION | ASSEMBLY REQ'D.: SINGLE | ASSEMBLY REQ'D.: DOUBLE |
|---|---|---|---|---|
| LT. | 65+57.28 | 1 | 1 | |
| | | | | |
| LT. | 67+75.45 | 1 | 1 | |
| | | | | |
| | | TOTAL | 2 | |

# EARTHWORK SUMMARY TABLE

| | | |
|---|---|---|
| Common Excavation | | |
| LINE 'PR-B' West Leg and East Leg (Sta. 31+29.45 to Sta. 36+54.75 & Sta. 38+04.75 to Sta. 43+34.06) | 2,420 | CYS |
| Line 'PR-A' North Leg and South Leg ( Sta. 65+07.21 to Sta. 68+93.12 & Sta. 70+43.12 to Sta. 74+39.43) | 1,414 | CYS |
| Roundabout | 1031 | CYS |
| Subtotal Common Excavation | 4,865 | CYS |
| Common Excavation (Undistributed) | 0 | CYS |
| **Total Common Excavation** | 4,865 | CYS |
| | | |
| Fill | | |
| LINE 'PR-B' West Leg and East Leg (Sta. 31+29.45 to Sta. 36+54.75 & Sta. 38+04.75 to Sta. 43+34.06) | 1,348 | CYS |
| Line 'PR-A' North Leg and South Leg ( Sta. 65+07.21 to Sta. 68+93.12 & Sta. 70+43.12 to Sta. 74+39.43) | 1,277 | CYS |
| Roundabout | 708 | CYS |
| | | |
| Subtotal Fill | 3,333 | CYS |
| Subtotal + 25% Swell | 4,167 | CYS |
| Excess Excavation | 698 | CYS |
| **Total Borrow Required** | 0 | CYS |
| | | |
| Structure Backfill Type I | 3,462 | CYS |

# SODDING SUMMARY TABLE

| LOCATION: FROM STATION | LOCATION: TO STATION | LEFT | CROSS | RIGHT | SODDING, NURSERY: FOR TREE LAWN | FOR DITCHES | FOR MEDIAN | FOR SHOULDER BREAK | FOR CENTER ISLAND | FOR LAWNS |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | SYS | SYS | SYS | SYS | SYS | SYS |
| 36+26.86 | 37+04.22 | | | X | 54 | | | | | |
| 36+27.39 | 36+91.72 | X | | | 53 | | | | | |
| 37+56.29 | 38+30.43 | X | | | 56 | | | | | |
| 37+78.60 | 38+31.55 | | | X | 44 | | | | | |
| 38+41.54 | 43+34.06 | X | | | 270 | | | | | |
| Total | | | | | 477 | | | | | |

DLZ

NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: MDD 1/2020 DRAWN: DPH 1/2020

CHECKED: BMS 1/2020 CHECKED: MDD 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS TABLES

| SCALE | ROAD FILE |
|---|---|
| NONE | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 38 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

X:\Projects\GFL\2017\1763\125290\Civil\Dgn\SHEETS\1252TB01.dgn
X:\Projects\GFL\2017\1763\125290\Civil\

NOTES:
1. CONTRACTOR TO FIELD VERIFY UPSTREAM INVERT BEFORE PLACING.

* TOP OF CASTING ELEVATIONS FOR CASTINGS IN CURB LINE ARE CALCULATED 0.02 FT BELOW THE GUTTER LINE ELEVATION.

# STRUCTURE DATA

| STRUCTURE NUMBER | LOCATION | | | | | SIZE | DESCRIPTION | | LENGTH | SKEW | FLOWLINE | | | TOP OF CASTING | SERVICE LIFE | SITE DESIGNATION | pH | BACKFILL METHOD | STRUCTURE BACKFILL | | FLOWABLE BACKFILL | | REVETMENT RIP-RAP | CONCRETE, CLASS A, FOR STR. | VIDEO INSPECTION | PIPE END SECTION | GRATED BOX END SECTION | | | SAFETY METAL END SECTION | | CONNECT TO STR. | NOTES/REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | STATION | LEFT | RIGHT | CROSS | OFFSET | | PIPE TYPE | MANHOLE, INLET, CATCH BASIN, OR SPECIALTY STRUCTURE | | | COVER | UPSTREAM INVERT | DOWNSTREAM INVERT | | | | | | TYPE | CYS | TYPE | CYS | TON | EA | LFT | EA | TYPE | SLOPE | EA | SLOPE | EA | | |
| | | | | | FT | IN | | | LFT | | FT | ELEV. | ELEV. | ELEV. | YR | | | | TYPE | CYS | TYPE | CYS | TON | EA | LFT | EA | TYPE | SLOPE | EA | SLOPE | EA | | |
| LINE | PRA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 105 | 73+20 | | X | | | 12 | 2 | INLET TYPE B-15 | 36 | | 1.9 | 879.64 | 879.46 | 883.63 | 75 | NA | 7.0 | 1 | 1 | 10 | | | | | | | | | | | | 106 | |
| 106 | 73+20 | X | | | | 12 | 2 | INLET TYPE C-15 | 10 | | 2.3 | 879.45 | 879.42 | 883.81 | 75 | NA | 7.0 | 1 | 1 | 3 | | | | | | | | | | | | 107 | |
| 107 | 73+20 | X | | | 23 | 12 | 2 | MH TYPE C-4 | 106 | | 4.1 | 878.93 | 878.42 | 884.37 | 75 | NA | 7.0 | 1 | 1 | 57 | | | | | | | | | | | | 110 | |
| 108 | 72+15 | | X | | | 12 | 2 | INLET TYPE B-15 | 43 | | 1.7 | 879.00 | 878.79 | 882.87 | 75 | NA | 7.0 | 1 | 1 | 11 | | | | | | | | | | | | 109 | |
| 109 | 72+15 | X | | | | 12 | 2 | INLET TYPE C-15 | 10 | | 2.2 | 878.79 | 878.76 | 882.98 | 75 | NA | 7.0 | 1 | 1 | 3 | | | | | | | | | | | | 110 | |
| 110 | 72+15 | X | | | 28 | 15 | 2 | MH TYPE C-4 | 60 | | 3.8 | 878.18 | 877.93 | 883.54 | 75 | NA | 7.0 | 1 | 1 | 34 | | | | | | | | | | | | 115 | |
| 111 | 71+66 | | X | | | 12 | 2 | INLET TYPE C-15 | 10 | | 1.5 | 878.80 | 878.77 | 882.61 | 75 | NA | 7.0 | 1 | 1 | 2 | | | | | | | | | | | | 112 | |
| 112 | 71+56 | | X | | | 12 | 2 | INLET TYPE B-15 | 48 | | 1.6 | 878.77 | 878.53 | 882.56 | 75 | NA | 7.0 | 1 | 1 | 12 | | | | | | | | | | | | 114 | |
| 113 | 71+66 | X | | | | 12 | 2 | INLET TYPE C-15 | 10 | | 1.8 | 878.56 | 878.53 | 882.74 | 75 | NA | 7.0 | 1 | 1 | 3 | | | | | | | | | | | | 114 | |
| 114 | 71+56 | X | | | | 12 | 2 | INLET TYPE C-15 | 9 | | 1.8 | 878.81 | 878.78 | 882.62 | 75 | NA | 7.0 | 1 | 1 | 2 | | | | | | | | | | | | 115 | |
| 115 | 71+56 | X | | | 32 | 18 | 2 | MH TYPE C-4 | 51 | | 3.6 | 877.69 | 877.55 | 883.17 | 75 | NA | 7.0 | 1 | 1 | 31 | | | | | | | | | | | | 116 | |
| 116 | 71+07 | X | | | 45 | 18 | 2 | INLET TYPE G-7 | 34 | | 4.3 | 877.55 | 877.47 | 882.80 | 75 | NA | 7.0 | 1 | 1 | 24 | | | | | | | | | | | | 119 | |
| 117 | 70+60 | | X | | | 12 | 2 | INLET TYPE B-15 | 76 | | 1.9 | 879.38 | 879.03 | 883.39 | 75 | NA | 7.0 | 1 | 1 | 21 | | | | | | | | | | | | 118 | |
| 118 | 70+55 | X | | | | 12 | 2 | INLET TYPE C-15 | 18 | | 2.6 | 879.03 | 878.96 | 883.50 | 75 | NA | 7.0 | 1 | 1 | 6 | | | | | | | | | | | | 119 | |
| 119 | 70+63 | X | | | 54 | 24 | 2 | MH TYPE C-4 | 158 | | 8.5 | 874.00 | 873.00 | 884.29 | 75 | NA | 7.0 | 1 | 1 | 256 | | | | | | | | | | | | 120 | |
| 120 | 69+08 | X | | | 77 | 24 | 2 | MH TYPE J-4 | 46 | | 9.4 | 872.50 | 872.25 | 884.24 | 75 | NA | 7.0 | 1 | 1 | 83 | | | | | | | | | | | | 125 | |
| 123 | 68+85 | | X | | | 24 | 2 | MOD. MH TYPE J-15 | 76 | | 7.9 | 872.08 | 871.94 | 883.33 | 75 | NA | 7.0 | 1 | 1 | 114 | | | | | | | | | | | | 124 | |
| 124 | 68+77 | X | | | | 24 | 2 | MOD. MH TYPE J-15 | 18 | | 8.3 | 871.94 | 871.91 | 883.22 | 75 | NA | 7.0 | 1 | 1 | 28 | | | | | | | | | | | | 125 | |
| 125 | 68+71 | X | | | 53 | 30 | 2 | MH TYPE J-4 | 110 | | 8.7 | 871.60 | 871.44 | 883.96 | 75 | NA | 7.0 | 1 | 1 | 212 | | | | | | | | | | | | 128 | |
| 126 | 67+71 | | X | | | 12 | 2 | INLET TYPE B-15 | 40 | | 5.1 | 874.34 | 874.14 | 881.70 | 75 | NA | 7.0 | 1 | 1 | 27 | | | | | | | | | | | | 127 | |
| 127 | 67+71 | X | | | | 12 | 2 | INLET TYPE C-15 | 9 | | 5.5 | 874.14 | 874.11 | 881.66 | 75 | NA | 7.0 | 1 | 1 | 7 | | | | | | | | | | | | 128 | |
| 128 | 67+71 | X | | | 30 | 30 | 2 | MH TYPE J-4 | 100 | | 7.8 | 871.44 | 871.30 | 882.26 | 75 | NA | 7.0 | 1 | 1 | 173 | | | | | | | | | | | | 131 | |
| 129 | 66+71 | | X | | | 12 | 2 | INLET TYPE B-15 | 29 | | 4.1 | 874.79 | 874.65 | 881.20 | 75 | NA | 7.0 | 1 | 1 | 16 | | | | | | | | | | | | 130 | |
| 130 | 66+71 | X | | | | 12 | 2 | INLET TYPE C-15 | 9 | | 4.5 | 874.65 | 874.62 | 881.14 | 75 | NA | 7.0 | 1 | 1 | 5 | | | | | | | | | | | | 131 | |
| 131 | 66+71 | X | | | 25 | 30 | 2 | MH TYPE J-4 | 47 | | 7.3 | 871.30 | 871.23 | 881.69 | 75 | NA | 7.0 | 1 | 1 | 76 | | | | | | | | | | | | 133 | |
| 132 | 66+31 | X | | | | 12 | 2 | INLET TYPE C-15 | 13 | | 1.8 | 876.95 | 876.91 | 880.93 | 75 | NA | 7.0 | 1 | 1 | 3 | | | | | | | | | | | | 133 | |
| 133 | 66+22 | X | | | 24 | 30 | 2 | MOD. INLET TYP G-7 | 111 | | 6.6 | 871.23 | 871.07 | 881.20 | 75 | NA | 7.0 | 1 | 1 | 163 | | | | | | | | | | | | 136 | |
| 134 | 65+11 | | X | | | 12 | 2 | INLET TYPE B-15 | 22 | | 3.1 | 873.93 | 873.82 | 879.23 | 75 | NA | 7.0 | 1 | 1 | 9 | | | | | | | | | | | | 135 | |
| 135 | 65+11 | X | | | | 12 | 2 | INLET TYPE C-15 | 9 | | 4.5 | 873.82 | 873.80 | 879.25 | 75 | NA | 7.0 | 1 | 1 | 5 | | | | | | | | | | | | 136 | |
| 136 | 65+11 | X | | | 20 | 30 | 2 | MH TYPE J-4 | 124 | | 4.4 | 871.07 | 870.90 | 879.92 | 75 | NA | 7.0 | 1 | 1 | 127 | | | | | | | | | | | | 137 | |
| 137 | 63+89 | X | | | 23 | 12 | 2 | MOD. MH TYPE J-4 | 15 | | 4.4 | 870.90 | 870.88 | 876.47 | 75 | NA | 7.0 | 1 | 1 | 9 | | | | | | | | | | | | 137A | |
| 137 | 63+89 | X | | | 23 | 30 | 2 | | 17 | | 2.6 | 870.90 | 870.86 | 876.47 | 75 | NA | 7.0 | 1 | 1 | 12 | | | | | | | | | | | | 137B | |
| 137A | 63+92 | X | | | 37 | 12 | 2 | Water Quality Unit | 16 | | 4.3 | 870.88 | 870.86 | 876.54 | 75 | NA | 7.0 | 1 | 1 | 9 | | | | | | | | | | | | 137B | |
| 137B | 63+77 | X | | | 34 | 30 | 2 | MH TYPE J-4 | 14 | | 1.2 | 870.86 | 870.67 | 876.17 | 75 | NA | 7.0 | 1 | 1 | 6 | | | | | 1 | | | | | | | Basin | |
| 138 | 62+31 | X | | | 44 | 30 | 2 | Basin Control | 273 | | 4.2 | 866.50 | 866.02 | 873.80 | 75 | NA | 7.0 | 1 | 1 | 269 | | | | | | | | | | | | 139 | |
| 139 | 59+53 | X | | | 37 | 30 | 2 | MH TYPE J-4 | 190 | | 3.6 | 866.02 | 865.73 | 872.83 | 75 | NA | 7.0 | 1 | 1 | 165 | | | | | | | | | | | | 140 | |
| 140 | 57+70 | X | | | 20 | 30 | 2 | MH TYPE J-4 | 283 | | 2.8 | 865.73 | 865.32 | 871.87 | 75 | NA | 7.0 | 1 | 1 | 203 | | | | | | | | | | | | 141 | |
| 141 | 54+88 | X | | | 24 | 30 | 2 | MH TYPE J-4 | 188 | | 2.4 | 865.32 | 865.04 | 870.42 | 75 | NA | 7.0 | 1 | 1 | 121 | | | | | | | | | | | | 142 | |
| 142 | 53+00 | X | | | 19 | 30 | 2 | MH TYPE J-4 | 29 | | 1.3 | 865.04 | 865.00 | 870.52 | 75 | NA | 7.0 | 1 | 1 | 13 | | | | | 1 | | | | | | | OUT | |

| STRUCTURE NUMBER | LOCATION | | | | | SIZE | DESCRIPTION | | LENGTH | SKEW | FLOWLINE | | | TOP OF CASTING | SERVICE LIFE | SITE DESIGNATION | pH | BACKFILL METHOD | STRUCTURE BACKFILL | | FLOWABLE BACKFILL | | REVETMENT RIP-RAP | CONCRETE, CLASS A, FOR STR. | VIDEO INSPECTION | PIPE END SECTION | GRATED BOX END SECTION | | | SAFETY METAL END SECTION | | CONNECT TO STR. | NOTES/REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | STATION | LEFT | RIGHT | CROSS | OFFSET | | PIPE TYPE | MANHOLE, INLET, CATCH BASIN, OR SPECIALTY STRUCTURE | | | COVER | UPSTREAM INVERT | DOWNSTREAM INVERT | | | | | | TYPE | CYS | TYPE | CYS | TON | EA | LFT | EA | TYPE | SLOPE | EA | SLOPE | EA | | |
| | | | | | FT | IN | | | LFT | | FT | ELEV. | ELEV. | ELEV. | YR | | | | TYPE | CYS | TYPE | CYS | TON | EA | LFT | EA | TYPE | SLOPE | EA | SLOPE | EA | | |
| LINE | PRB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 144 | 43+66 | X | | | 20.0 | 12 | 2 | INLET TYPE G-7 | 36 | | 0.5 | 875.48 | 875.40 | 876.48 | 75 | NA | 7.0 | 1 | 1 | 4 | | | | | | | | | | | | 40 | |
| 40 | 43+31 | X | | | | 12 | 2 | INLET TYPE B-15 | 22 | | 1.1 | 874.40 | 874.29 | 877.78 | 75 | NA | 7.0 | 1 | 1 | 4 | | | | | | | | | | | | 41 | |
| 41 | 43+31 | | X | | | 12 | 2 | INLET TYPE C-15 | 9 | | 1.3 | 874.28 | 874.25 | 877.78 | 75 | NA | 7.0 | 1 | 1 | 2 | | | | | | | | | | | | 42 | |
| 42 | 43+31 | | X | | 20 | 15 | 2 | MH TYPE C-4 | 143 | | 2.8 | 874.24 | 873.82 | 878.00 | 75 | NA | 7.0 | 1 | 1 | 62 | | | | | | | | | | | | 39 | |
| 145 | 42+02 | X | | | 35 | 12 | 2 | INLET TYPE G-7 | 26 | | 1.2 | 875.40 | 875.23 | 877.54 | 75 | NA | 7.0 | 1 | 1 | 5 | | | | | | | | | | | | 37 | |
| 37 | 41+88 | X | | | | 12 | 2 | INLET TYPE B-15 | 27 | | 1.5 | 874.23 | 874.11 | 878.00 | 75 | NA | 7.0 | 1 | 1 | 6 | | | | | | | | | | | | 38 | |
| 38 | 41+88 | | X | | | 12 | 2 | INLET TYPE C-15 | 8 | | 1.9 | 874.05 | 874.02 | 877.88 | 75 | NA | 7.0 | 1 | 1 | 2 | | | | | | | | | | | | 39 | |
| 39 | 41+88 | | X | | 22 | 15 | 2 | MH TYPE C-4 | 52 | | 3.2 | 873.82 | 873.68 | 878.59 | 75 | NA | 7.0 | 1 | 1 | 25 | | | | | | | | | | | | 36 | |
| 34 | 41+36 | X | | | | 12 | 2 | INLET TYPE B-15 | 29 | | 0.9 | 874.59 | 874.45 | 877.80 | 75 | NA | 7.0 | 1 | 1 | 5 | | | | | | | | | | | | 35 | |
| 35 | 41+36 | | X | | | 12 | 2 | INLET TYPE C-15 | 9 | | 1.3 | 874.45 | 874.42 | 877.68 | 75 | NA | 7.0 | 1 | 1 | 2 | | | | | | | | | | | | 36 | |
| 36 | 41+36 | | X | | 24 | 15 | 2 | MH TYPE C-4 | 45 | | 3.3 | 873.68 | 873.55 | 878.38 | 75 | NA | 7.0 | 1 | 1 | 22 | | | | | | | | | | | | 33 | |
| 31 | 40+91 | X | | | | 12 | 2 | INLET TYPE B-15 | 35 | | 1.2 | 874.40 | 874.23 | 877.89 | 75 | NA | 7.0 | 1 | 1 | 7 | | | | | | | | | | | | 32 | |
| 32 | 40+91 | | X | | | 12 | 2 | INLET TYPE C-15 | 8 | | 1.6 | 874.23 | 874.21 | 877.81 | 75 | NA | 7.0 | 1 | 1 | 2 | | | | | | | | | | | | 33 | |
| 33 | 40+91 | | X | | 26 | 15 | 2 | MH TYPE C-4 | 86 | | 3.7 | 873.55 | 873.31 | 878.50 | 75 | NA | 7.0 | 1 | 1 | 47 | | | | | | | | | | | | 30 | |
| 28 | 40+05 | X | | | | 12 | 2 | INLET TYPE B-15 | 43 | | 1.3 | 875.50 | 875.29 | 879.00 | 75 | NA | 7.0 | 1 | 1 | 9 | | | | | | | | | | | | 29 | |
| 29 | 40+05 | | X | | | 12 | 2 | INLET TYPE C-15 | 10 | | 1.3 | 875.29 | 875.26 | 879.05 | 75 | NA | 7.0 | 1 | 1 | 2 | | | | | | | | | | | | 30 | |
| 30 | 40+05 | | X | | 30 | 18 | 2 | MH TYPE C-4 | 90 | | 4.9 | 873.06 | 872.89 | 878.82 | 75 | NA | 7.0 | 1 | 1 | 72 | | | | | | | | | | | | 27 | |
| 25 | 39+15 | X | | | | 12 | 2 | INLET TYPE B-15 | 50 | | 1.6 | 876.90 | 876.65 | 880.72 | 75 | NA | 7.0 | 1 | 1 | 12 | | | | | | | | | | | | 26 | |
| 26 | 39+15 | | X | | | 12 | 2 | INLET TYPE C-15 | 9 | | 1.7 | 876.65 | 876.63 | 880.75 | 75 | NA | 7.0 | 1 | 1 | 2 | | | | | | | | | | | | 27 | |
| 27 | 39+15 | | X | | 34 | 18 | 2 | MH TYPE C-4 | 100 | | 7.4 | 872.89 | 872.69 | 880.51 | 75 | NA | 7.0 | 1 | 1 | 121 | | | | | | | | | | | | 24 | |
| 22 | 38+14 | X | | | | 12 | 2 | INLET TYPE B-15 | 78 | | 1.8 | 878.90 | 878.54 | 882.98 | 75 | NA | 7.0 | 1 | 1 | 21 | | | | | | | | | | | | 23 | |
| 23 | 38+24 | | X | | | 12 | 2 | INLET TYPE C-15 | 18 | | 2.2 | 878.54 | 878.47 | 882.66 | 75 | NA | 7.0 | 1 | 1 | 6 | | | | | | | | | | | | 24 | |
| 24 | 38+29 | | X | | 54 | 24 | 2 | MH TYPE C-4 | 57 | | 8.9 | 872.19 | 872.08 | 883.44 | 75 | NA | 7.0 | 1 | 1 | 97 | | | | | | | | | | | | 123 | |
| 5 | 31+85 | X | | | | 12 | 2 | INLET TYPE B-15 | 50 | | 1.4 | 874.75 | 874.61 | 878.59 | 75 | NA | 7.0 | 1 | 1 | 11 | | | | | | | | | | | | 6 | |
| 6 | 31+35 | X | | | | 12 | 2 | INLET TYPE C-15 | 24 | | 1.3 | 874.61 | 874.55 | 878.21 | 75 | NA | 7.0 | 1 | 1 | 5 | | | | | | | | | | | | 7 | |
| 7 | 31+35 | | X | | | 12 | 2 | INLET TYPE C-15 | 8 | | 1.7 | 874.54 | 874.53 | 878.21 | 75 | NA | 7.0 | 1 | 1 | 2 | | | | | | | | | | | | 8 | |
| 8 | 31+35 | | X | | 20 | 12 | 2 | MH TYPE C-4 | 170 | | 4.0 | 874.53 | 874.03 | 878.81 | 75 | NA | 7.0 | 1 | 1 | 90 | | | | | | | | | | | | 11 | |
| 9 | 33+05 | X | | | | 12 | 2 | INLET TYPE B-15 | 30 | | 1.7 | 875.70 | 875.55 | 879.66 | 75 | NA | 7.0 | 1 | 1 | 8 | | | | | | | | | | | | 10 | |
| 10 | 33+05 | | X | | | 12 | 2 | INLET TYPE C-15 | 9 | | 2.1 | 875.54 | 875.52 | 879.64 | 75 | NA | 7.0 | 1 | 1 | 3 | | | | | | | | | | | | 11 | |
| 11 | 33+05 | | X | | 24 | 15 | 2 | MH TYPE C-4 | 107 | | 5.8 | 873.78 | 873.47 | 880.18 | 75 | NA | 7.0 | 1 | 1 | 91 | | | | | | | | | | | | 14 | |
| 12 | 34+09 | X | | | | 12 | 2 | INLET TYPE B-15 | 40 | | 1.5 | 876.75 | 876.55 | 880.46 | 75 | NA | 7.0 | 1 | 1 | 9 | | | | | | | | | | | | 13 | |
| 13 | 34+09 | | X | | | 12 | 2 | INLET TYPE C-15 | 9 | | 2.3 | 876.55 | 876.53 | 880.53 | 75 | NA | 7.0 | 1 | 1 | 3 | | | | | | | | | | | | 14 | |
| 14 | 34+09 | | X | | 29 | 15 | 2 | MH TYPE C-4 | 100 | | 7.3 | 873.47 | 873.19 | 881.73 | 75 | NA | 7.0 | 1 | 1 | 108 | | | | | | | | | | | | 17 | |
| 15 | 35+04 | X | | | | 12 | 2 | INLET TYPE B-15 | 48 | | 1.6 | 877.45 | 877.21 | 881.27 | 75 | NA | 7.0 | 1 | 1 | 12 | | | | | | | | | | | | 16 | |
| 16 | 35+06 | | X | | | 12 | 2 | INLET TYPE C-15 | 9 | | 2.4 | 877.21 | 877.19 | 881.29 | 75 | NA | 7.0 | 1 | 1 | 3 | | | | | | | | | | | | 17 | |
| 17 | 35+06 | | X | | 34 | 18 | 2 | MH TYPE C-4 | 49 | | 8.1 | 872.94 | 872.85 | 882.55 | 75 | NA | 7.0 | 1 | 1 | 65 | | | | | | | | | | | | 20 | |
| 18 | 35+54 | X | | | | 12 | 2 | INLET TYPE B-15 | 52 | | 1.5 | 878.15 | 877.89 | 881.96 | 75 | NA | 7.0 | 1 | 1 | 12 | | | | | | | | | | | | 19 | |
| 19 | 35+54 | | X | | | 12 | 2 | INLET TYPE C-15 | 9 | | 2.2 | 877.89 | 877.87 | 881.78 | 75 | NA | 7.0 | 1 | 1 | 3 | | | | | | | | | | | | 20 | |
| 20 | 35+54 | | X | | 36 | 18 | 2 | MH TYPE C-4 | 64 | | 9.0 | 872.85 | 872.73 | 883.04 | 75 | NA | 7.0 | 1 | 1 | 95 | | | | | | | | | | | | 122 | |
| 122 | 36+36 | | X | | 57 | 18 | 2 | MH TYPE C-4 | 26 | | 9.8 | 872.70 | 872.50 | 884.04 | 75 | NA | 7.0 | 1 | 1 | 42 | | | | | | | | | | | | 120 | |
| 121 | 36+45 | | X | | | 12 | 2 | MOD. MH TYPE J-15 | 18 | | 2.6 | 878.80 | 878.58 | 883.25 | 75 | NA | 7.0 | 1 | 1 | 6 | | | | | | | | | | | | 122 | |
| 21 | 36+34 | X | | | | 12 | 2 | INLET TYPE B-15 | 76 | | 2.5 | 879.88 | 879.00 | 883.13 | 75 | NA | 7.0 | 1 | 1 | 26 | | | | | | | | | | | | 121 | |

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DLZ

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DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

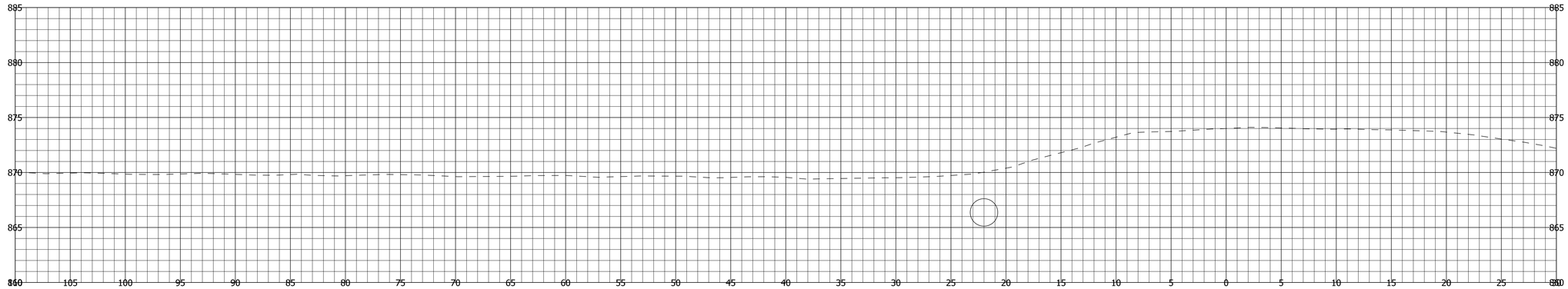
DESIGNED: PH 1/2020 DRAWN: LJS 1/2020

CHECKED: PH 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

STRUCTURE DATA TABLE

| SCALE | ROAD FILE |
|---|---|
| NOT TO SCALE | N/A |
| | DESIGNATION |
| | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 39 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




54+00

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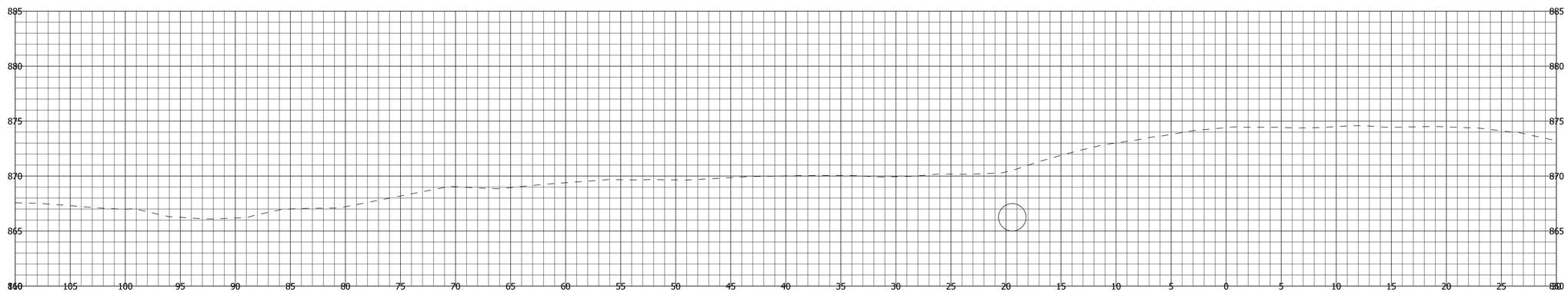
Vc = 0 CYS Vf = 0 CYS




53+00

Ac = 0.0 SFT Af = 0.0 SFT
Vc = 0 CYS Vf = 0 CYS

STA. 53+00 TO STA. 54+00

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DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

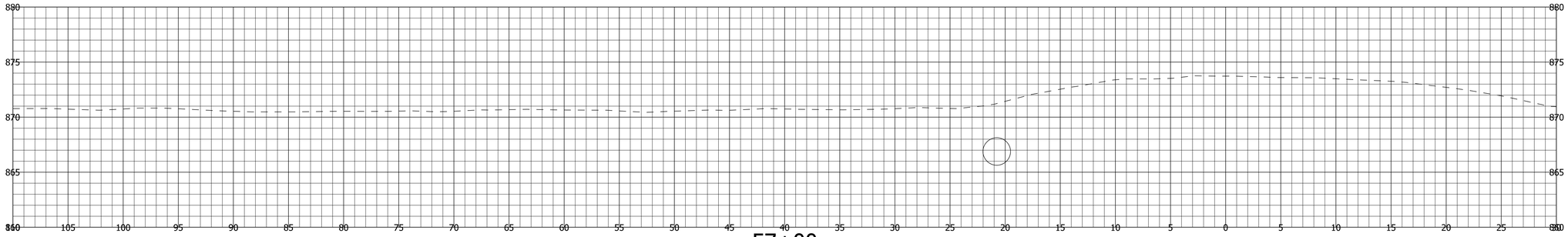
DESIGNED: PH 1/2020 DRAWN: DPH 1/2020

CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
LINE 'A'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 40 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




57+00

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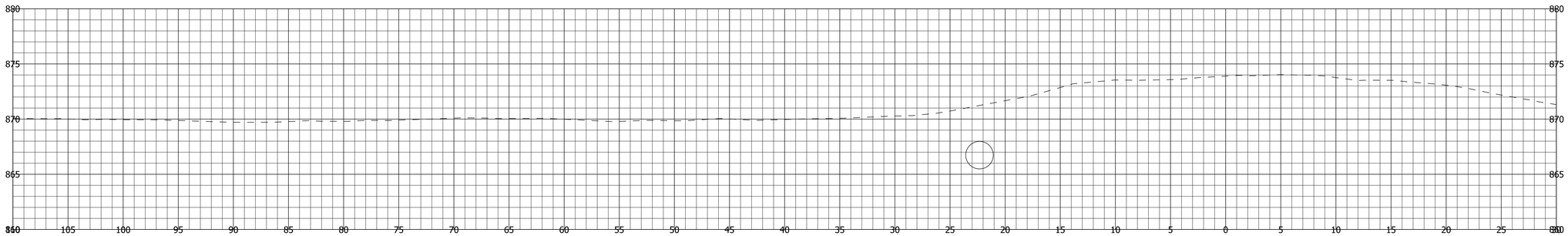


56+00

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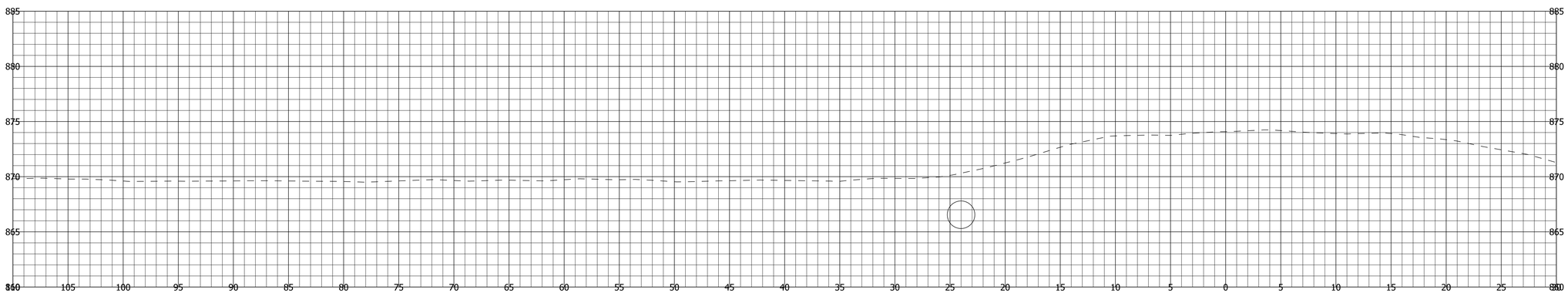
Vc = 0 CYS Vf = 0 CYS




55+00

Ac = 0.0 SFT Af = 0.0 SFT
Vc = 0 CYS Vf = 0 CYS

STA. 55+00 TO STA. 57+00

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DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

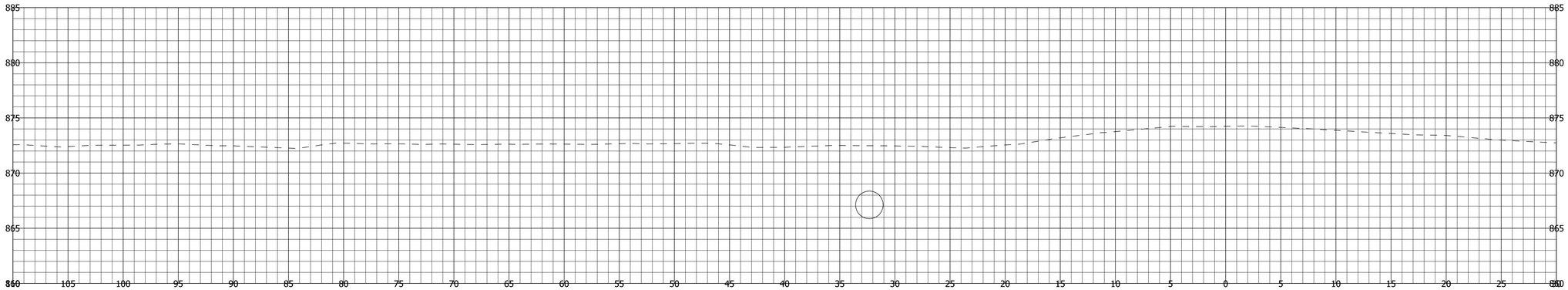
DESIGNED: PH 1/2020 DRAWN: DPH 1/2020

CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

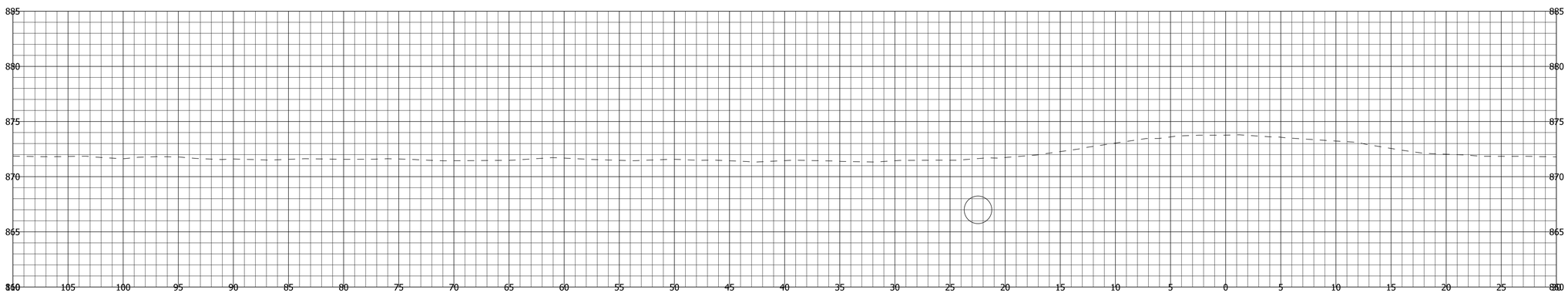
CROSS SECTIONS
LINE 'A'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 41 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




59+00

Ac = 0.0 SFT Af = 0.0 SFT
Vc = 0 CYS Vf = 0 CYS




58+00

Ac = 0.0 SFT Af = 0.0 SFT
Vc = 0 CYS Vf = 0 CYS

STA. 58+00 TO STA. 59+00

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RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

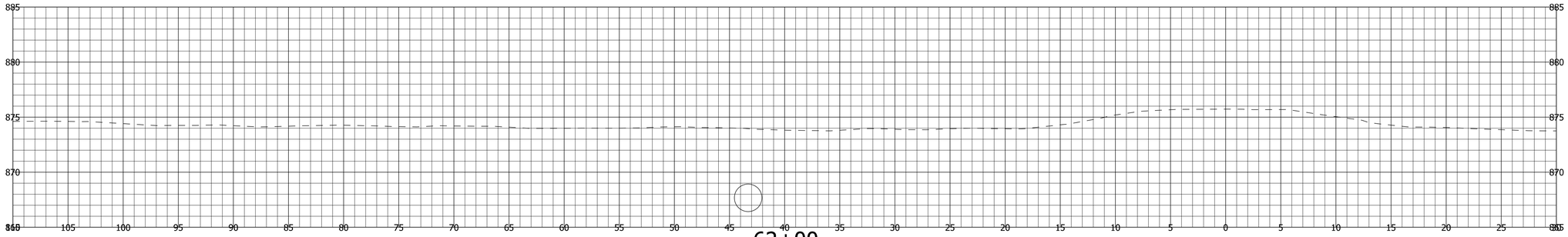
DESIGNED: PH 1/2020 DRAWN: DPH 1/2020

CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

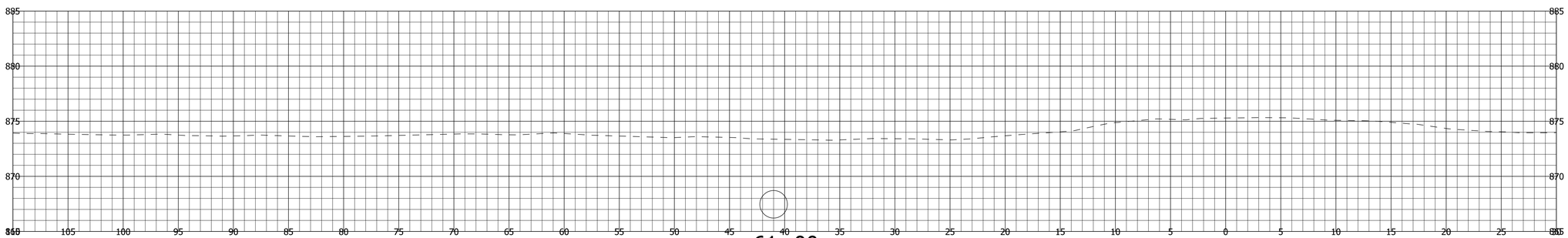
CROSS SECTIONS
LINE 'A'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 42 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |



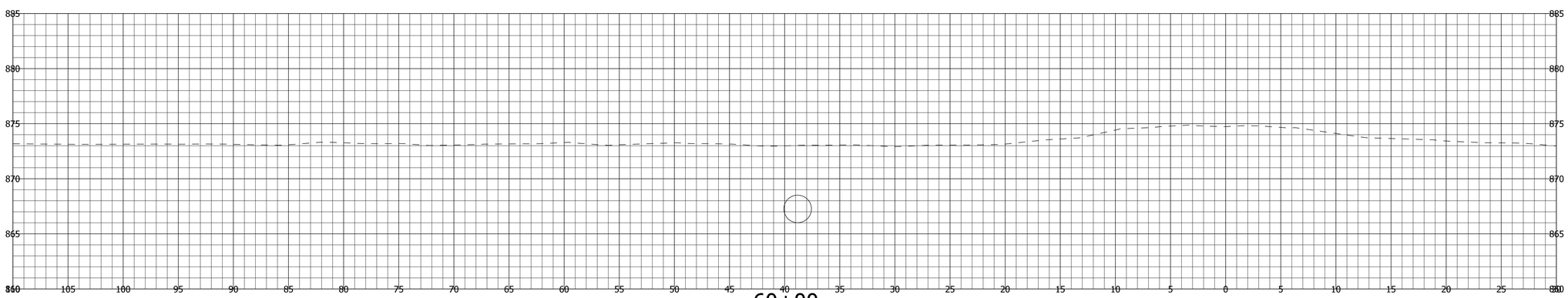

62+00

Ac = 0.0 SFT Af = 0.0 SFT
Vc = 0 CYS Vf = 0 CYS




61+00

Ac = 0.0 SFT Af = 0.0 SFT
Vc = 0 CYS Vf = 0 CYS




60+00

Ac = 0.0 SFT Af = 0.0 SFT
Vc = 0 CYS Vf = 0 CYS

STA. 60+00 TO STA. 62+00

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RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

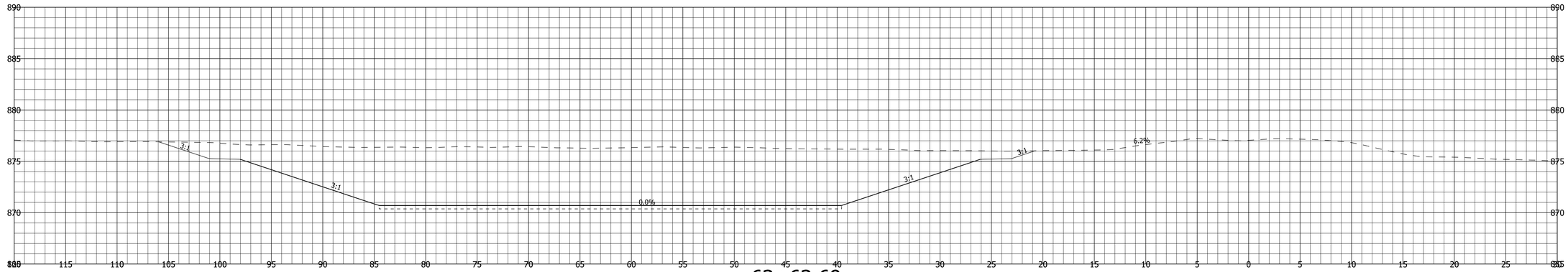
DESIGNED: PH 1/2020 DRAWN: DPH 1/2020

CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

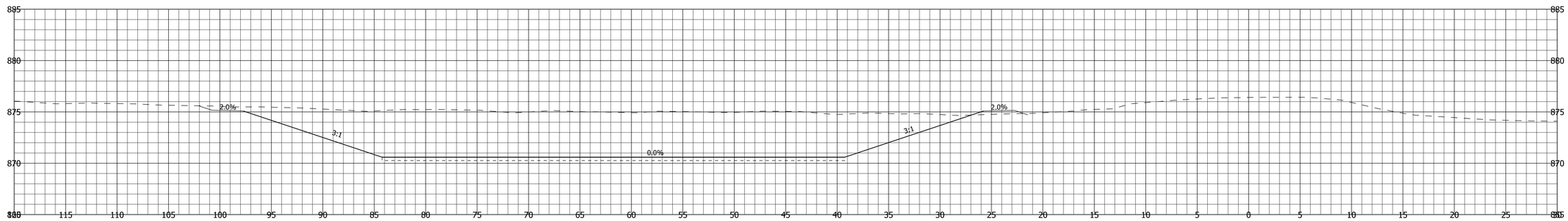
CROSS SECTIONS
LINE 'A'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 43 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |



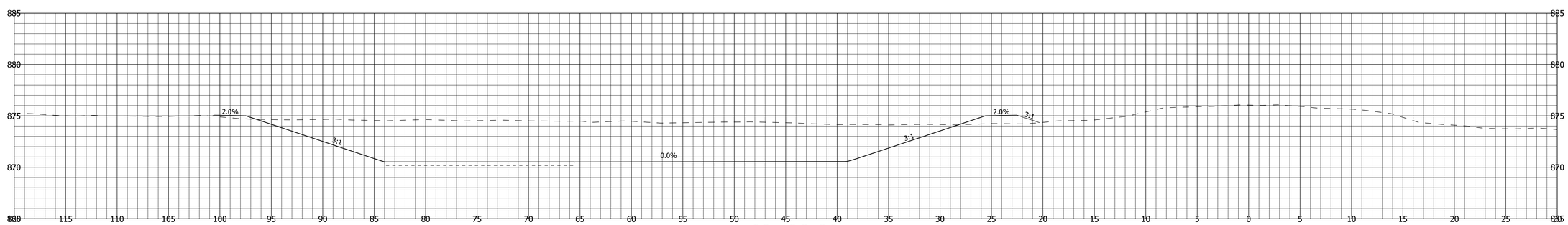

63+63.69

Ac = 265.2 SFT Af = 0.0 SFT
Vc = 737 CYS Vf = 2 CYS




63+00

Ac = 276.5 SFT Af = 1.4 SFT
Vc = 478 CYS Vf = 6 CYS




62+28.80

Ac = 226.7 SFT Af = 5.4 SFT
Vc = 204 CYS Vf = 5 CYS

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STA. 62+48.7000 TO STA. 63+73.5000

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RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

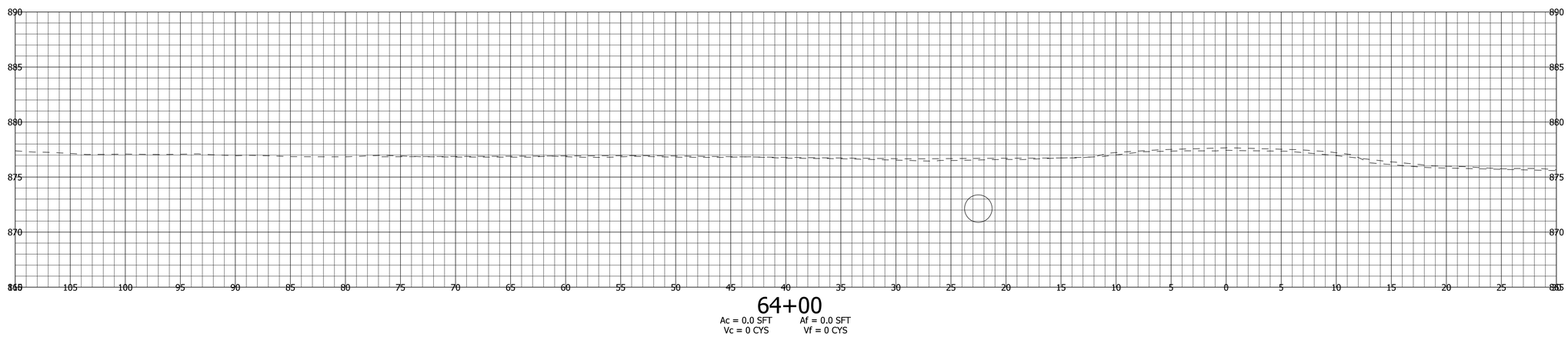
DESIGNED: PH 1/2020 DRAWN: DPH 1/2020

CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
LINE 'A'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 44 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




STA. 64+00 TO STA. 64+00

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DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

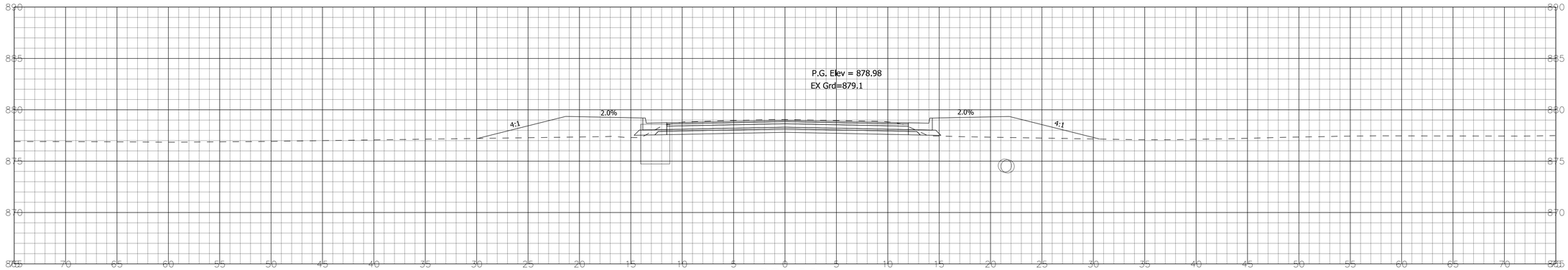
DESIGNED: PH 1/2020 DRAWN: DPH 1/2020

CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

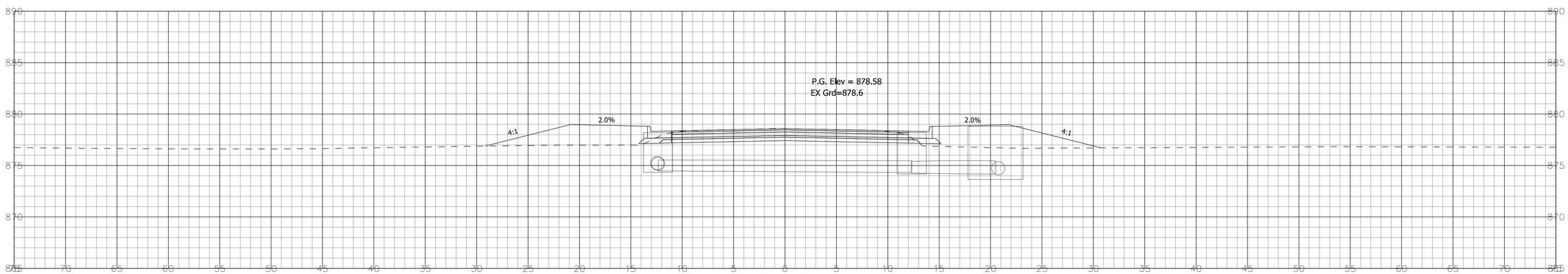
CROSS SECTIONS
LINE 'A'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 45 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




## 32+00

Ac = 30.5 SFT  Af = 45.7 SFT
Vc = 54 CYS  Vf = 87 CYS




## 31+50

Ac = 28.3 SFT  Af = 48.2 SFT
Vc = 0 CYS  Vf = 0 CYS

STA. 31+29.45
BEGIN PROJECT

STA. 31+50 TO STA. 32+00

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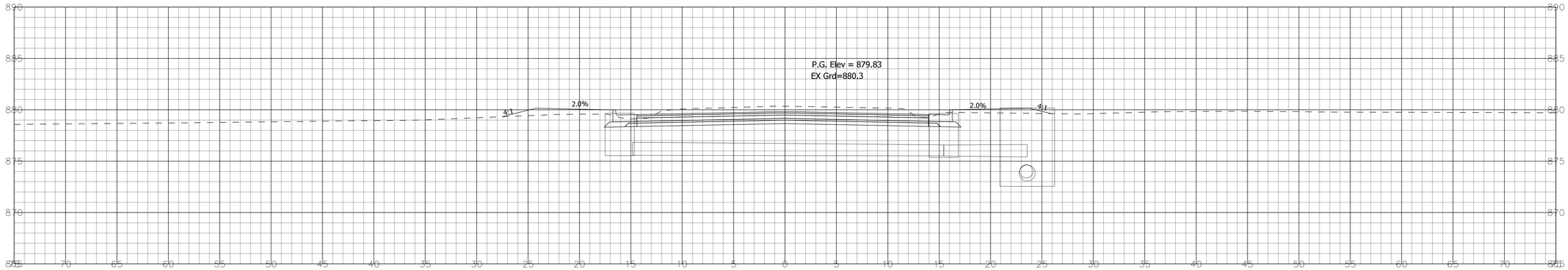
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: PH 1/2020  DRAWN: DPH 1/2020
CHECKED: RAC 1/2020  CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

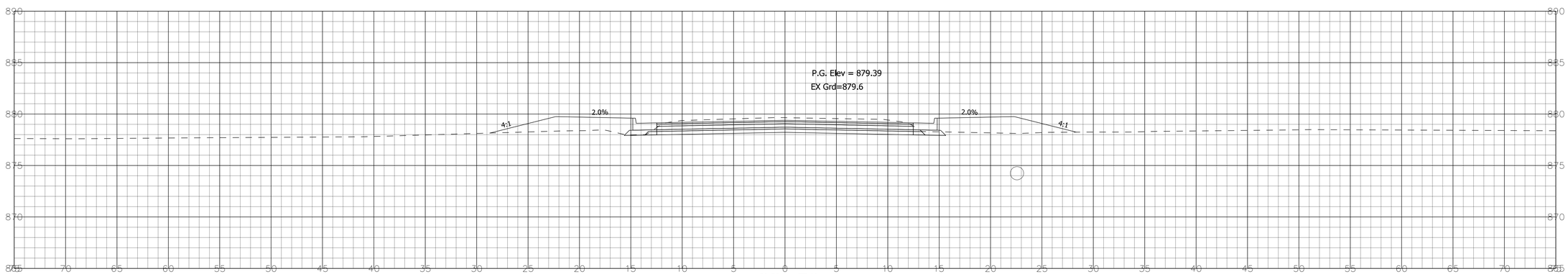
CROSS SECTIONS
LINE 'PRB'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 46 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




## 33+00

Ac = 49.9 SFT  Af = 5.6 SFT
Vc = 79 CYS  Vf = 31 CYS




## 32+50

Ac = 36.0 SFT  Af = 27.4 SFT
Vc = 62 CYS  Vf = 68 CYS

STA. 32+50 TO STA. 33+00

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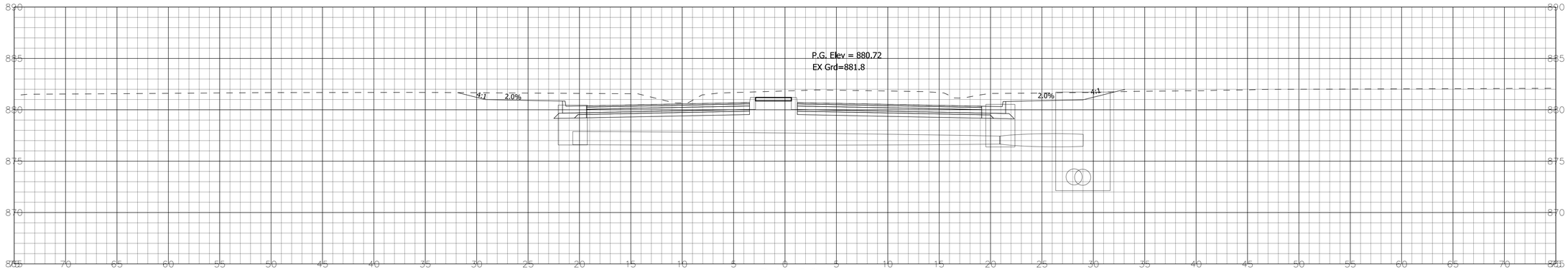
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: PH 1/2020  DRAWN: DPH 1/2020
CHECKED: RAC 1/2020  CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

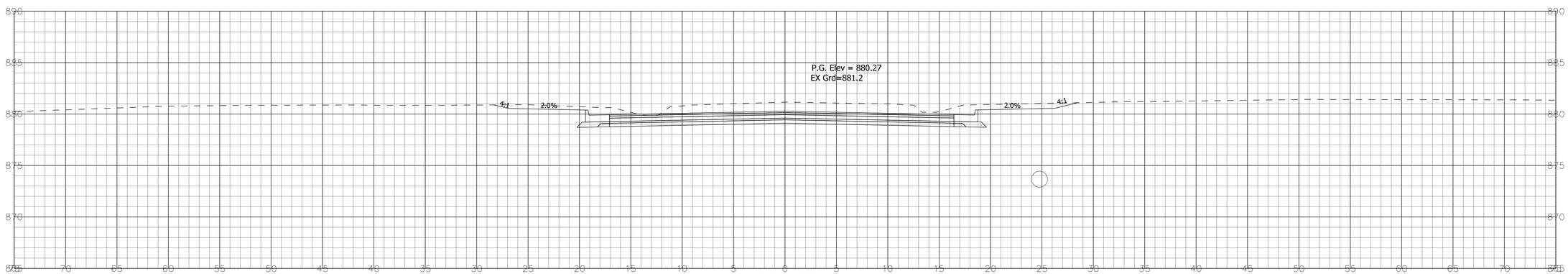
CROSS SECTIONS
LINE 'PRB'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 47 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




## 34+00

Ac = 106.8 SFT  Af = 0.1 SFT
Vc = 175 CYS  Vf = 0 CYS




## 33+50

Ac = 81.8 SFT  Af = 0.0 SFT
Vc = 122 CYS  Vf = 12 CYS

STA. 33+50 TO STA. 34+00

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X:\Projects\GFL \ 2017\ 1763 \ 125290\ Civil\

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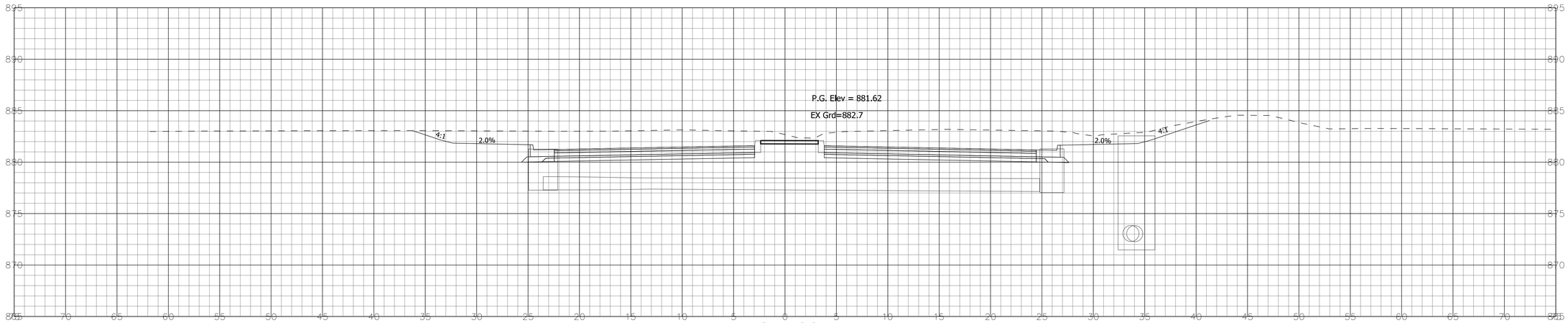
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: PH 1/2020  DRAWN: DPH 1/2020
CHECKED: RAC 1/2020  CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

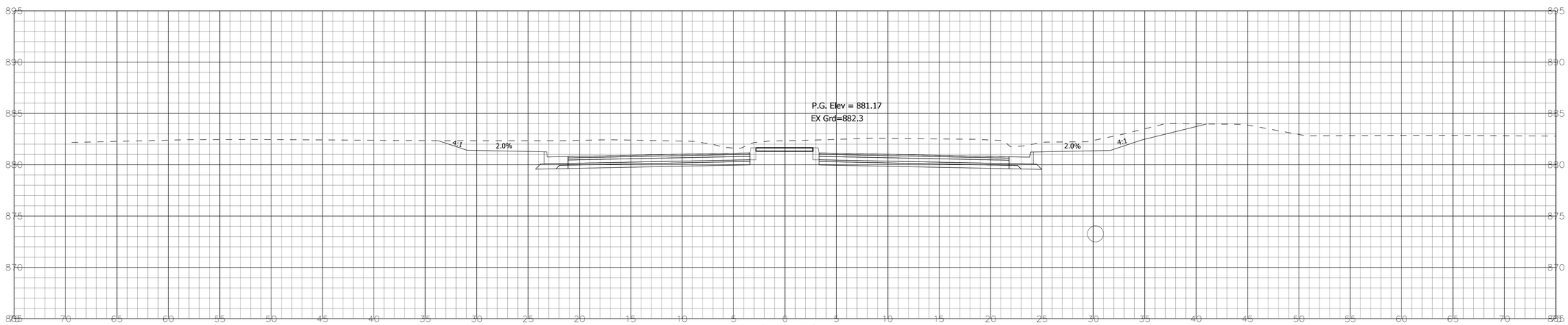
CROSS SECTIONS
LINE 'PRB'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 48 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




## 35+00

Ac = 162.3 SFT  Af = 0.0 SFT
Vc = 279 CYS  Vf = 0 CYS




## 34+50

Ac = 139.5 SFT  Af = 0.0 SFT
Vc = 228 CYS  Vf = 0 CYS

STA. 34+50 TO STA. 35+00

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DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

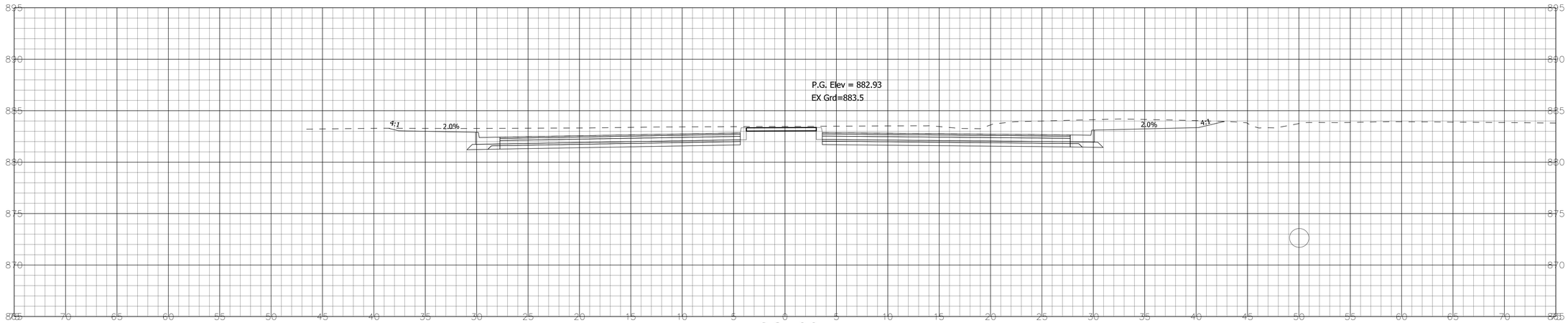
DESIGNED: PH 1/2020  DRAWN: DPH 1/2020

CHECKED: RAC 1/2020  CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

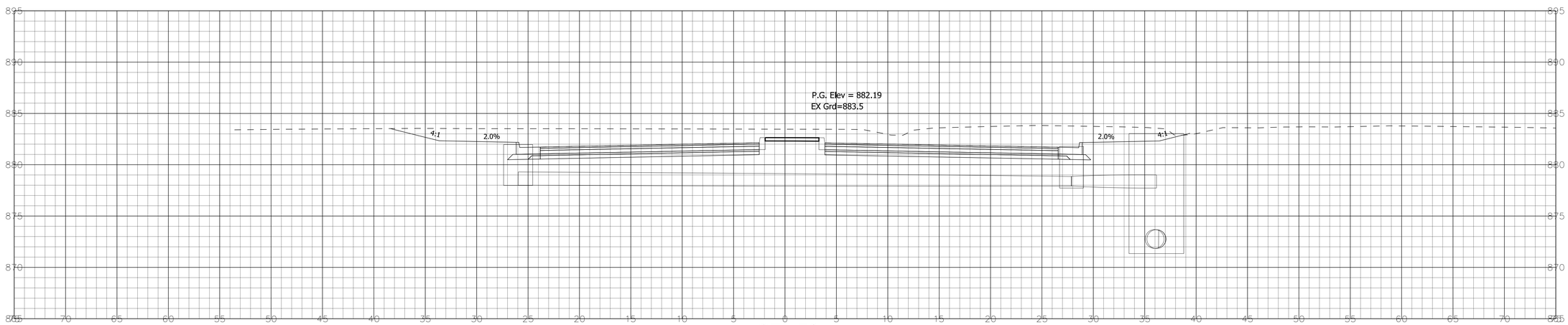
CROSS SECTIONS
LINE 'PRB'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 49 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




## 36+00

Ac = 124.0 SFT  Af = 0.0 SFT
Vc = 274 CYS  Vf = 0 CYS




## 35+50

Ac = 171.4 SFT  Af = 0.1 SFT
Vc = 309 CYS  Vf = 0 CYS

STA. 35+50 TO STA. 36+00

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DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

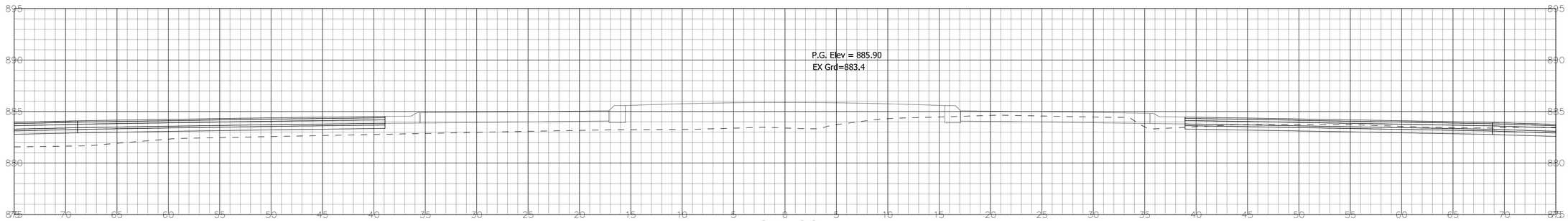
DESIGNED: PH 1/2020  DRAWN: DPH 1/2020

CHECKED: RAC 1/2020  CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

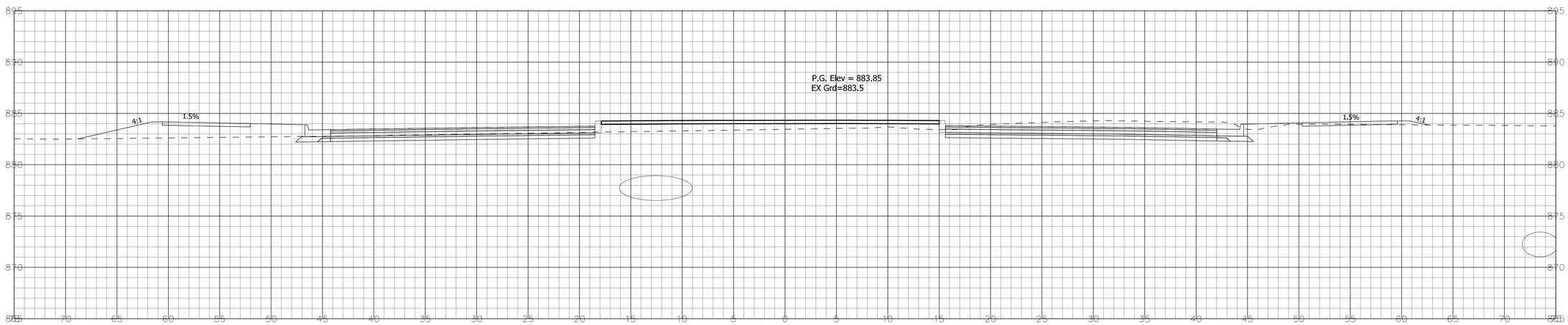
CROSS SECTIONS
LINE 'PRB'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 50 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




## 37+00

Ac = 32.2 SFT  Af = 120.2 SFT
Vc = 88 CYS  Vf = 153 CYS




## 36+50

Ac = 63.3 SFT  Af = 44.9 SFT
Vc = 174 CYS  Vf = 42 CYS

STA. 36+50 TO STA. 37+00

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DLZ

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DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

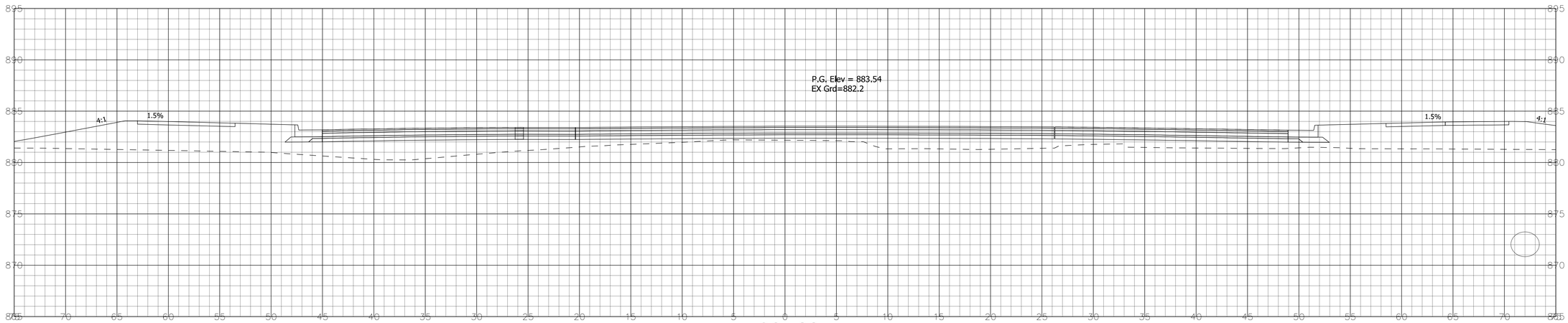
DESIGNED: PH 1/2020  DRAWN: DPH 1/2020

CHECKED: RAC 1/2020  CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

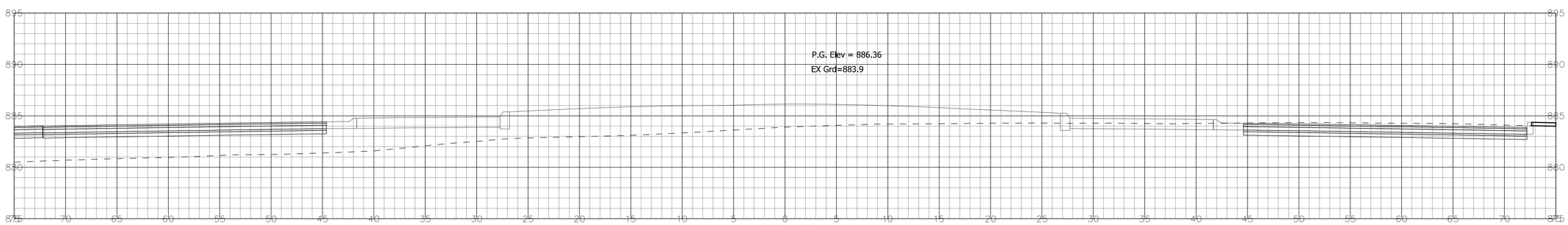
CROSS SECTIONS
LINE 'PRB'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 51 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




## 38+00

Ac = 0.0 SFT  Af = 198.1 SFT
Vc = 44 CYS  Vf = 376 CYS




## 37+50

Ac = 47.9 SFT  Af = 207.7 SFT
Vc = 74 CYS  Vf = 304 CYS

STA. 37+50 TO STA. 38+00

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DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

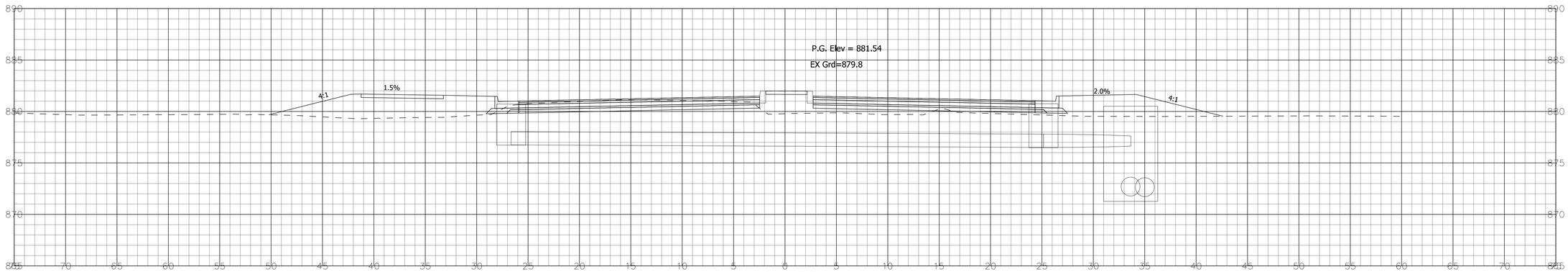
DESIGNED: PH 1/2020  DRAWN: DPH 1/2020

CHECKED: RAC 1/2020  CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

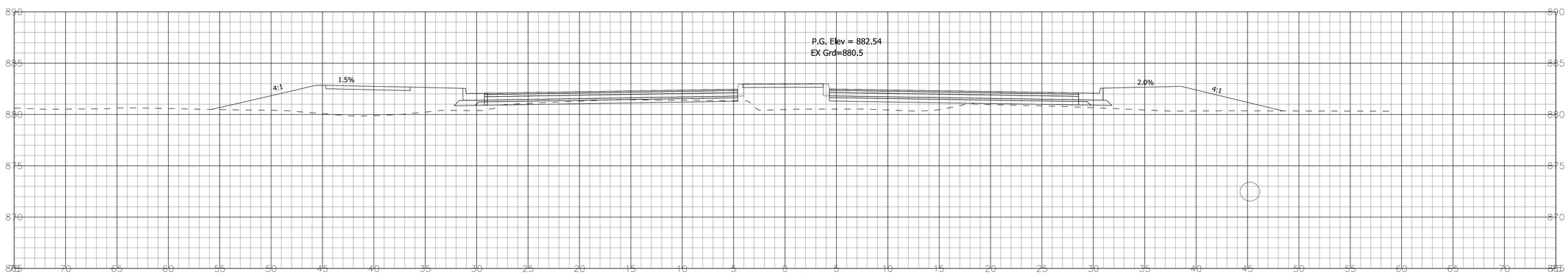
CROSS SECTIONS
LINE 'PRB'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 52 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




39+00

Ac = 22.7 SFT  Af = 75.5 SFT
Vc = 25 CYS  Vf = 168 CYS




38+50

Ac = 4.4 SFT  Af = 105.9 SFT
Vc = 4 CYS  Vf = 281 CYS

STA. 38+50 TO STA. 39+00

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DLZ INDIANA, LLC

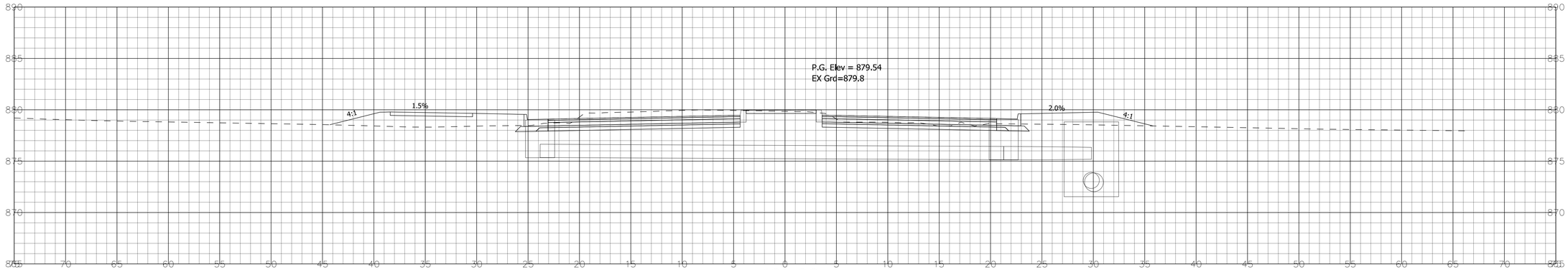
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

| | | | |
|---|---|---|---|
| DESIGNED: PH | 1/2020 | DRAWN: DPH | 1/2020 |
| CHECKED: RAC | 1/2020 | CHECKED: PH | 1/2020 |

INDIANA
DEPARTMENT OF TRANSPORTATION

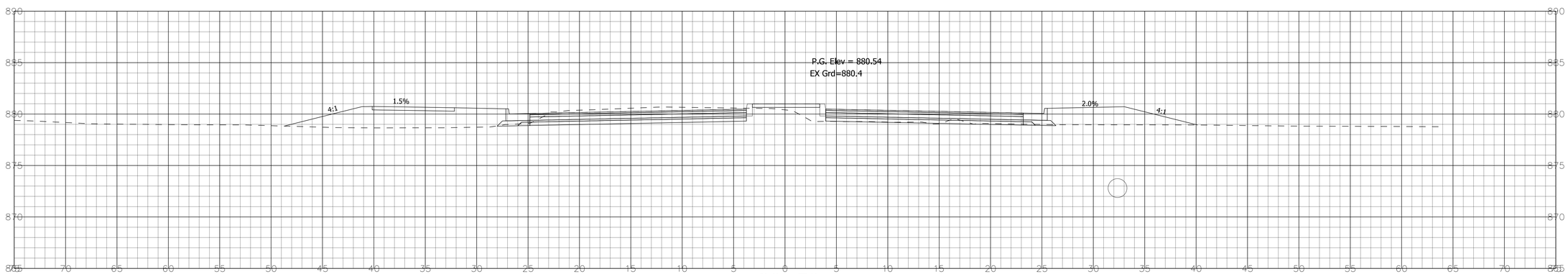
CROSS SECTIONS
LINE 'PRB'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 53 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




## 40+00

Ac = 45.5 SFT  Af = 30.6 SFT
Vc = 71 CYS  Vf = 79 CYS




## 39+50

Ac = 31.1 SFT  Af = 54.5 SFT
Vc = 50 CYS  Vf = 120 CYS

STA. 39+50 TO STA. 40+00

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DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

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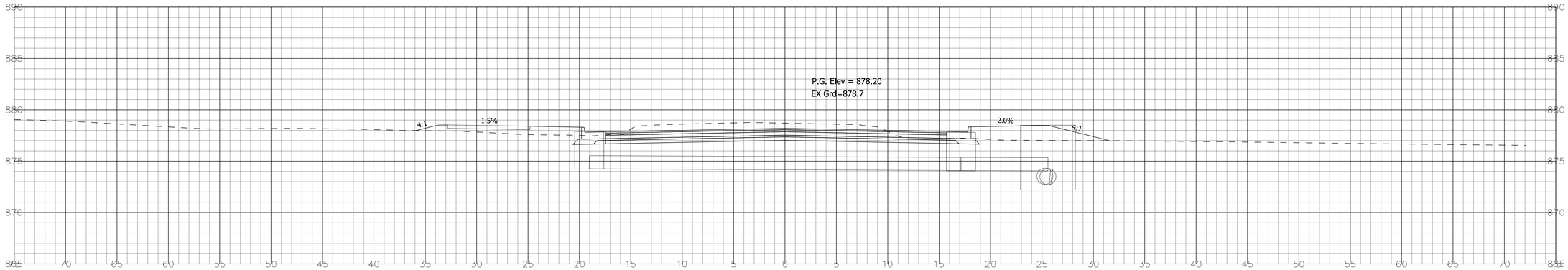
|---|---|---|---|
| DESIGNED: PH | 1/2020 | DRAWN: DPH | 1/2020 |
| CHECKED: RAC | 1/2020 | CHECKED: PH | 1/2020 |

INDIANA
DEPARTMENT OF TRANSPORTATION

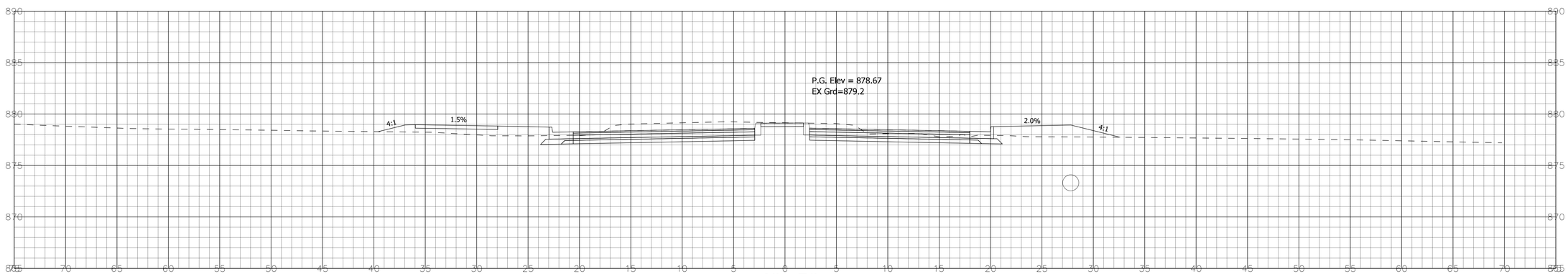
CROSS SECTIONS
LINE 'PRB'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 54 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




41+00

Ac = 51.6 SFT  Af = 22.6 SFT
Vc = 96 CYS  Vf = 40 CYS




40+50

Ac = 52.3 SFT  Af = 20.4 SFT
Vc = 91 CYS  Vf = 47 CYS

STA. 40+50 TO STA. 41+00

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RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

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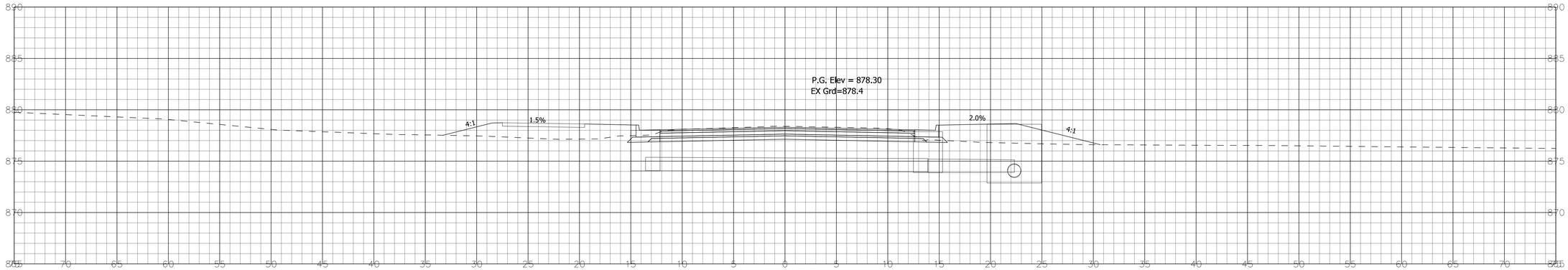
|---|---|---|---|
| DESIGNED: | PH 1/2020 | DRAWN: | DPH 1/2020 |
| CHECKED: | RAC 1/2020 | CHECKED: | PH 1/2020 |

INDIANA
DEPARTMENT OF TRANSPORTATION

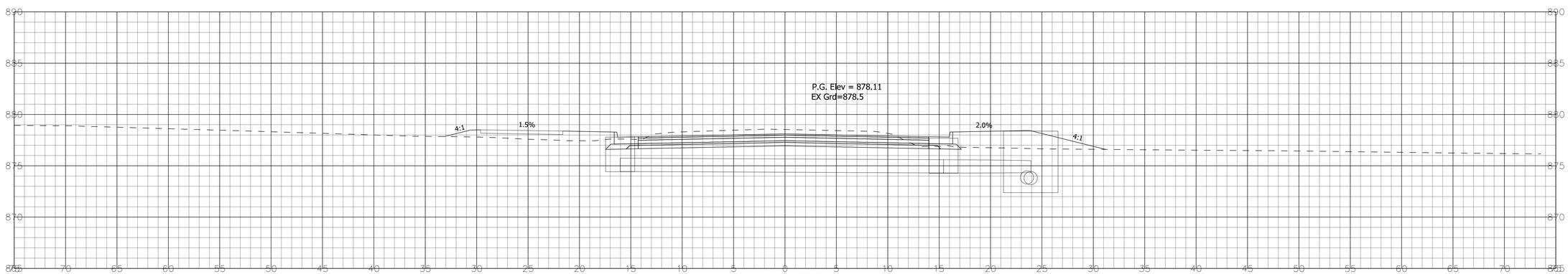
CROSS SECTIONS
LINE 'PRB'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 55 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




## 42+00

Ac = 32.5 SFT  Af = 40.4 SFT
Vc = 71 CYS  Vf = 64 CYS




## 41+50

Ac = 43.8 SFT  Af = 28.2 SFT
Vc = 88 CYS  Vf = 47 CYS

STA. 41+50 TO STA. 42+00

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DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

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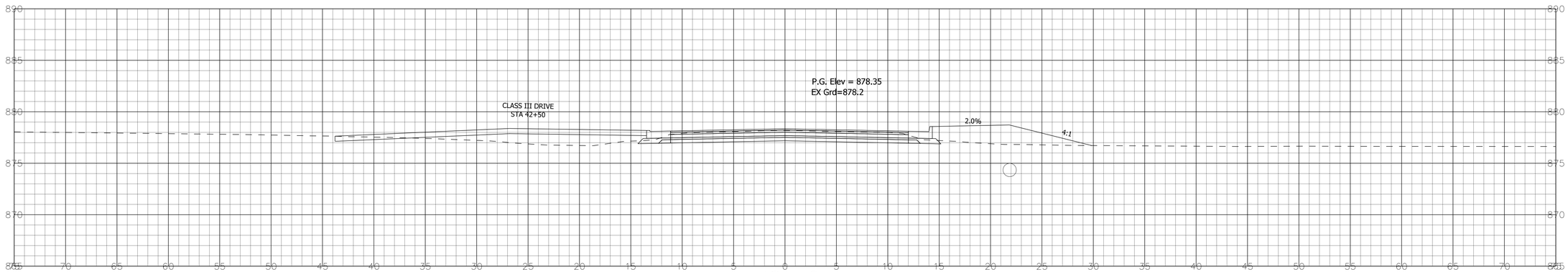
|---|---|---|---|
| DESIGNED: PH | 1/2020 | DRAWN: DPH | 1/2020 |
| CHECKED: RAC | 1/2020 | CHECKED: PH | 1/2020 |

INDIANA
DEPARTMENT OF TRANSPORTATION

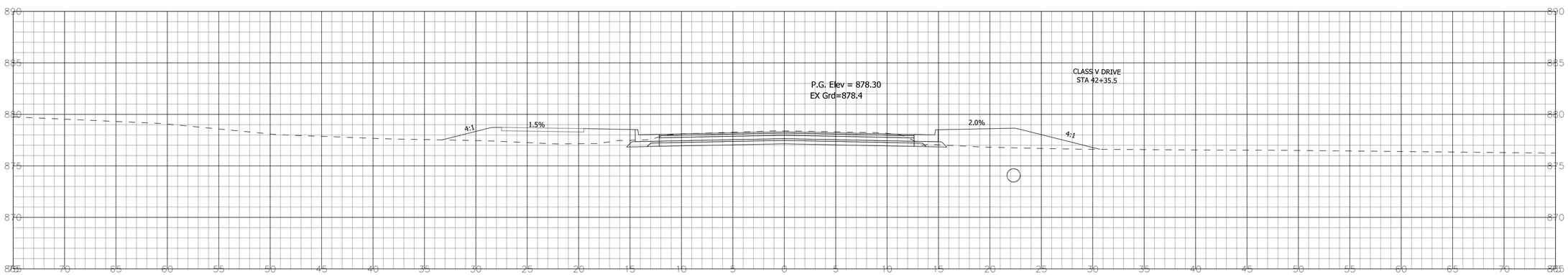
CROSS SECTIONS
LINE 'PRB'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 56 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




42+50

Ac = 25.6 SFT  Af = 47.2 SFT
Vc = 54 CYS  Vf = 81 CYS




42+35

Ac = 32.5 SFT  Af = 40.4 SFT
Vc = 71 CYS  Vf = 64 CYS

STA. 42+50 TO STA. 43+00

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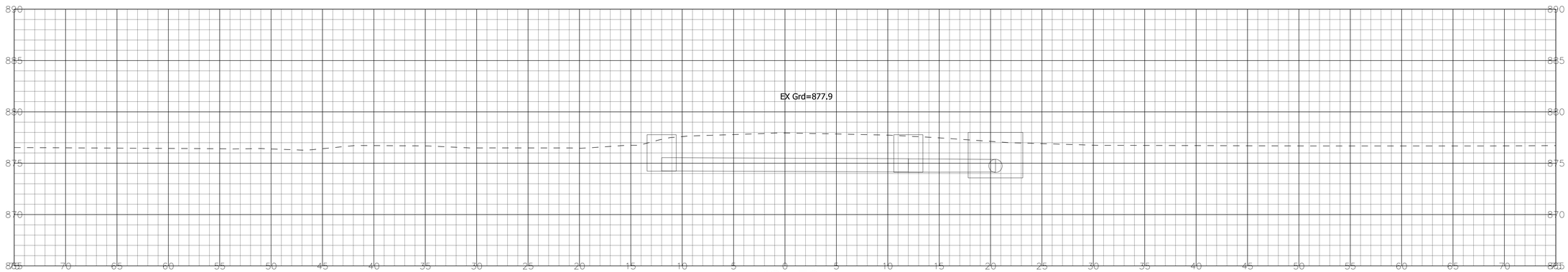
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

| | | | |
|---|---|---|---|
| DESIGNED: PH | 1/2020 | DRAWN: DPH | 1/2020 |
| CHECKED: RAC | 1/2020 | CHECKED: PH | 1/2020 |

INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
LINE 'PRB'

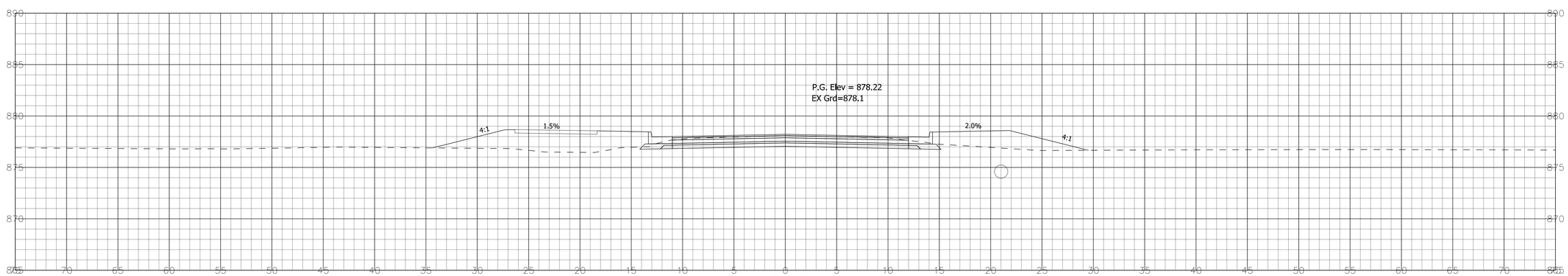
| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 57 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




43+50

Ac = 0.0 SFT Af = 0.0 SFT
Vc = 24 CYS Vf = 45 CYS

STA. 43+34.06
END PROJECT




43+00

Ac = 26.5 SFT Af = 48.5 SFT
Vc = 48 CYS Vf = 89 CYS

STA. 43+50 TO STA. 43+50

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DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

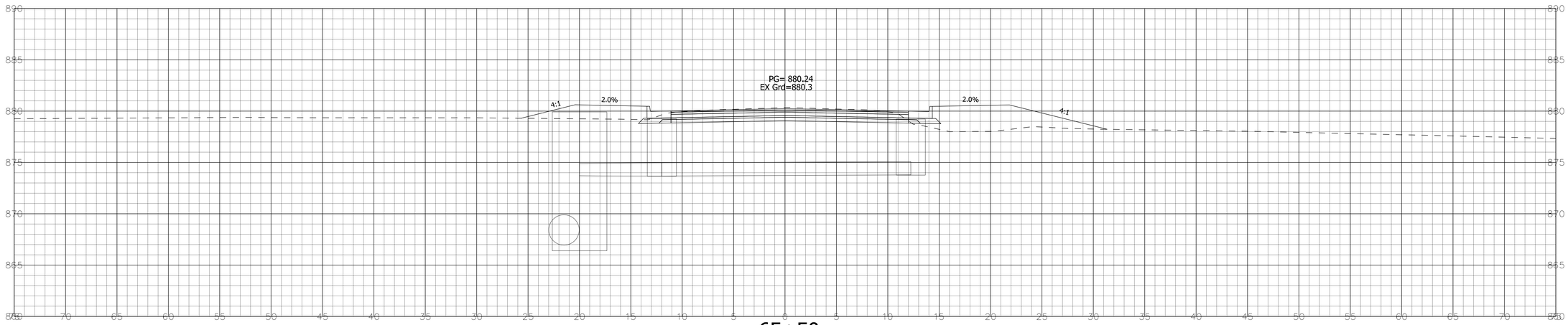
DESIGNED: PH 1/2020 DRAWN: DPH 1/2020

CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
LINE 'PRB'

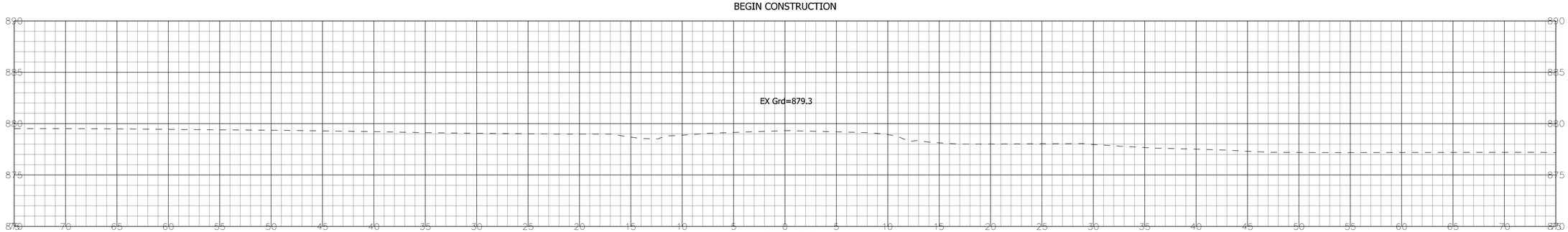
| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 58 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




65+50

Ac = 28.8 SFT Af = 41.7 SFT
Vc = 27 CYS Vf = 39 CYS

STA. 65+07.21
BEGIN CONSTRUCTION




65+00

Ac = 0.0 SFT Af = 0.0 SFT
Vc = 0 CYS Vf = 0 CYS

STA. 65+00 TO STA. 65+50

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DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

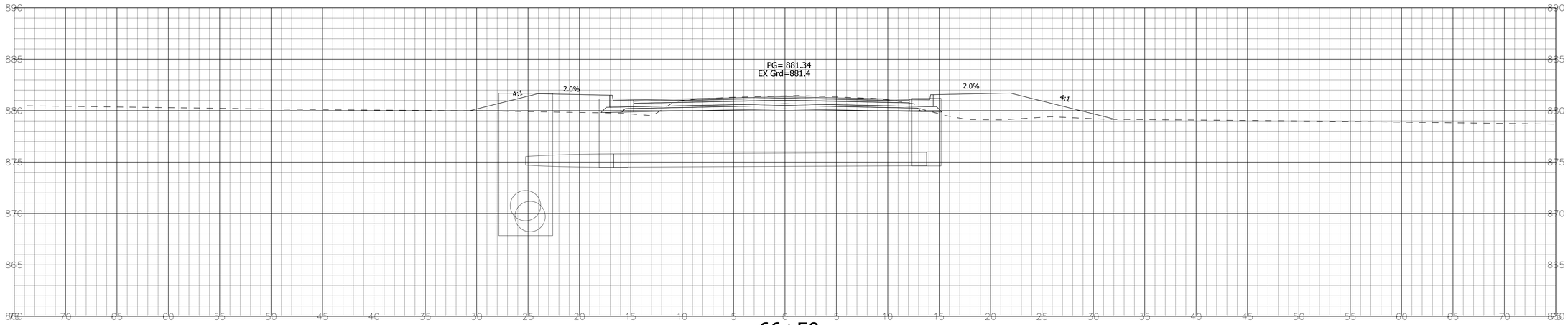
DESIGNED: PH 1/2020 DRAWN: DPH 1/2020

CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

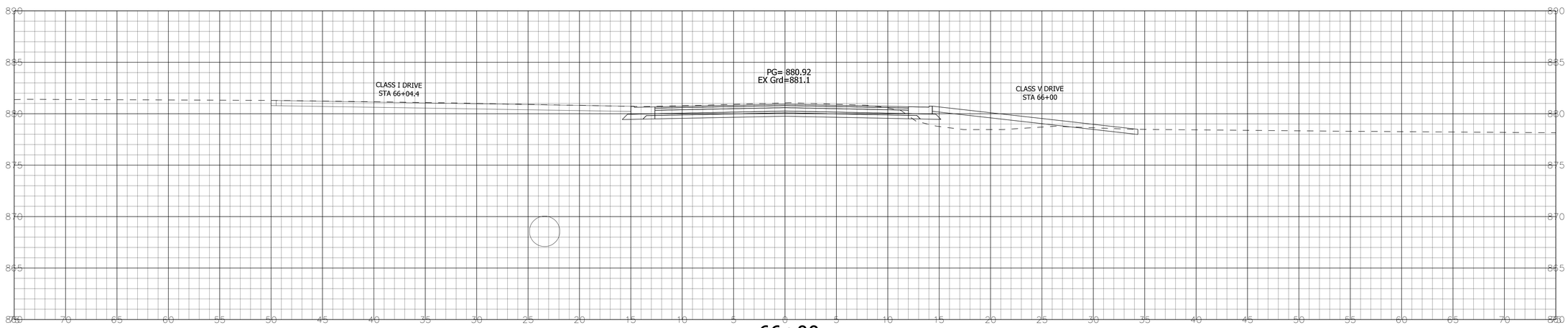
CROSS SECTIONS
LINE 'PRA'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 59 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




66+50

Ac = 28.7 SFT  Af = 48.1 SFT
Vc = 58 CYS  Vf = 76 CYS




66+00

Ac = 33.9 SFT  Af = 34.4 SFT
Vc = 58 CYS  Vf = 70 CYS

STA. 66+00 TO STA. 66+50

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DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER  DATE

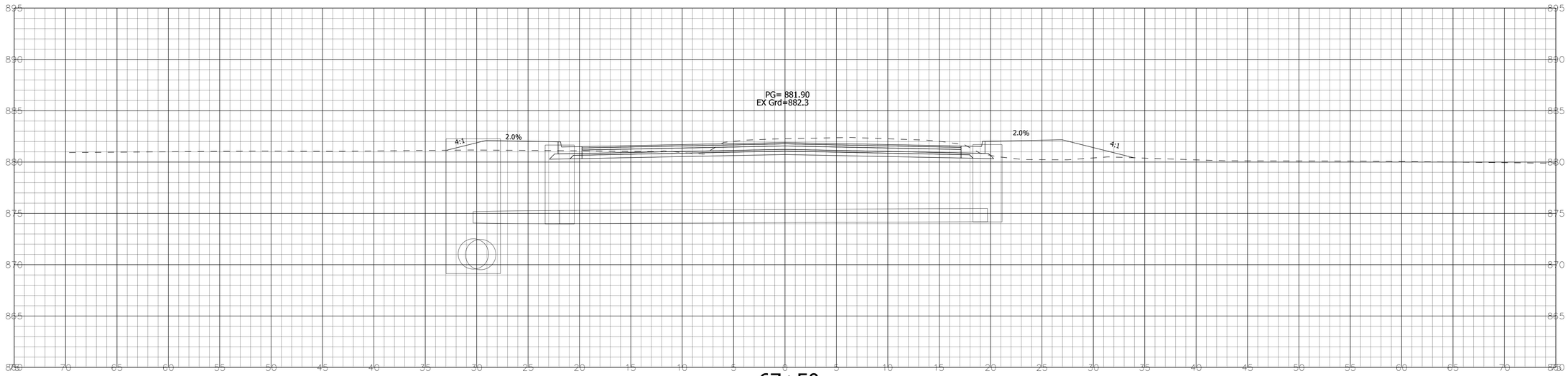
DESIGNED: PH 1/2020  DRAWN: DPH 1/2020

CHECKED: RAC 1/2020  CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

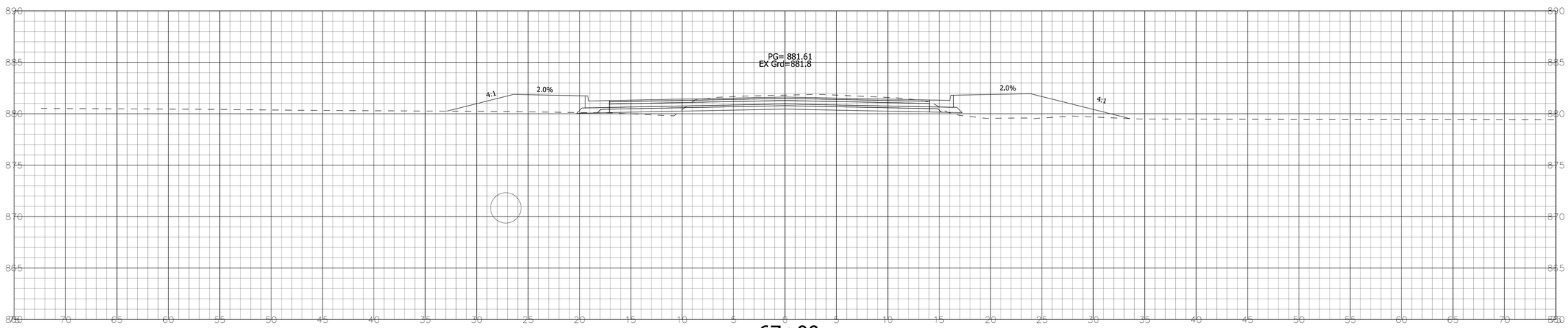
CROSS SECTIONS
LINE 'PRA'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 60 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




67+50

Ac = 49.6 SFT Af = 27.5 SFT
Vc = 76 CYS Vf = 67 CYS




67+00

Ac = 32.2 SFT Af = 45.4 SFT
Vc = 56 CYS Vf = 87 CYS

STA. 67+00 TO STA. 67+50

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DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

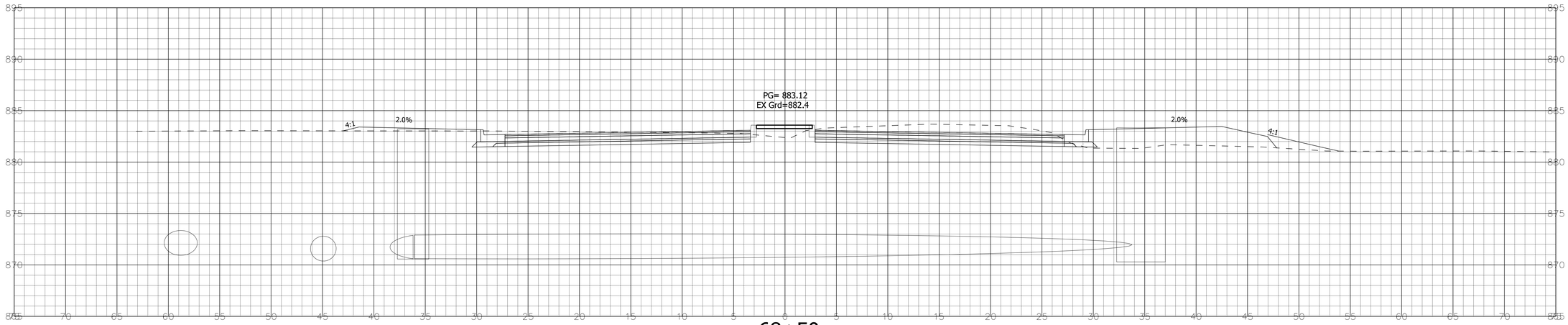
DESIGNED: PH 1/2020 DRAWN: DPH 1/2020

CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

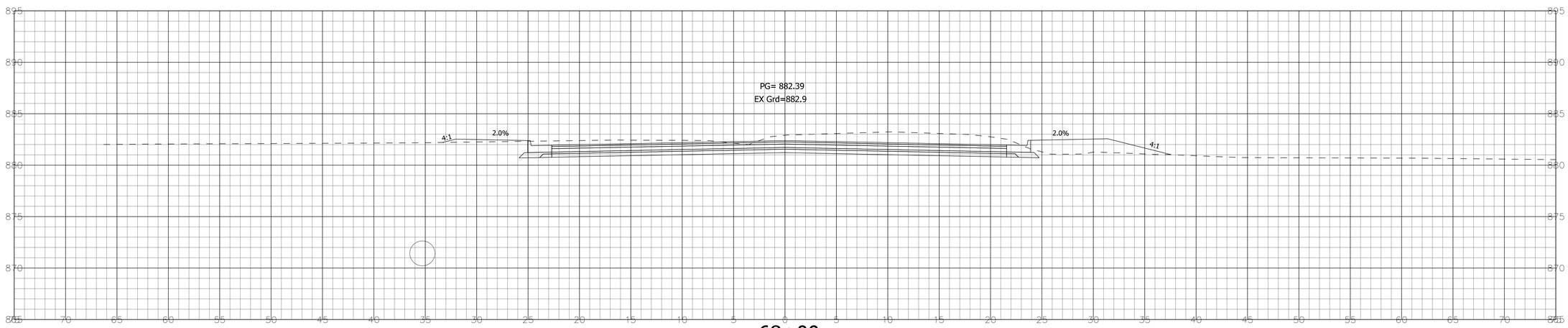
CROSS SECTIONS
LINE 'PRA'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 61 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




68+50

Ac = 74.7 SFT  Af = 41.3 SFT
Vc = 146 CYS  Vf = 53 CYS




68+00

Ac = 83.0 SFT  Af = 15.5 SFT
Vc = 123 CYS  Vf = 40 CYS

STA. 68+00 TO STA. 68+50

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DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER  DATE

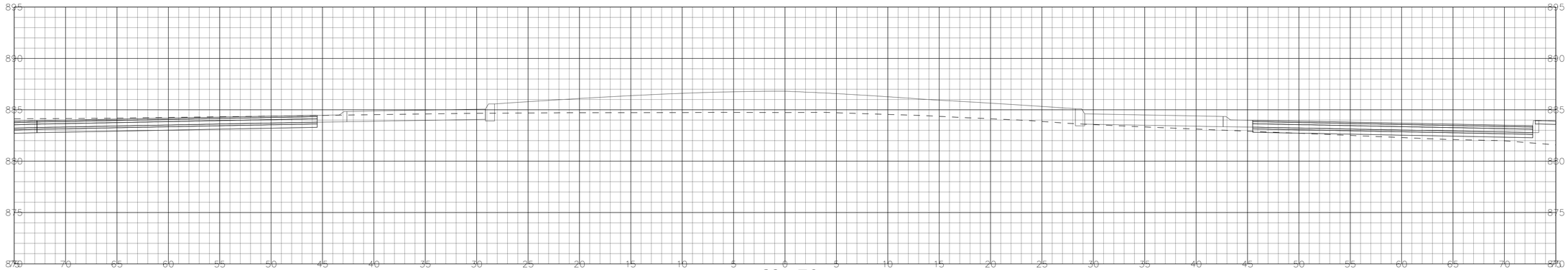
DESIGNED: PH 1/2020  DRAWN: DPH 1/2020

CHECKED: RAC 1/2020  CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

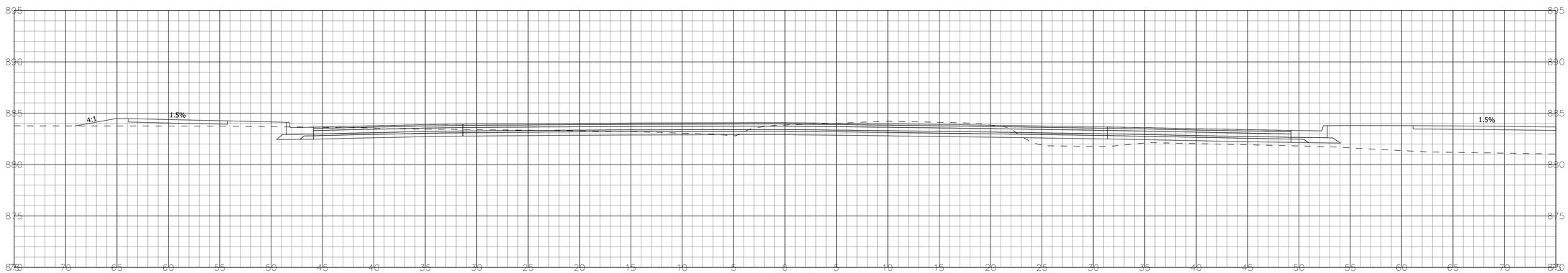
CROSS SECTIONS
LINE 'PRA'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 62 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




69+50

Ac = 48.1 SFT  Af = 105.7 SFT
Vc = 97 CYS  Vf = 163 CYS




69+00

Ac = 56.8 SFT  Af = 70.5 SFT
Vc = 122 CYS  Vf = 103 CYS

STA. 69+00 TO STA. 69+50

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DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

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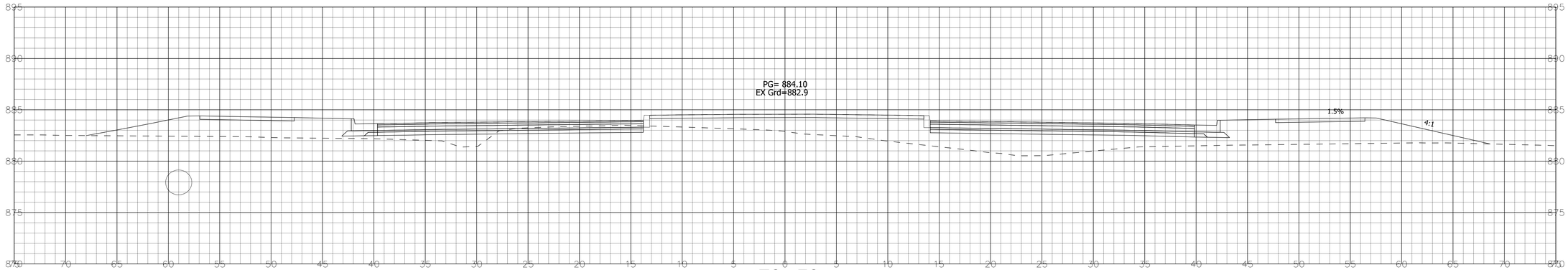
|---|---|---|---|
| DESIGNED: PH | 1/2020 | DRAWN: DPH | 1/2020 |
| CHECKED: RAC | 1/2020 | CHECKED: PH | 1/2020 |

INDIANA
DEPARTMENT OF TRANSPORTATION

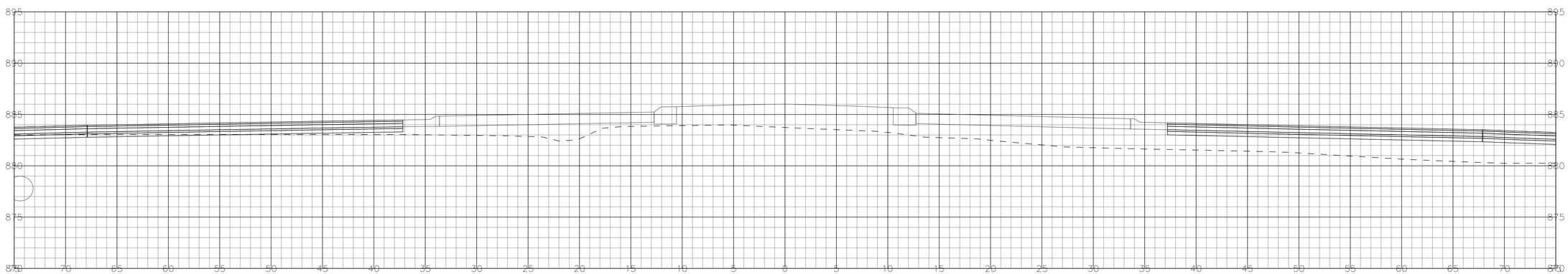
CROSS SECTIONS
LINE 'PRA'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 63 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




## 70+50

Ac = 8.8 SFT  Af = 175.3 SFT
Vc = 12 CYS  Vf = 327 CYS




## 70+00

Ac = 4.6 SFT  Af = 177.9 SFT
Vc = 49 CYS  Vf = 263 CYS

STA. 70+00 TO STA. 70+50

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DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

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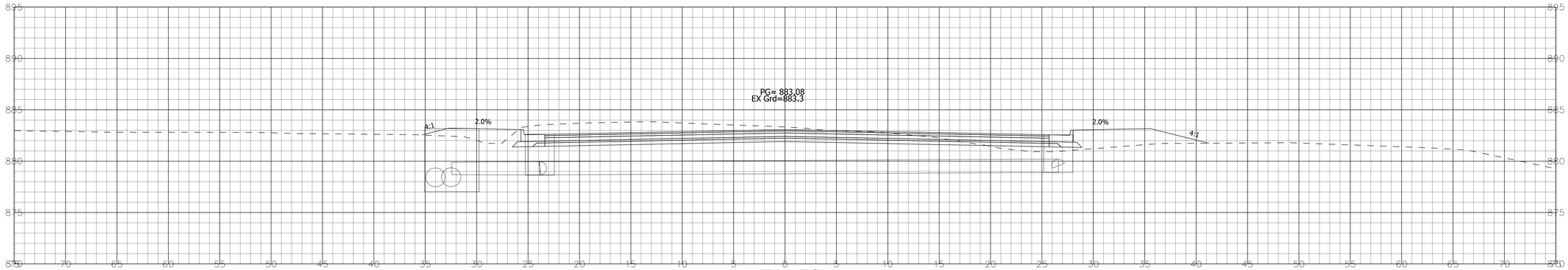
|---|---|---|---|
| DESIGNED: PH | 1/2020 | DRAWN: DPH | 1/2020 |
| CHECKED: RAC | 1/2020 | CHECKED: PH | 1/2020 |

INDIANA
DEPARTMENT OF TRANSPORTATION

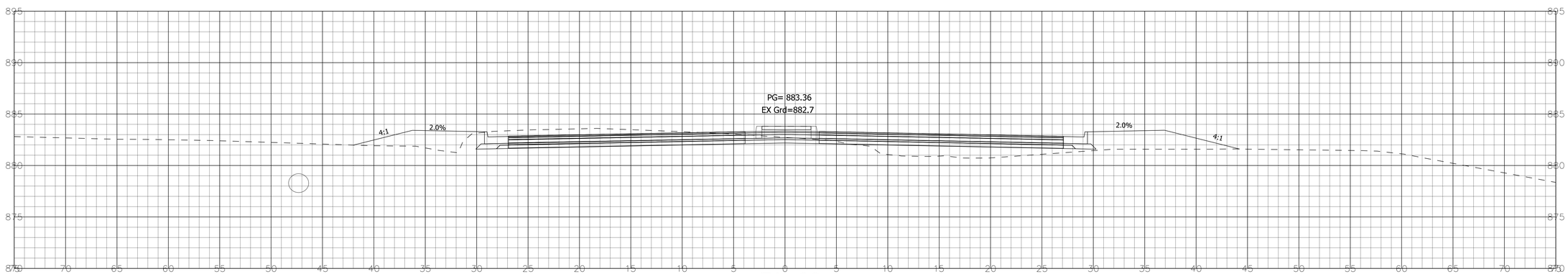
CROSS SECTIONS
LINE 'PRA'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 64 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




## 71+50

Ac = 68.9 SFT  Af = 27.7 SFT
Vc = 104 CYS  Vf = 77 CYS




## 71+00

Ac = 43.9 SFT  Af = 55.0 SFT
Vc = 49 CYS  Vf = 213 CYS

STA. 71+00 TO STA. 71+50

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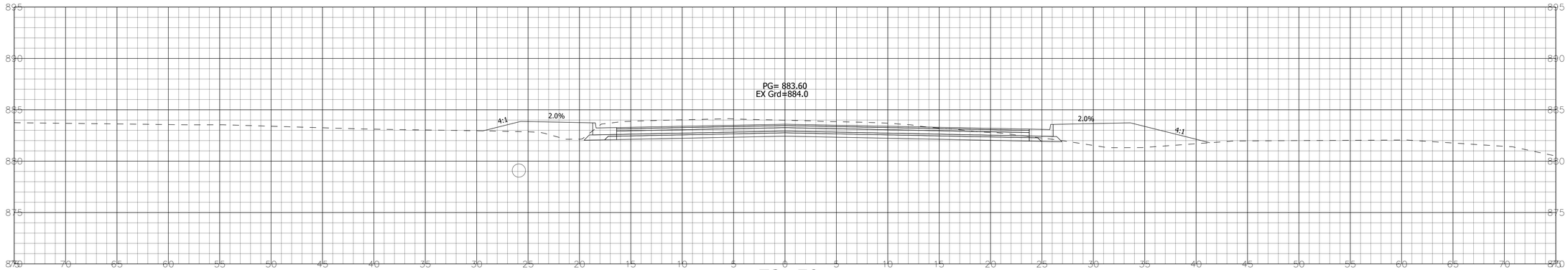
| CHECKED: RAC | 1/2020 | CHECKED: PH | 1/2020 |

INDIANA
DEPARTMENT OF TRANSPORTATION

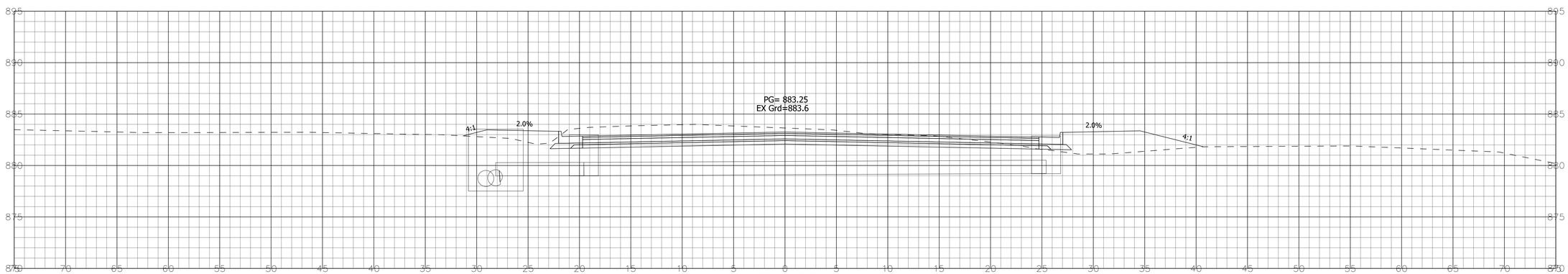
CROSS SECTIONS
LINE 'PRA'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 65 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |




72+50

Ac = 61.9 SFT Af = 35.6 SFT
Vc = 120 CYS Vf = 60 CYS




72+00

Ac = 67.7 SFT Af = 29.5 SFT
Vc = 127 CYS Vf = 53 CYS

STA. 72+00 TO STA. 72+50

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RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: PH 1/2020 DRAWN: DPH 1/2020

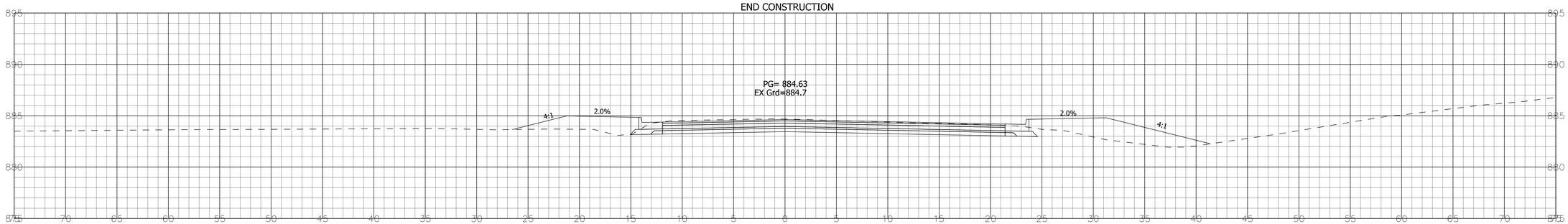
CHECKED: RAC 1/2020 CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
LINE 'PRA'

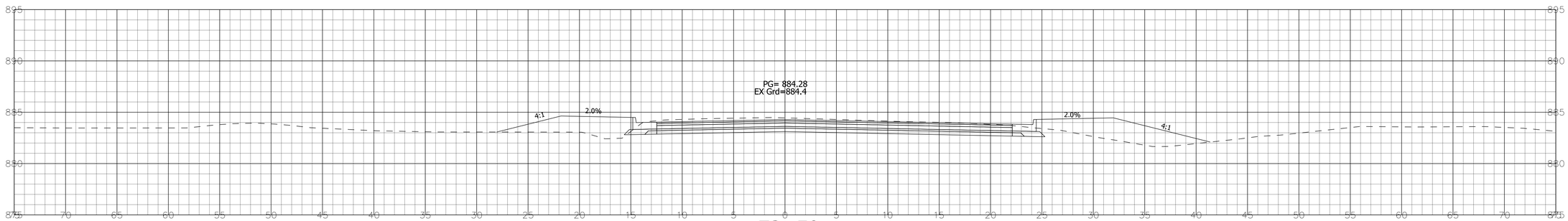
| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 66 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |

STA. 74+39.43
END CONSTRUCTION



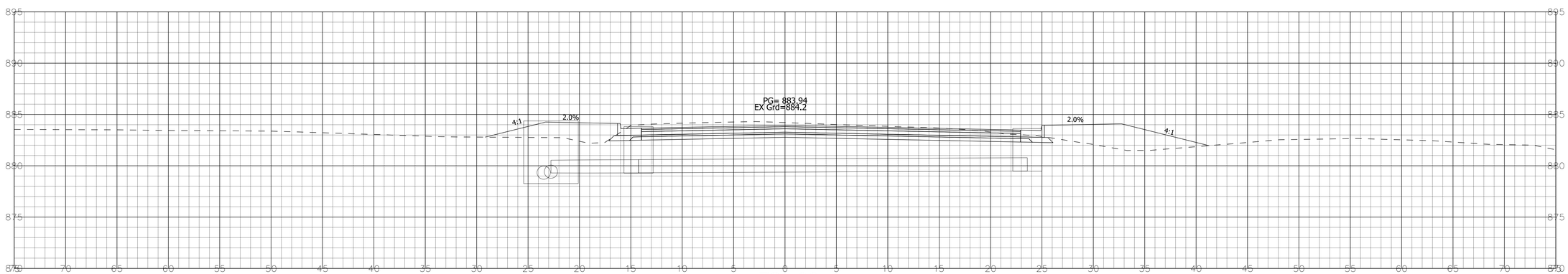

## 74+00

Ac = 44.2 SFT  Af = 37.4 SFT
Vc = 87 CYS  Vf = 73 CYS




## 73+50

Ac = 49.3 SFT  Af = 41.0 SFT
Vc = 96 CYS  Vf = 76 CYS




## 73+00

Ac = 54.4 SFT  Af = 41.3 SFT
Vc = 108 CYS  Vf = 71 CYS

STA. 73+00 TO STA. 74+00

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|---|---|---|---|
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| CHECKED: RAC | 1/2020 | CHECKED: PH | 1/2020 |

INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
LINE 'PRA'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
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| ELECTRONIC | 67 of 68 |
| CONTRACT | PROJECT |
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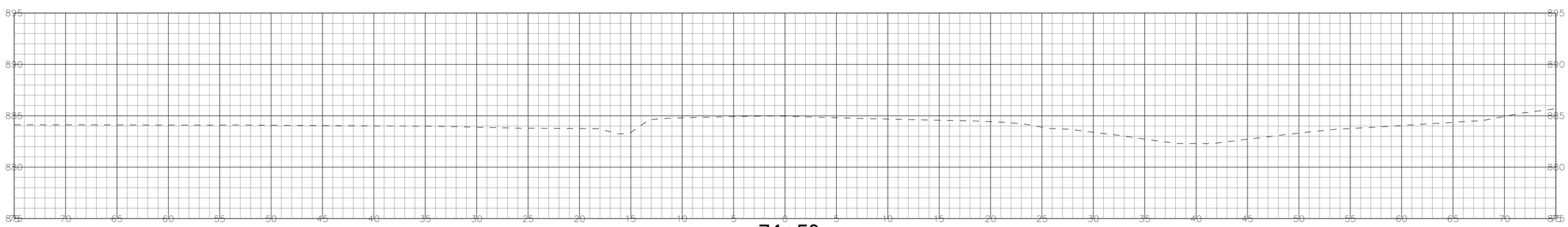


74+50

Ac = 0.0 SFT  Af = 0.0 SFT
Vc = 41 CYS  Vf = 35 CYS

STA. 74+50 TO STA. 74+50

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RECOMMENDED FOR APPROVAL

DESIGN ENGINEER  DATE

DESIGNED: PH 1/2020  DRAWN: DPH 1/2020

CHECKED: RAC 1/2020  CHECKED: PH 1/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
LINE 'PRA'

| HORIZONTAL SCALE | ROAD FILE |
|---|---|
| 1"=5' | N/A |
| VERTICAL SCALE | DESIGNATION |
| 1"=5' | 1700731 |
| SURVEY BOOK | SHEETS |
| ELECTRONIC | 68 of 68 |
| CONTRACT | PROJECT |
| R-40286 | 1700731 |