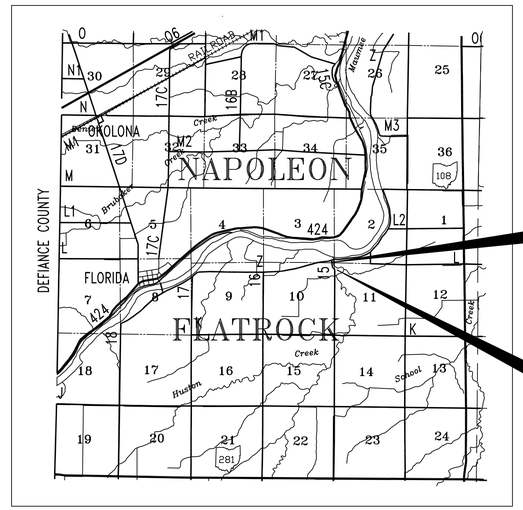
HENRY COUNTY
DEPARTMENT OF HIGHWAYS
TOWNSHIP ROAD 15
ROAD RELOCATION
BETWEEN C.R. K & C.R. Z
FLATROCK TWP.
STATE OF OHIO

CONVENTIONAL SIGNS

Township Line
Section Line
Center Line
Property Line
Railroad
Fence Line (existing)
Guardrail (existing)
Trees Stumps
Utility Poles: Telephone Power
Light Brace

County Line
Corporation Limits
Construction Limits
Right of Way
Underground Utilities
(proposed)
(proposed)
(to be removed)



N

2013 SPECIFICATIONS

The Standard Specifications of the Ohio Department of Transportation, including changes and supplemental specifications, listed in the proposal shall govern this improvement.

I hereby approve these plans and declare that the making of this improvement will require the closing of the highway and that the necessary lights and signs shall be maintained.

Approved _____
Date _____ Henry County Engineer

Approved _____
Date _____ Flatrock Township Trustee

Approved _____
Date _____ Flatrock Township Trustee

Approved _____
Date _____ Flatrock Township Trustee

INDEX OF SHEETS

TITLE SHEET 1
GENERAL NOTES, TYPICAL SECTIONS, GENERAL & SUB SUMMARIES .. 2
PLAN AND PROFILE 3
CROSS SECTIONS 4-5

LOCATION MAP

1 1/2 0 1 2 4
SCALE IN MILES

Detour
Portion to be improved
State and U.S. Routes
County and Township Roads

SCALES

Plan 0' 10' 20' 30' 40' 50'
Profile __ Horizontal 0' 20' Vertical 0' 5'
Cross Section _ Horz. 0' 5' Vertical 0' 5'

UNDERGROUND UTILITIES
2 WORKING DAYS
BEFORE YOU DIG
CALL 800-362-2764
OHIO UTILITY PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

CREATED: 2/18/2014

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

BR-4.1	7-16-04			
DM-1.1	7-19-02			

SUPPLEMENTAL SPECIFICATIONS

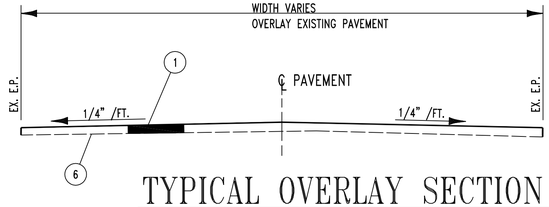
944	12-07-95	

Plans Prepared By
HENRY COUNTY ENGINEER'S OFFICE
NAPOLEON, OHIO

DEPARTMENT OF HIGHWAYS
HENRY COUNTY, OHIO

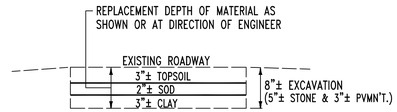
TITLE SHEET
TOWNSHIP ROAD 15
ROAD RELOCATION
BETWEEN C.R. K & C.R. Z
FLATROCK TWP.

Designed:	Drawn:	Checked:	File Name:
HEN. CO. ENG.	S.J.K	T.J.S	S:\ROADS\ROADS\15-K-L\TITLESHEET



TYPICAL OVERLAY SECTION

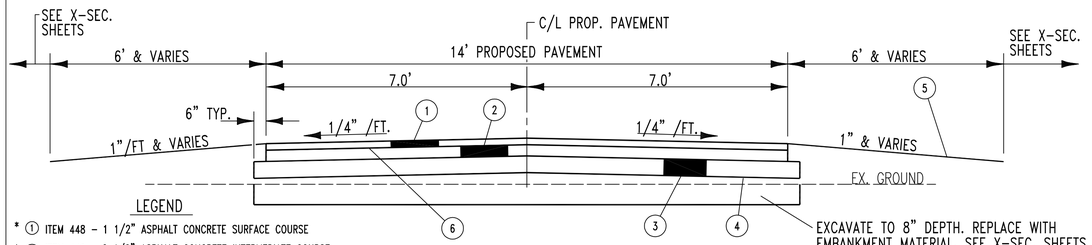
NOT TO SCALE STA. 13+37.4 TO 16+15.0



ROADWAY EXCAVATION & REPLACEMENT

EXISTING ROADWAY TO BE EXCAVATED TO A DEPTH OF APPROX. 8".
FILL VOID WITH EXCAVATED MATERIAL FROM PROPOSED ROADWAY EXCAVATION.
3"± CLAY, 2"± SOD, & 3"± TOPSOIL EXCEPT WHERE PROPOSED
ROADWAY OVERLAPS EXISTING ROADWAY, THEN USE TYPICAL PAVEMENT SECTION.

12+93.47 TO 13+37.4 (USE SAME TYPICAL PAVEMENT SECTION BELOW EXCEPT PAVEMENT WIDTH VARIES.)



EXCAVATE TO 8" DEPTH. REPLACE WITH EMBANKMENT MATERIAL. SEE X-SEC. SHEETS WHERE APPLICABLE

LEGEND

* ① ITEM 448 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE
* ② ITEM 448 - 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE
③ ITEM 304 - 8" & VARIES AGGREGATE BASE (SEE X-SEC. SHEETS)
④ ITEM 204 - SUBGRADE COMPACTION
⑤ ITEM 659 - SEEDING & MULCHING (BY COUNTY FORCES)
⑥ ITEM 407 - TACK COAT APPLIED AT THE RATE OF 0.05 GAL./S.Y.

* MATERIAL SHALL BE PLACED FULL WIDTH. PAVER SHALL BE EQUIPPED WITH A FOURTY (40) FOOT AUTOMATICALLY CONTROLLED LEVELING SKI.

TYPICAL PAVEMENT SECTION

NOT TO SCALE STA. 7+73.22 TO 13+37.4

7+63 TO 7+73.22 PAVEMENT TAPER (USE SAME THICKNESS DIMENSIONS AS TYPICAL PAVEMENT SECTION ABOVE)

5"± THICK STONE FOR ROADWAY PER ROADWAY EXCAVATION DEATAIL

4"± THICK STONE FOR OLD MAILBOX APPROACH. TO ALSO INCLUDE FILLING W/TOP SOIL AS NEEDED FROM PROPOSED ROADWAY EXCAVATION. SEE X-SEC. SHEETS

INCLUDES LSM & STONE BACKFILL PER X-OVER DETAIL & 12" MANUFACTURED END SECTION

SUB-SUMMARY

REF. NO.	STATION FROM	STATION TO	SIDE	ROAD	201 STUMP REMOVED 18" SIZE EACH	201 STUMP REMOVED 30" SIZE EACH	201 TREE REMOVED 18" SIZE EACH	202 PIPE REMOVED 24" & UNDER LIN. FT.	202 C.B. REMOVED EACH	202 REMOVE AND RELOCATE MAILBOX EACH	202 EX. ROADWAY PAVEMENT REMOVED 3" ± THICK SQ. YD.	202 BASE REMOVED SQ. YD.	202 BASE REMOVED SQ. YD.	601 ROCK CHANNEL PROTECTION TYPE D W/O FILTER CU. YD.	611 12" CONDUIT TYPE B 707.33 (SEE X-OVER DETAIL)	SHEET NUMBER
1R	8+15	-	LT	15	1											3-4
2R	8+21	-	LT	15		1										3-4
3R	8+38	8+42	RT	15						1						3-4
4R	7+97	8+73	RT	15									56			3-4
⊏	8+78	9+04	RT	15									21			3-4
5R	9+71	-	RT	15			1									3-4
6R	10+05	-	RT	15			1									3-4
7R	10+17	-	RT	15					1							3-4
8R	10+17	10+10	RT	15				38								3-4
9R	10+33	-	RT	15			1									3-4
10R	10+38	-	RT	15					1							3-4
11R	10+38	10+42	RT	15				36								3-4
12R	12+60	-	LT	15			1									3 & 5
13R	12+68	-	LT	15			1									3 & 5
14R	12+82	-	LT	15			1									3 & 5
15R	12+84	-	LT	15			1									3 & 5
16R	12+88	-	LT	15	1											3 & 5
17R	7+73.22	13+37.4	L&R	15							769					3-4-5
18R	7+73.22	13+37.4	L&R	15								769				3-4-5
1D	10+25	10+25	L+R	15											70	3-4
1RCP	10+25	-	RT	15										1		3-4
TOTALS					2	1	7	74	2	1	769	769	77	1	70	

UNDERGROUND UTILITIES
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GENERAL NOTES

ELEVATION DATUM
All elevations are based on GPS datum

EROSION CONTROL
ITEM 601 is provided in the plans for erosion control. Rock of a stable nature will not be removed in order to place this item. The Engineer shall check and non-perform quantities or adjust locations and quantities for this item where indicated by field conditions during construction.

UNDERGROUND UTILITIES
The locations of underground utilities shown on the plans are as obtained from the owners of the utility as required by Section 153.64 ORC.

UTILITY OWNERSHIP
The following utilities and owners are located within the work limits of this project:

ELECTRIC: TOLEDO EDISON
6099 ANGOLA ROAD
HOLLAND, OHIO 43528
419/249-5900

TELEPHONE: CENTURYLINK
375 E. RIVERVIEW
NAPOLEON, OH. 43545
419/599-4024

ITEM 611
Immediately after placement of any conduits, the Contractor shall construct the end treatments required by the plans at both the outlet and inlet ends. This shall include headwalls, wingwalls, end sections, concrete riprap, rock channel protection, sodding, etc.

Payment for any manufactured end sections, coupling bands, precast wingwalls and footers, shall be included in the unit price bid for each conduit under this item.

Where plans provide for proposed conduit to be connected to, or to cross either over or under an existing utility line, it shall be the responsibility of the Contractor to locate the existing pipe or line both as to line and grade before laying the proposed conduit.

Animal guards shall be provided at the outlet of all pipes which are to be constructed by the Contractor, as per Standard Construction Drawing DM-1.1, except when they outlet into a drainage structure or unless noted on plan sheet.

Payment for all operations described above shall be included in the unit price bid for the pertinent 611 conduit items.

SEEDING
To Be Performed By County Forces.

INGRESS AND EGRESS TO DRIVES
Ingress and egress to all residential drives shall be maintained at all times during the construction of this project. Temporary closures of any drives shall require permission from the Engineer prior to closure and shall be held to as short a period of time as is necessary.

EXISTING STONE BERM
Existing stone berm shall be graded so that no granular material is within 6" of the finished grade as shown on the cross sections.

DETOURS
All necessary signs and sign supports including erecting, maintaining and removing the signs and sign supports shall be provided by the Contractor for the required project detour.

Signs and sign supports shall be as detailed in the Ohio Manual of Uniform Traffic Control Devices. Payment for providing, erecting, maintaining and removing signs and sign supports shall be included in the lump sum price bid for ITEM 614, MAINTAINING TRAFFIC.

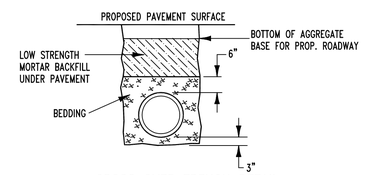
LIGHTS AND SIGNS AT ADJACENT INTERSECTIONS
The Contractor shall, in addition to the general requirements of ITEM 614 on this project, perform the following:

Provide, erect, and maintain standard 48"x30" "ROAD CLOSED" signs, supports, and lights at the following locations during the period in which the affected road is closed to traffic:

1. INT. C.R. Z & T.R. 15
2. INT. C.R. K & T.R. 15

Sign supports and lights for "ROAD CLOSED" signs shall be as detailed in the Ohio Manual of Uniform Traffic Control Devices. Payment for providing, erecting, maintaining, and removing lights, signs, and sign supports shall be included in the lump sum price bid for ITEM 614, MAINTAINING TRAFFIC.

CONTINGENCY QUANTITIES
Items designated by plan note to be used "AS DIRECTED BY ENGINEER" are subject to adjustment. The actual work locations and quantities used at the Engineer's discretion shall be made a matter of record by incorporation into the final change order governing completion of this project.

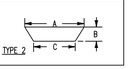


CROSS OVER TRENCH DETAIL
NO SCALE

*-REFER TO DWG. BP-4.1

FIELD & RESIDENTIAL DRIVES+

Ref. No.	Station	Rt./Lt.	A	B	C	TYPE	448	304	301			AREA
1	8+67	LT	46	10	20	2	-	4.4	3			139 SF
2	8+88	RT	32	6	16	2	-	9.0	9			364 SF



DRIVE & M.B. TURNOUT QUANTITIES

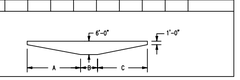
448 SURFACE = 2.6 C.Y.
304 = 18.5 C.Y.
301 = 15 C.Y.

*-REFER TO DWG. BP-4.1

MAILBOX TURNOUTS+

Ref. No.	Station	Rt./Lt.	A	B	C	448	403	402	301	304	
1	8+42	RT.	33'	13'	24'	2.6			3	5.1	278 SF

3" - 448
6" - 304



GENERAL SUMMARY

ITEM	GRAND TOTAL	UNIT	DESCRIPTION
			ROADWAY
201	1	LUMP	CLEARING & GRUBBING (INCLUDES SMALL TREE REMOVAL NOT LISTED UNDER ITEMIZED TREE REMOVAL)
201	2	EACH	STUMP REMOVED, 18" SIZE
201	1	EACH	STUMP REMOVED, 30" SIZE
201	7	EACH	TREE REMOVED, 18" SIZE
202	74	LIN. FT.	PIPE REMOVED, 24" & UNDER
202	2	EACH	CATCH BASIN REMOVED (CORRUGATED PLASTIC STAND PIPE)
202	1	EACH	REMOVE AND RELOCATE MAILBOX
202	769	S.Y.	PAVEMENT REMOVED (3"± THICK ASPHALT FOR EXIST. ROADWAY)
202	769	S.Y.	BASE REMOVED (5"± THICK STONE FOR ROADWAY)
202	77	S.Y.	BASE REMOVED (4"± THICK STONE FOR OLD MAILBOX APPROACH) (TO ALSO INCLUDE FILLING W/TOP SOIL AS NEEDED FROM PROPOSED ROADWAY EXCAVATION. SEE X-SEC. SHEETS)
203	227	CU. YD.	EXCAVATION (DOES NOT INCLUDE ANY ASPHALT OR BASE REMOVAL)
203	613	CU. YD.	EMBANKMENT (ALSO REFER TO ROADWAY EXCAVATION & REPLACEMENT DETAIL ON SHEET 2))
			EROSION CONTROL
601	1	CU. YD.	ROCK CHANNEL PROTECTION, TYPE D W/O FILTER
			DRAINAGE
611	70	LIN. FT.	12" CONDUIT, TYPE B, 707.33 (INCLUDES LSM & STONE BACKFILL PER X-OVER DETAIL & 12" MANUFACTURED END SECTION)
			PAVEMENT
204	1152	SQ. YD.	SUBGRADE COMPACTION (INCLUDES ROADWAY 7+73.22 TO 13+37.4, MB TURNOUT @ 8+42, & DRIVES @ 8+67 & 8+88)
304	267	CU. YD.	AGGREGATE BASE (INCLUDES ROADWAY 7+73.22 TO 13+37.4, MB TURNOUT @ 8+42, & DRIVES @ 8+67 & 8+88)
407	64	GAL.	TACK COAT (APPLIED @ THE RATE OF 0.05 GAL./SY., INCLUDES ROADWAY 7+73.22 TO 16+15)
448	56	CU. YD.	ASPHALT CONCRETE SURFACE COURSE PG 64-22, TYPE 1M (INCLUDES ROADWAY 7+73.22 TO 13+37.4, OVERLAY FROM 13+37.4 TO 16+15, & MAILBOX APPROACH @ 8+42)
448	62	CU. YD.	ASPHALT CONCRETE INTERMEDIATE COURSE PG 64-22, TYPE 1M (INCLUDES ROADWAY 7+73.22 TO 13+37.4)
SPEC.	2	EACH	BUTT JOINTS (36')
			MISCELLANEOUS
614	1	LUMP	MAINTAINING TRAFFIC
623	1	LUMP	CONSTRUCTION LAYOUT STAKES
624	1	LUMP	MOBILIZATION
103.05	1	LUMP	CONTRACT PERFORMANCE & PAYMENT BOND

T.R. 15 ROAD RELOCATION

BETWEEN ROAD K & Z

3/5

DWG. CREATED 2/12/2014

Scale: 1"=20'

1D PLACE 70 L.F.-12" N12 TILE
F/L INLET @ 10+25, 16' LT. = 681.00
F/L OUTLET @ 10+25, 54' RT. = 676.00
PLACE 12" MFG. END SECTION ON INLET END

TRANSITION FROM 6' SHLD. @ STA. 10+00 TO 4' SHLD. @ STA. 10+20. MAINTAIN 4' SHLD. FROM STA. 10+20 TO 10+30. TRANSITION FROM 4' SHLD. @ STA. 10+30 TO 6' SHLD. @ 10+50.

RELOCATED 14' WIDE ROAD 15

CURVE 1
P.I.=8+43.70
L=132.49'
C=128.60'
R=157.00'
T=70.48'
E=15.09'
D=48°21'08" (LT)
Dc=36°29'39"

CURVE 2
P.I.=10+88.72
L=184.97'
C=179.90'
R=227.21'
T=97.95'
E=20.22'
D=46°38'39" (RT)
Dc=25°13'02"

EXCAVATE AS NEEDED TO ACHIEVE 8" DEPTH OF 304 STONE

EXIST. ROADWAY TO BE EXCAVATED TO A DEPTH OF APPROX. 8". FILL VOID WITH EXCAVATED MATERIAL FROM PROPOSED ROADWAY EXCAVATION. 3"± CLAY, 2"± SOD, & 3"± TOPSOIL EXCEPT WHERE PROPOSED ROADWAY OVERLAPS EXISTING ROADWAY, THEN USE TYPICAL PAVEMENT SECTION AS SHOWN ON TYPICAL SHEET.

EXCAVATE AS NEEDED TO ACHIEVE 8" DEPTH OF 304 STONE

REMOVE 18" CORR. PLAST. STAND PIPE/C.B. & 36 L.F.-10" CORR. PLAST. (10R) (11R)

PLACE 1 CY ROCK CHANN. PROT. (1RCP)

REMOVE 15" CORR. PLAST. STAND PIPE/C.B. & 38 L.F.-8" CMP (7R) (8R)

REMOVE BRUSH TO STA. 13+37

END 14' WIDE PROP. PAVEMENT @ STA. 12+93.47 & BEGIN PAVEMENT TAPER TO EXIST. 12' WIDE PAVEMENT @ STA. 13+37.4

END EXIST. PAVEMENT REMOVAL @ STA. 13+37.4
BEGIN 1 1/2" OVERLAY TO NORTH FROM STA. 13+37.4 TO STA. 16+15.0 OR 20' S. OF RR SPK. IN INT. OF 15 & Z. PROVIDE BUTT JOINT.

MEET EXIST. PAVEMENT @ STA. 7+63

STA. 0+00
R.R. SPK. FOUND SE COR., NE 1/4, NE 1/4 SEC. 10.

BEGIN EXIST. 12'± WIDE PAVEMENT REMOVAL & BEGIN 14' WIDE PROPOSED PAVEMENT @ STA. 7+73.22. PROVIDE BUTT JOINT.

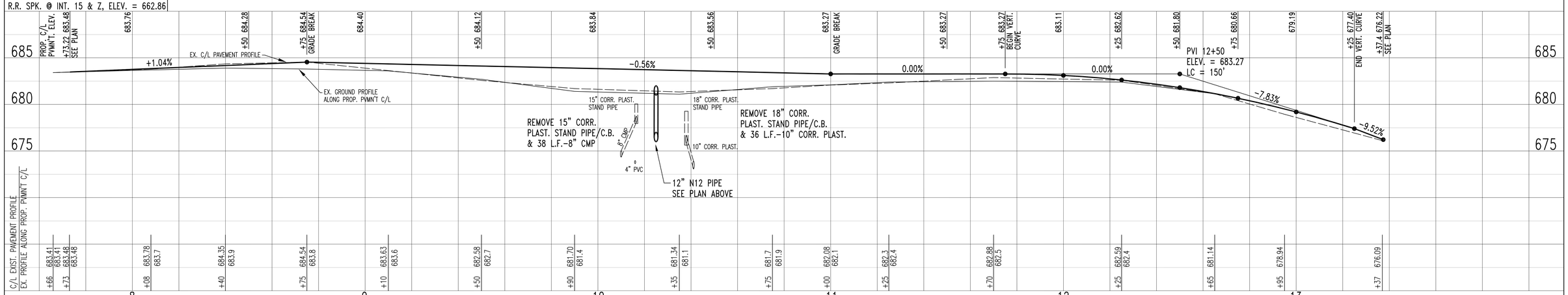
RELOCATE M.B. FROM 8+38 TO 8+42 (3R)

REMOVE STONE 4"± DEEP & REPLACE WITH TOPSOIL AS NEEDED (4R)

IRON PIPE FOUND NE CORNER, SEC. 10 FLATROCK TWP.

BASIS FOR BEARINGS
ALL BEARINGS SHOWN ARE FOR PROJECT USE ONLY. THE BEARINGS SHOWN ARE REALTIVE TO GRID NORTH OF THE OHIO STATE PLANE COORDINATES, NORTH ZONE NAD 83 (2007 ADJUSTMENT) DATUM, AS ESTABLISHED BY GPS OBSERVATION IN DECEMBER OF 2012.

SBM
R.R. SPK. STA. 0+00 @ S.E. COR., N.E. 1/4, N.E. 1/4 SEC. 10 FLATROCK TWP. ELEV. = 681.90
R.R. SPK. @ INT. 15 & Z, ELEV. = 662.86



PLAN — PROFILE

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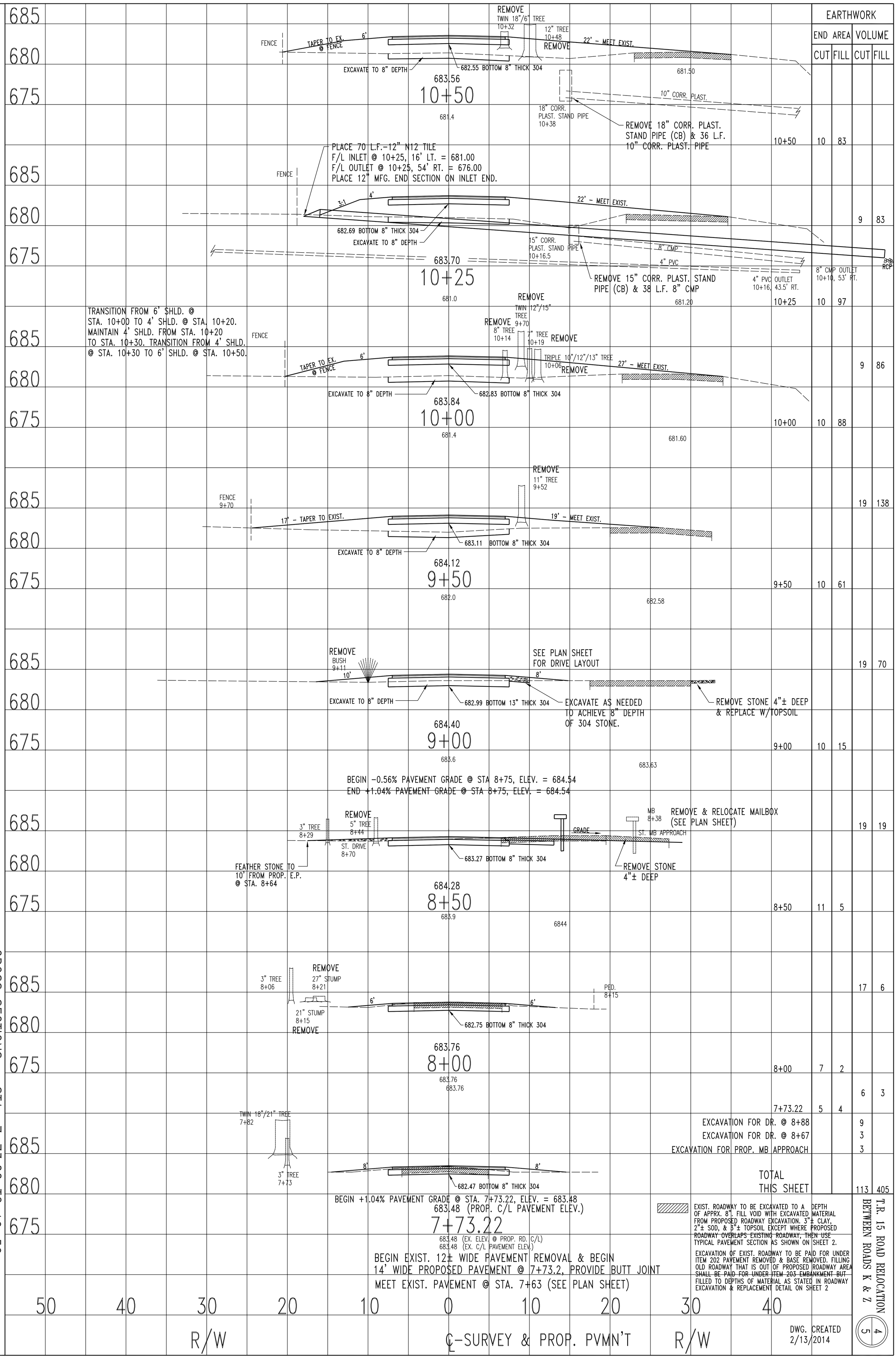
FULL CROSS SECTION

CROSS SECTIONS - STA. 7+73.22 TO 10+50



EARTHWORK			
END AREA		VOLUME	
CUT	FILL	CUT	FILL
10+50	10	83	
		9	83
10+25	10	97	
		9	86
10+00	10	88	
		19	138
9+50	10	61	
		19	70
9+00	10	15	
		19	19
8+50	11	5	
		17	6
8+00	7	2	
		6	3
7+73.22	5	4	
EXCAVATION FOR DR. @ 8+88			9
EXCAVATION FOR DR. @ 8+67			3
EXCAVATION FOR PROP. MB APPROACH			3
TOTAL THIS SHEET			113 405

EXIST. ROADWAY TO BE EXCAVATED TO A DEPTH OF APPRX. 8". FILL VOID WITH EXCAVATED MATERIAL FROM PROPOSED ROADWAY EXCAVATION. 3"± CLAY, 2"± SOD, & 3"± TOPSOIL EXCEPT WHERE PROPOSED ROADWAY OVERLAPS EXISTING ROADWAY, THEN USE TYPICAL PAVEMENT SECTION AS SHOWN ON SHEET 2.

EXCAVATION OF EXIST. ROADWAY TO BE PAID FOR UNDER ITEM 202 PAVEMENT REMOVED & BASE REMOVED. FILLING OLD ROADWAY THAT IS OUT OF PROPOSED ROADWAY AREA SHALL BE PAID FOR UNDER ITEM 203 EMBANKMENT BUT FILLED TO DEPTHS OF MATERIAL AS STATED IN ROADWAY EXCAVATION & REPLACEMENT DETAIL ON SHEET 2

T.R. 15 ROAD RELOCATION BETWEEN ROADS K & Z

DWG. CREATED 2/13/2014

4/5

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FULL CROSS SECTION

CROSS SECTIONS - STA. 11+00 TO 12+93

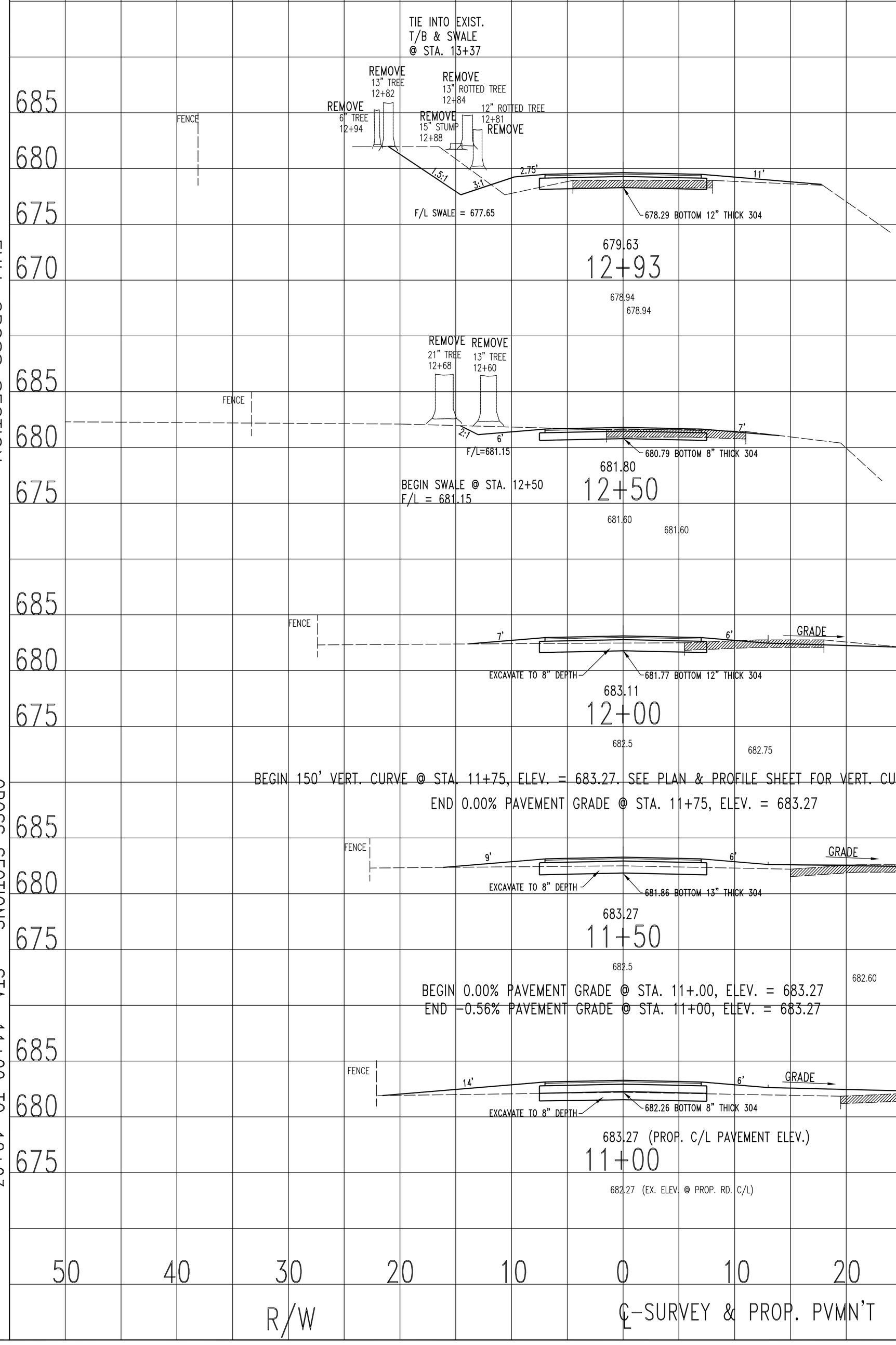
PROVIDE BUTT JOINT @ 16+15.0

BEGIN 1 1/2" PAVEMENT OVERLAY TO NORTH FROM STA. 13+37.4 TO STA. 16+15.0
OR 20' S. OF RR SPK. IN INT. OF 15 & Z.

END EXIST. PAVEMENT REMOVAL @ STA. 13+37.4

END 14' WIDE PROPOSED PAVEMENT @ STA. 12+93.47 & BEGIN PAVEMENT TAPER TO EXIST. 12' WIDE PAVEMENT @ STA. 13+37.4

PROP. C/L PAVEMENT ELEV. @ 13+37.4 = 676.22
EX. C/L PAVEMENT ELEV. @ 13+37.4 = 676.09
END 150' VERT. CURVE @ STA. 13+25, ELEV. = 677.40



	EARTHWORK			
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
13+37.4	0	0		
			15	7
12+93	18	8		
			22	8
12+50	10	2		
			19	7
12+00	10	6		
			19	21
11+50	11	17		
			20	52
11+00	11	39		
			19	113
10+50	10	83		
TOTAL THIS SHEET			114	208
TOTAL SHEET 4			113	405
GRAND TOTAL			227	613

DWG. CREATED
2/18/2014

T.R. 15 ROAD RELOCATION
BETWEEN ROADS K & Z

5/5

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