

PROJECT	DESIGNATION
CONTRACT	1006017
R-35164	BRIDGE FILE

**INDIANA  
DEPARTMENT OF  
TRANSPORTATION**

**ENGINEERING PLANS  
FOR PROPOSED TRAIL AT  
NORTHSIDE BUSINESS PARK**

P.E. N/A  
R/W N/A  
CONST. N/A

TRAFFIC DATA	
A.A.D.T.	V.P.D.
A.A.D.T.	V.P.D.
D.H.V.	V.P.H.
DIRECTIONAL DISTRIBUTION	%
TRUCKS	% D.H.V.
	% A.A.D.T.
DESIGN DATA	
DESIGN SPEED	20 mph
PROJECT DESIGN CRITERIA	TRAIL CONSTRUCTION
FUNCTIONAL CLASSIFICATION	LOCAL
RURAL/URBAN	URBAN
TERRAIN	LEVEL
ACCESS CONTROL	

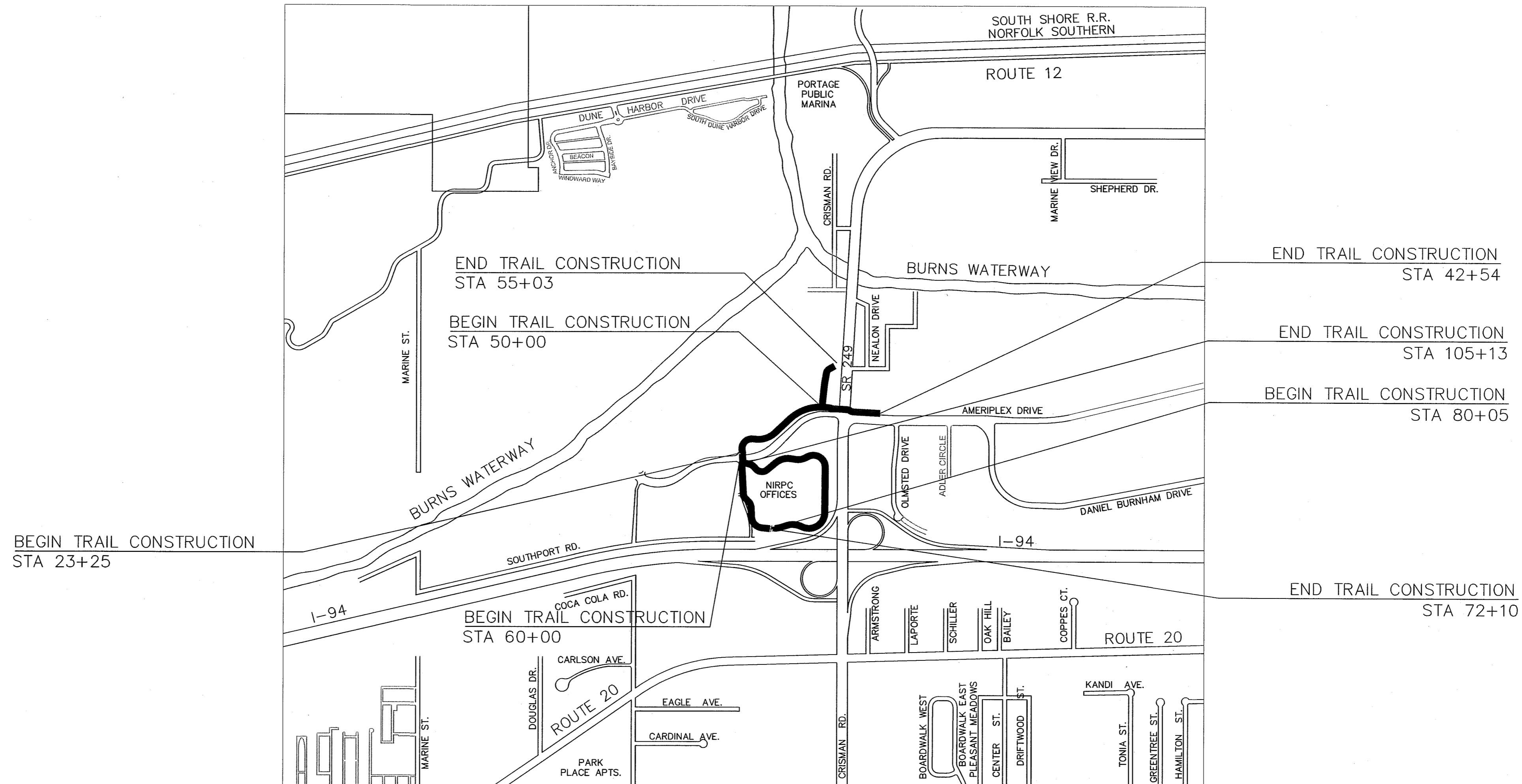
CITY OF PORTAGE  
BOARD OF PUBLIC WORKS AND SAFETY

*James E. Snyder*  
James E. Snyder, Mayor

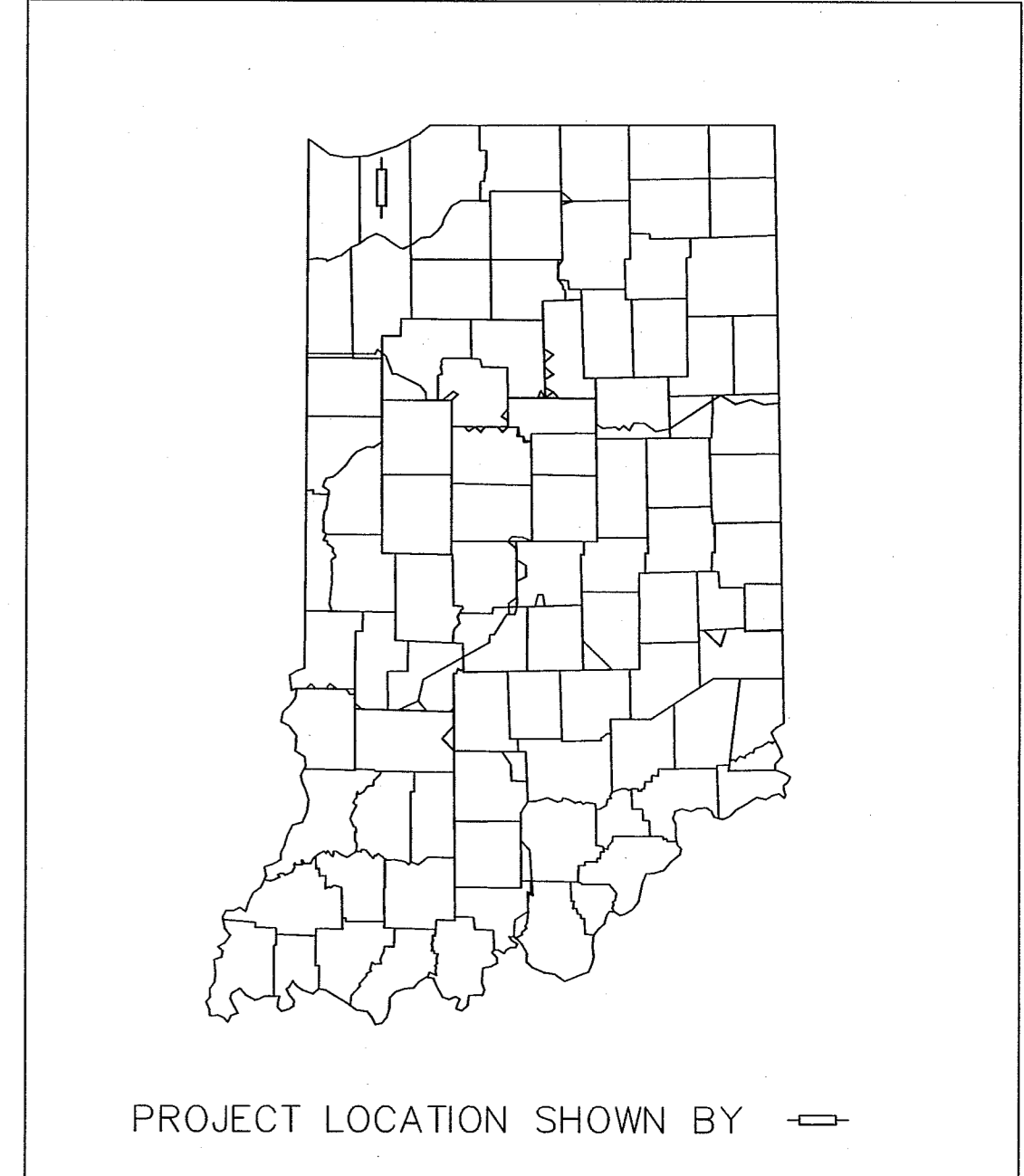
*Paul Ciesielski*  
Paul Ciesielski, Member

*Larry Smock*  
Larry Smock, Member

PORTAGE TOWNSHIP, PORTER COUNTY, IN  
TOWNSHIP 37 N, RANGE 7 W, SECTION 36  
TOWNSHIP 36 N, RANGE 7 W, SECTION 1



LOCATION MAP



PROJECT LENGTH: 6,212 LF  
MAXIMUM GRADE: 3.89%  
MINIMUM GRADE: 0.29%  
LONGITUDE: 41.467943 N  
LATITUDE: 87.061543 W

FINAL TRACINGS SUBMITTAL  
JUNE 7, 2012



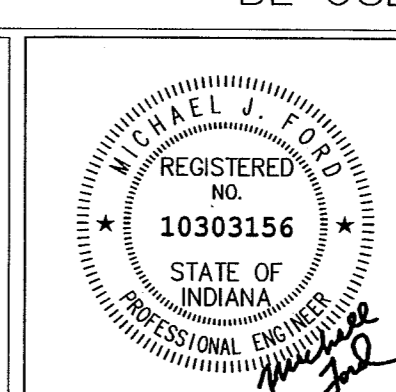
[INDIANA DEPARTMENT OF TRANSPORTATION  
STANDARD SPECIFICATIONS DATED 2012 TO  
BE USED WITH THESE SET OF PLANS]

REVISIONS	
DATE	SHEET NO.

FEDERAL HIGHWAY ADMINISTRATION  
U.S. DEPT. OF TRANSPORTATION  
APPROVED: \_\_\_\_\_  
DATE \_\_\_\_\_  
DIVISION ADMINISTRATOR

PREPARED BY: SHORT ELLIOTT HENDRICKSON, INC. (219) 513-2500  
PHONE  
CERTIFIED BY: *Michael Ford* 05/22/2012  
DATE  
APPROVED FOR LETTING: \_\_\_\_\_  
DATE

**SEH**  
PHONE: 219.513.2500  
9200 CALUMET AVENUE  
SUITE N501  
MUNSTER, IN 46321



BRIDGE FILE	
DESIGNATION	1006017
SHEETS	1 of 41
PROJECT	
CONTRACT	R-35164

GENERAL NOTES

1. THE CONTRACTOR SHALL PROVIDE FULL DEPTH SAW CUTS WHERE EXISTING PAVEMENT, CONCRETE OR ASPHALT IS TO BE REMOVED. THE CONTRACTOR SHALL PROVIDE ADEQUATE COMPACTED MATERIAL/GRAVEL AT SAW CUT EDGE TO SHORE UP AND PREVENT THE DEGRADATION OF THE EXISTING PAVEMENT TO REMAIN. DAMAGE TO EXISTING PAVEMENT WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
2. THE CONTRACTOR SHALL PLACE AND MAINTAIN A 6" GRAVEL BASE AT ALL PROPOSED ENTRANCES TO THE CONSTRUCTION SITE, PRIOR TO DEMOLITION.
3. EROSION CONTROL PROVISIONS SHALL BE IN PLACE PRIOR TO ALL OPERATIONS. THE CONTRACTOR SHALL FOLLOW THE CITY'S REQUIREMENTS FOR THE PROJECT AND PRACTICES OUTLINED IN THE "INDIANA HANDBOOK FOR EROSION CONTROL IN DEVELOPING AREAS" REQUIRED FOR THE PREVENTION OF SOIL EROSION AND SEDIMENTATION WITHIN AND DOWNSTREAM OF THE CONSTRUCTION SITE. SAID PRACTICES AND REQUIREMENTS SHALL REMAIN IN PLACE FOR THE DURATION OF THE PROJECT.
4. CONTRACTOR SHALL COORDINATE WITH THE CITY OF PORTAGE RELATIVE TO ALL WORK TO BE PERFORMED WITHIN THE CITY OF PORTAGE PUBLIC R.O.W. CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL MEASURES WITHIN PUBLIC R.O.W. AS REQUIRED.
5. ALL SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO INDIANA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION. AND INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND STANDARD DRAWINGS, LATEST EDITION. ANY SIGNS DAMAGED BY CONSTRUCTION SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.
6. UTILITIES SHOWN ON PLANS ARE APPROXIMATE IN LOCATION AND ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY NOT BE ALL INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL UTILITY COMPANIES WHETHER IDENTIFIED BELOW AND LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE ENGINEER.
7. THE CONTRACTOR SHALL CONFORM TO INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION YEAR 2012, FOR ALL WORK TO BE PERFORMED, UNLESS OTHERWISE SPECIFIED OR NOTED.
8. MAINTENANCE OF TRAFFIC DURING CONSTRUCTION SHALL BE PROVIDED FOR ALL PUBLIC RIGHT-OF-WAYS IN ACCORDANCE WITH INDOT STANDARD DRAWINGS AND SPECIFICATIONS. REFER TO STANDARD DRAWING NO. E 801-TCTL-07, E 801-TCLC-12, E 801-TCSN-01, E 801-TCSN-02, E 801-TCSN-01, E 801-TCSN-05, E 801-TCSN-11, E 801-TCSN-12, E 801-TCSN-13, E 801-TC DV-01 AND E 801-TC DV-02 FOR DETAILS.

9. TACK COAT SHALL BE APPLIED TO ALL HMA OR CONCRETE PAVEMENT BEFORE PLACEMENT OF ANY HMA MIXTURES IN ACCORDANCE WITH INDOT STANDARD SPECIFICATION SECTION 406.
10. CONTRACTOR SHALL RESTORE ALL DRIVES AND PAVEMENT TRUE TO HORIZONTAL AND VERTICAL LINES. THE SECTION REMOVED SHALL BE REPLACED TO ITS ORIGINAL CONDITION WHERE INDICATED ON THE PLANS OR BETTER OR AS STATED BY THESE PLANS AND SPECIFICATIONS. ANY DRIVE OR PAVING OUTSIDE THE CONSTRUCTION AREA DAMAGED BY CONSTRUCTION PRACTICES SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER.
11. WHEN EXCAVATING NEAR UTILITIES, CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPORTING, BRACING OR SHORING AS REQUIRED TO PREVENT DAMAGE TO THE UTILITIES.
12. CONTRACTOR SHALL RESTORE ALL AFFECTED SITE CONDITIONS TO THEIR ORIGINAL CONDITION OR BETTER AFTER COMPLETION OF THE WORK. GRASS REQUIRING REPLACEMENT THROUGHOUT THE PROJECT SHALL BE SEEDED PER THE SPECIFICATIONS. ANY DITCH AFFECTED BY THE CONSTRUCTION SHALL BE RE-ESTABLISHED TO ITS ORIGINAL LINE AND GRADE.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DEWATERING. WATER REMOVED BY DEWATERING EQUIPMENT SHALL NOT BE DISPOSED OF INTO SANITARY OR STORM SEWERS WITHOUT WRITTEN APPROVAL BY THE CITY, BOARD OF PUBLIC WORKS.
14. WHERE SANITARY MANHOLES ARE LOCATED OUTSIDE OF PAVED AREAS. CONTRACTOR SHALL GRADE AROUND EACH CASTING SO THAT SURFACE WATER SHALL NOT DRAIN INTO OR OVER THE STRUCTURE.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE HEALTH AND SAFETY OF HIS EMPLOYEES AND THE SUBCONTRACTORS PER OSHA REGULATIONS AND ANY OTHER ORGANIZATION HAVING JURISDICTION.
16. CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING A BID FOR WORK. BY SUBMITTING A BID, THE CONTRACTOR INDICATES THAT HE HAS VISITED THE SITE AND IS AWARE OF ALL EXISTING CONDITIONS.
17. NO OPEN TRENCHES WILL BE ALLOWED IN THE EVENING AFTER DAILY CONSTRUCTION OPERATIONS HAVE FINISHED, EXCEPT IN THE AREA OF THE TRENCHING BOX. CONTRACTOR TO PROVIDE CONSTRUCTION FENCING AND NECESSARY WARNING SIGNAGE AROUND TRENCHING BOX AREA FOR PUBLIC SAFETY.

18. CONTRACTOR SHALL NOTIFY THE CITY OF PORTAGE ENGINEER'S OFFICE AND PUBLIC WORKS OFFICE 48 HOURS PRIOR TO THE INSTALLATION OF THE CONNECTION TO THE EXISTING STRUCTURE/PIPING.
19. THE CONTRACTOR SHALL CLEAR AND GRUB ALL NON-PAVEMENT AREAS LOCATED WITHIN THE CONSTRUCTION LIMITS IN ACCORDANCE WITH THE SPECIFICATIONS INCLUDING THE REMOVAL OF ALL TREES OF ALL DIAMETERS, SHRUBS, BUSHES AND MISCELLANEOUS DEBRIS NOT CALLED OUT TO BE PROTECTED ON THE PLANS.
20. CONTACT THE ENGINEERING DEPARTMENT FOR SANITARY SEWER, ROADWAY LIGHTING, TRAFFIC SIGNAL AND STORM SEWER INFORMATION.
21. CONTRACTOR SHALL MAINTAIN ALL ROADWAY LIGHTING AND TRAFFIC SIGNALS INSTALLED UNDER THIS CONTRACT UNTIL FINAL ACCEPTANCE. RESPONSE TO MAINTENANCE CALLS SHALL BE MADE WITHIN TWO HOURS OR LESS, SEVEN DAYS A WEEK, TWENTY-FOUR HOURS PER DAY.
22. CONTRACTOR SHALL PERFORM ALL WORK WITHIN REASONABLE WORK HOURS (7:00 AM TO 7:00 PM) MONDAY THROUGH SATURDAY. CONTRACTOR SHALL NOT WORK ON HOLIDAYS IDENTIFIED IN INDOT SPECIFICATION SECTION 101.23. DEVIATIONS IN WORK SCHEDULE SHALL BE APPROVED IN WRITING BY THE CITY ENGINEER.
23. MAINTAIN ROADWAY SIGNAGE DURING CONSTRUCTION.
24. ACCESS TO ALL RESIDENCES AND COMMERCIAL FACILITIES SHALL BE MAINTAINED AT ALL TIMES.
25. MAINTAIN TRAFFIC CONTROL AND MAINTENANCE OF TRAFFIC MEASURES AT ALL TIMES.
26. FOR ADDITIONAL MAINTENANCE OF TRAFFIC, SEE SPECIFICATION SECTION 02200.
27. ALL RADII DIMENSIONS ARE FROM BACK OF CURB UNLESS OTHERWISE NOTED.
28. CONTRACTOR SHALL VERIFY ALL BENCHMARK ELEVATIONS WITH A CLOSED LEVEL CIRCUIT PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER PRIOR TO START OF CONSTRUCTION.
29. CONTRACTOR SHALL PROVIDE TO THE CITY, AS-BUILT DRAWINGS SHOWING ALL DEVIATIONS FROM PLAN INCLUDING BUT NOT LIMITED TO LOCATION, ELEVATION, COLOR OR TYPE. IF A PARTICULAR SHEET OR PLAN HAS NO DEVIATION, CONTRACTOR SHALL SUBMIT THE PLAN AND LABEL "NO DEVIATION FROM PLAN." ALL AS-BUILTS SHALL BE SIGNED AND STAMPED BY THE CONTRACTOR.

UTILITIES

<p>AMERITECH 302 SOUTH EAST STREET CROWN POINT, INDIANA 46307 219.662.4400</p> <p>NIPSCO BEN SIELSKI 1460 EAST 15TH AVENUE GARY, INDIANA 46402 219.886.5596</p> <p>FRONTIER ALLISON BUCHANAN 2401 CHICAGO STREET VALPARAISO, INDIANA 46383 219.531.9237</p> <p>BP PIPELINES (NORTH AMERICA) INC. NICK SCHILLING 150 W WARRENVILLE ROAD NAPERVILLE, IL 60563 630.536.2172</p>	<p>CITY OF PORTAGE ENGINEERING 6070 CENTRAL AVENUE PORTAGE, INDIANA 46368 219.762.4204</p> <p>INDIANA AMERICAN WATER COMPANY DAVE CLARK 1650 MICHIGAN STREET GARY, IN 46401 219.880.2386</p> <p>COMCAST RICK WALSTRA 17 WASHINGTON STREET VALPARAISO, IN 46383 219.462.9990</p>
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REVISIONS

SHEET NO.	DATE	REVISED

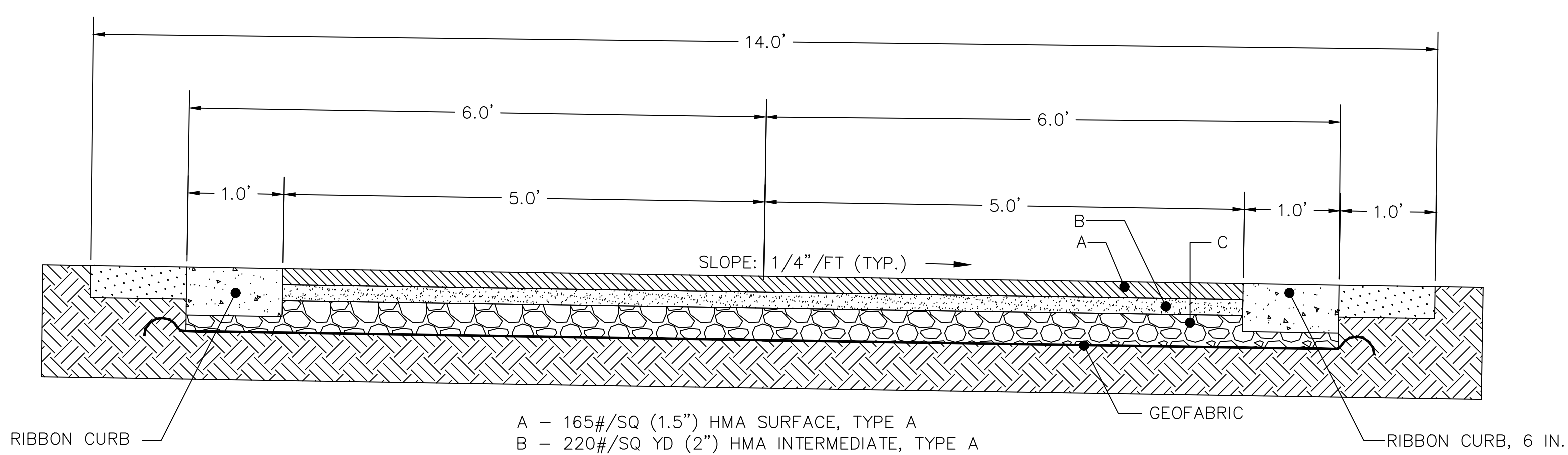
SHEET INDEX

SHEET NO.	DESIGNATION
1	TITLE SHEET
2	INDEX & GENERAL NOTES
3-4	TYPICAL CROSS SECTIONS & DETAILS
5	OVERALL PLAN
6	SHEET LAYOUT PLAN
7-16	PLAN & PROFILES
17-18	SIGNAGE & STRIPING PLANS
19	TRAFFIC SIGNAL PLAN
20-23	LANDSCAPING PLANS
24-25	EROSION CONTROL PLANS
26-41	CROSS SECTIONS

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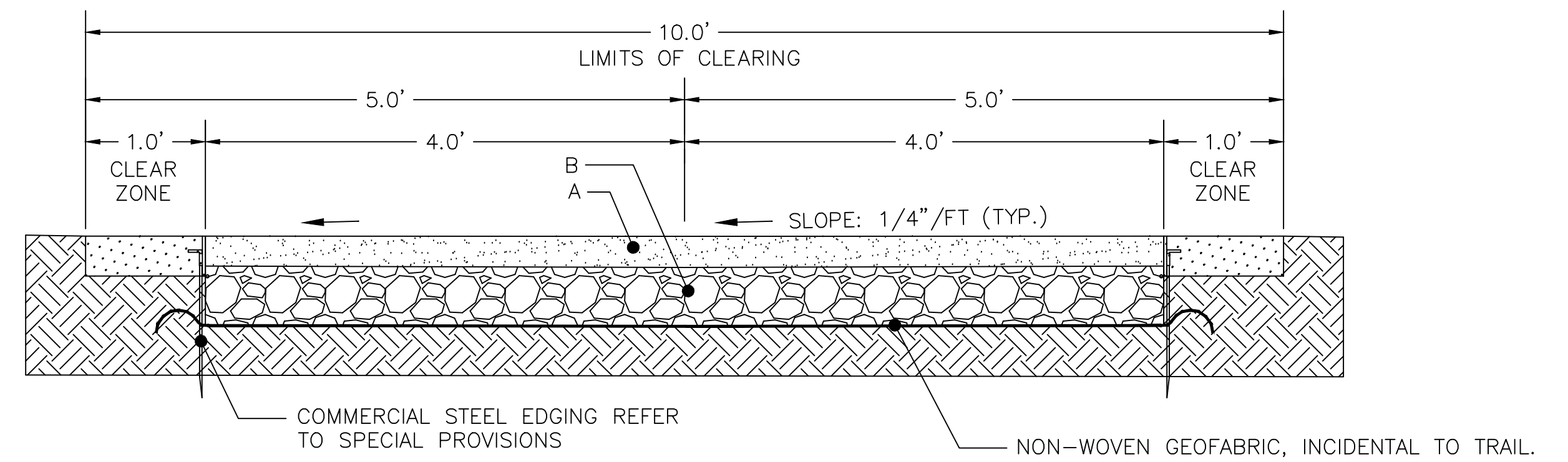
<p>PHONE: 219.513.2500 9200 CALUMET AVENUE SUITE N501 MUNSTER, IN 46321</p>		RECOMMENDED FOR APPROVAL  05/22/2012 DESIGN ENGINEER DATE	<p><b>INDIANA DEPARTMENT OF TRANSPORTATION</b></p> <p><b>INDEX &amp; GENERAL NOTES</b></p>	HORIZONTAL SCALE	BRIDGE FILE
		DESIGNED: NM DRAWN: JS		VERTICAL SCALE	DESIGNATION
CHECKED: MF	CHECKED: CH			N/A	1006017
				SURVEY BOOK	SHEETS
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				CONTRACT R-35164	PROJECT



A - 165#/SQ (1.5") HMA SURFACE, TYPE A  
 B - 220#/SQ YD (2") HMA INTERMEDIATE, TYPE A  
 C - 6" COMPACTED AGGREGATE, NO. 53, BASE  
 WOVEN GEOFABRIC APPROVED BY ENGINEER, INCIDENTAL TO TRAIL

**ASPHALT TRAIL TYPICAL SECTION**

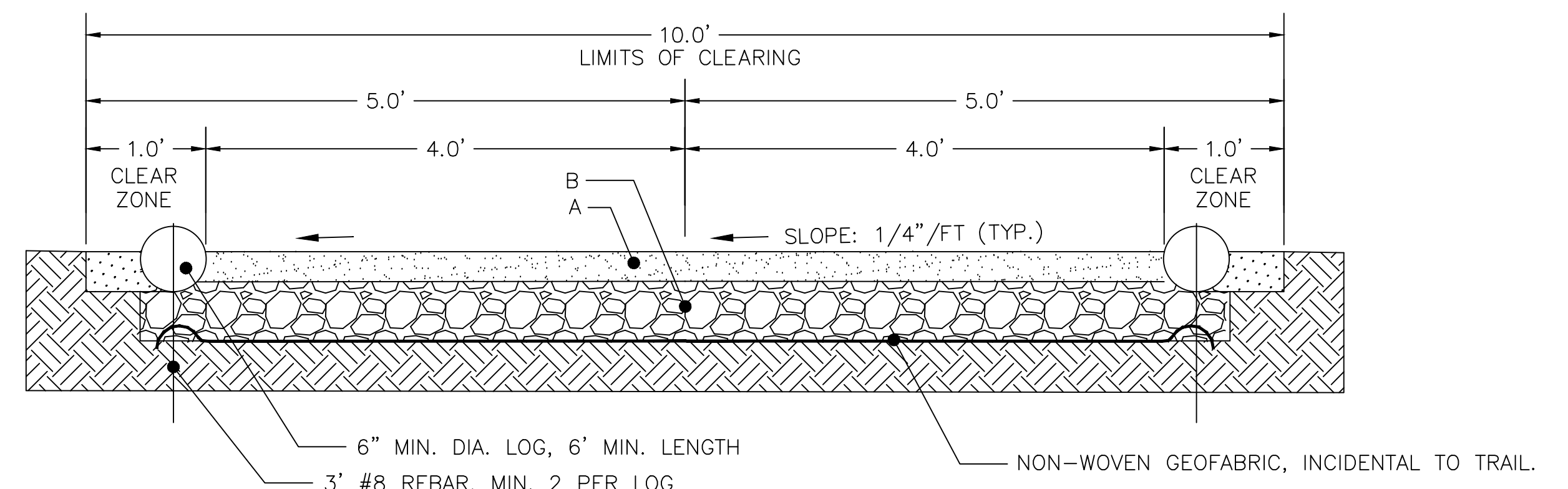
STA. 10+55 - 43+52.22 - LINE A  
 STA. 60+00 - 61+50.00 - LINE B  
 STA. 65+28.84 - 72+45.13 - LINE B  
 STA. 50+00 - 55+58.40 - LINE D



A - 3" COMPACTED LIMESTONE SURFACE  
 B - 6" COMPACTED AGGREGATE, NO. 53, BASE

**LIMESTONE TRAIL TYPE "A" TYPICAL SECTION**

STA. 80+05 - 96+13.44 - LINE C



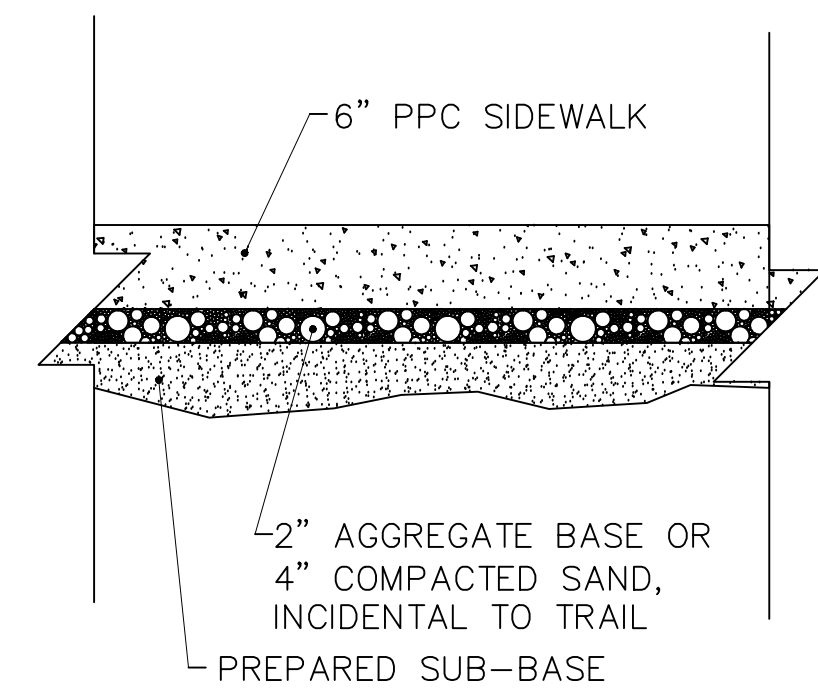
A - 3" COMPACTED LIMESTONE SURFACE  
 B - 6" COMPACTED AGGREGATE, NO. 53, BASE

**LIMESTONE TRAIL TYPE "B" TYPICAL SECTION**

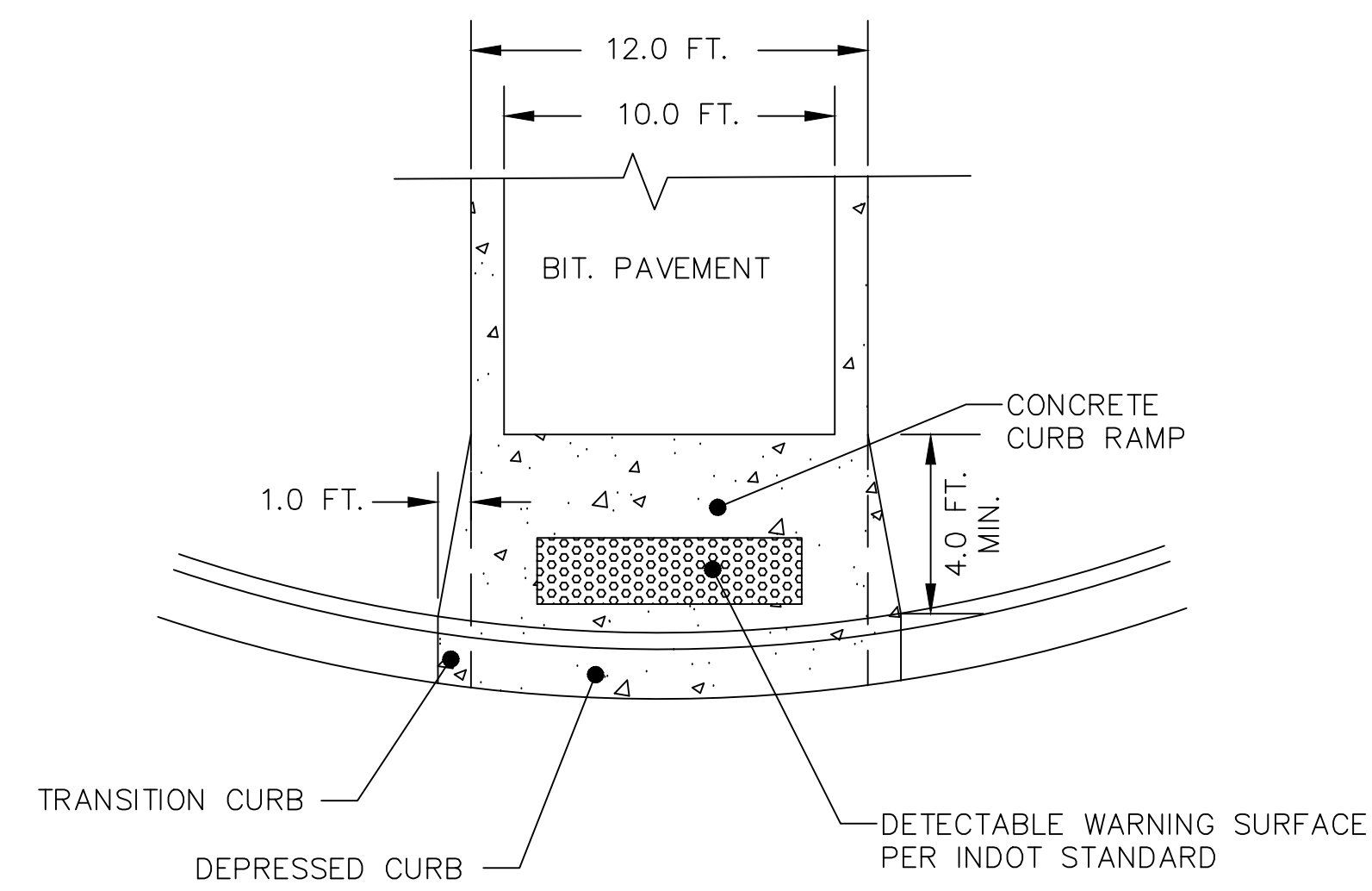
STA. 96+13.44 - 104+74.11 - LINE C

**CURVE DATA TABLE**

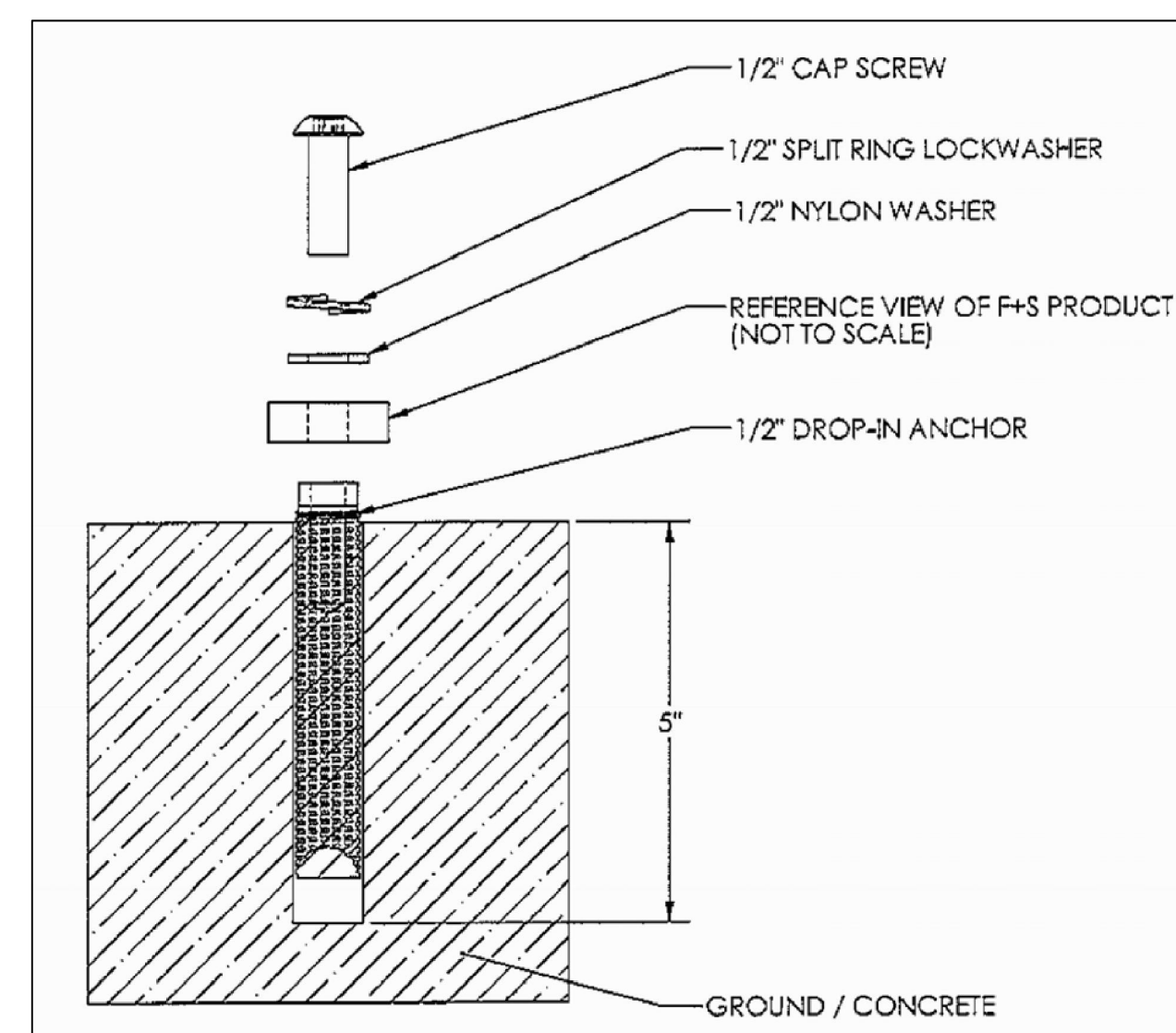
NUMBER	DEFLECTION ANGLE	TANGENT	RADIUS	ARC LENGTH
C7	82°12'58"	26.18	30.00	43.05
C8	94°59'09"	136.38	125.00	207.23
C9	48°22'49"	134.76	300.00	253.32
C10	46°34'27"	236.72	550.00	447.08
C11	25°11'26"	11.17	50.00	21.98
C12	25°05'37"	11.13	50.00	21.90
C13	33°01'30"	14.82	50.00	28.82
C14	32°55'13"	14.77	50.00	28.73
C15	20°36'04"	9.10	50.07	18.00
C16	38°21'14"	17.46	50.20	33.61
C17	16°51'19"	11.11	75.00	22.06
C18	16°28'52"	10.86	75.00	21.57
C19	09°05'25"	23.85	300.00	47.60
C20	09°05'25"	23.85	300.00	47.60
C21	29°12'46"	13.03	50.00	25.49
C22	35°33'17"	160.31	500.00	310.27
C23	129°41'28"	170.36	80.00	181.08
C24	31°17'49"	28.01	100.00	54.62
C25	29°41'30"	26.51	100.00	51.82
C26	50°56'54"	83.37	175.00	155.61
C27	117°15'38"	328.04	200.00	409.32
C28	09°07'29"	39.90	500.00	79.63
C29	14°44'24"	64.67	500.00	128.63
C30	108°03'24"	172.23	125.00	235.74
C31	41°27'29"	151.38	400.00	289.43
C32	54°47'39"	51.83	100.00	95.63
C33	88°35'18"	97.57	100.00	154.62
C34	46°43'14"	64.79	150.00	122.31
C35	26°44'11"	71.29	300.00	139.99
C36	18°08'36"	47.90	300.00	95.00
C37	65°35'43"	96.66	150.00	171.73



**TYPICAL CONCRETE SIDEWALK SECTION**



**TYPICAL CURB RAMP**



NOTE:  
 FOR BENCH & TRASH RECEPTACLE TYPE REFER TO SPECIAL PROVISIONS.

**BENCH & TRASH RECEPTACLE MOUNTING CONNECTION**

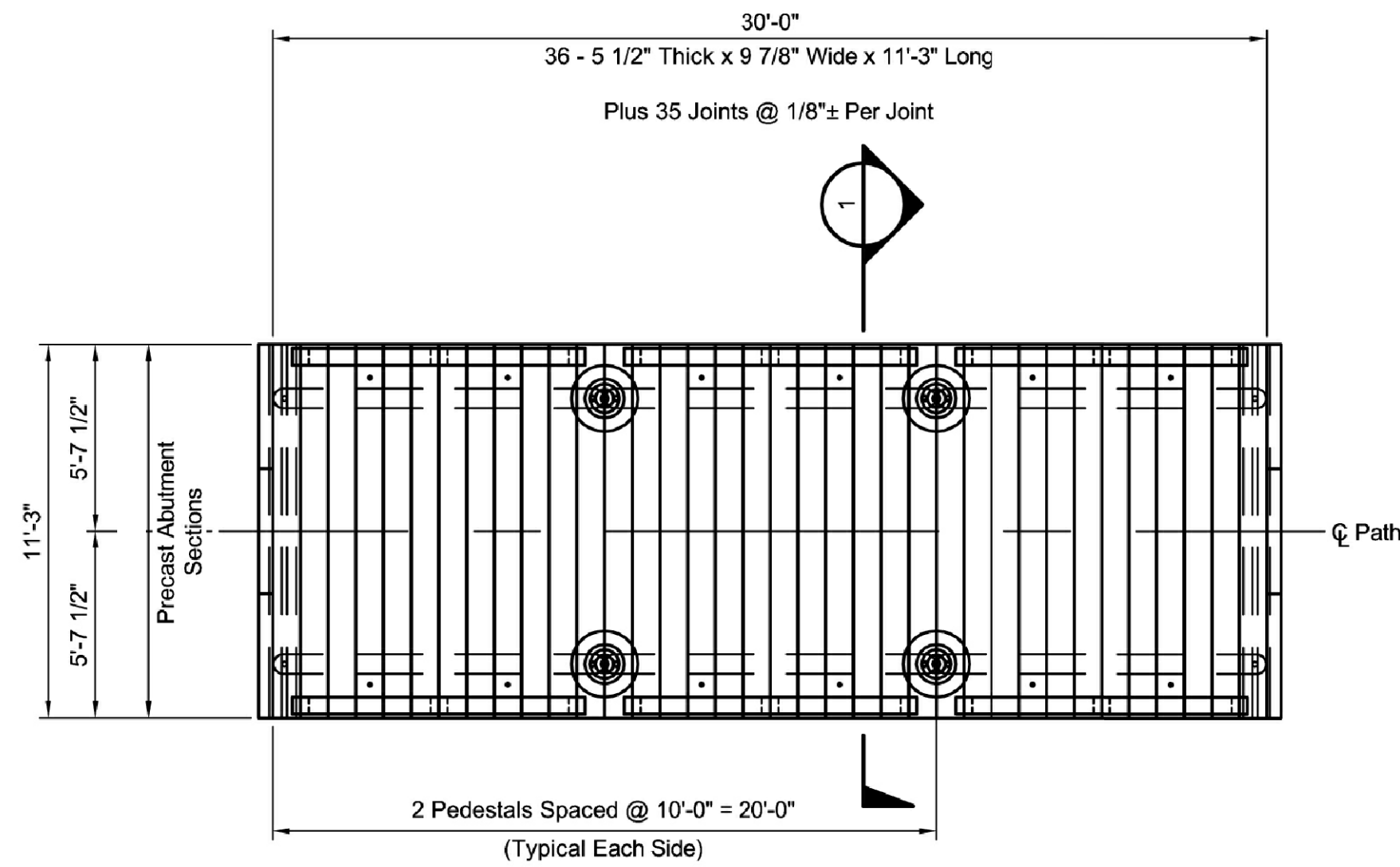
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LEGEND

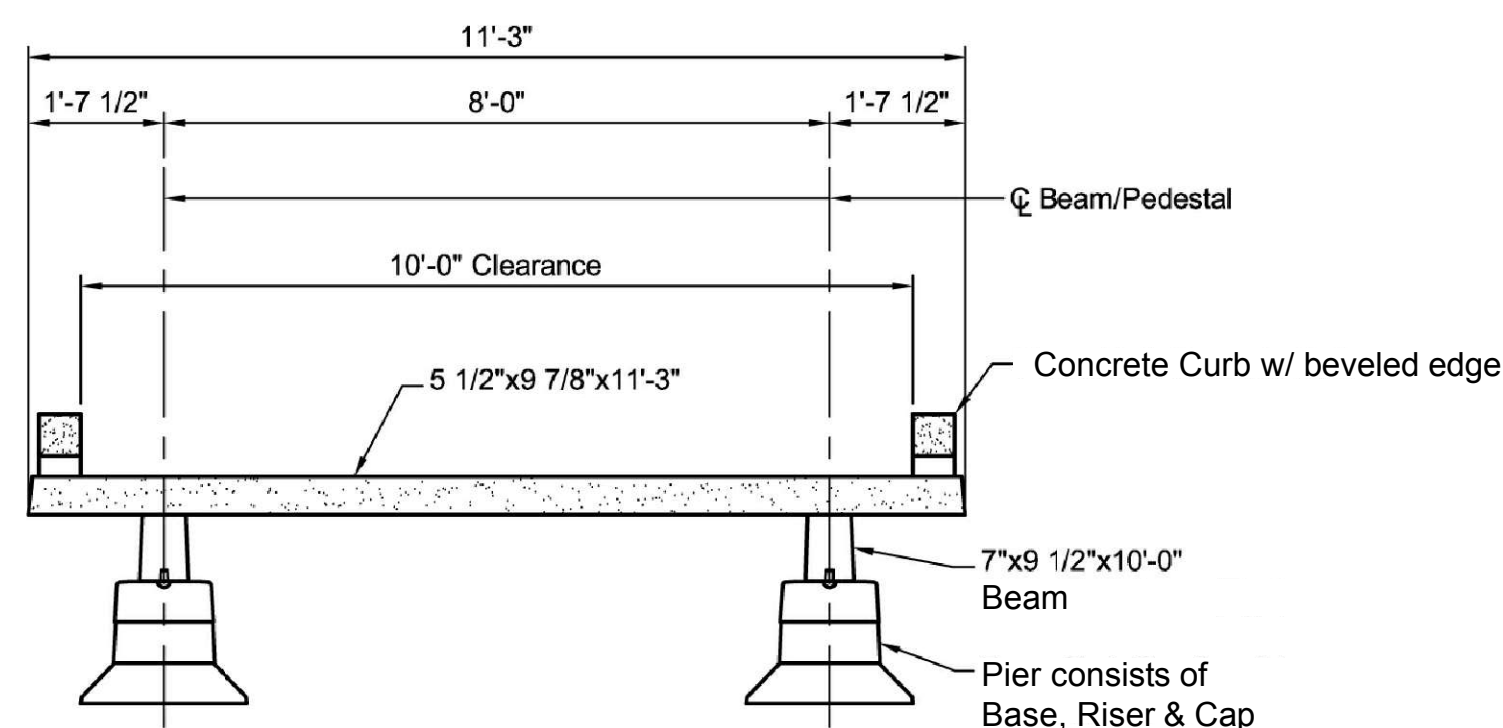
RECOMMENDED FOR APPROVAL: *Michael J. Ford* 05/22/2012 DATE  
 DESIGN ENGINEER  
 DESIGNED: NM DRAWN: JS  
 CHECKED: MF CHECKED: CH

**INDIANA DEPARTMENT OF TRANSPORTATION**  
**TYPICAL SECTIONS & DETAILS**

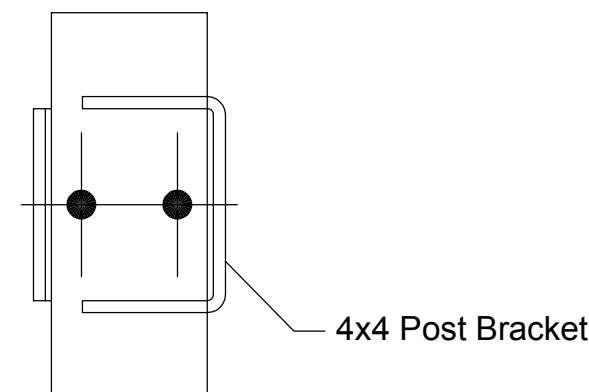
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N/A	
VERTICAL SCALE	DESIGNATION
N/A	1006017
SURVEY BOOK	SHEETS
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CONTRACT	PROJECT
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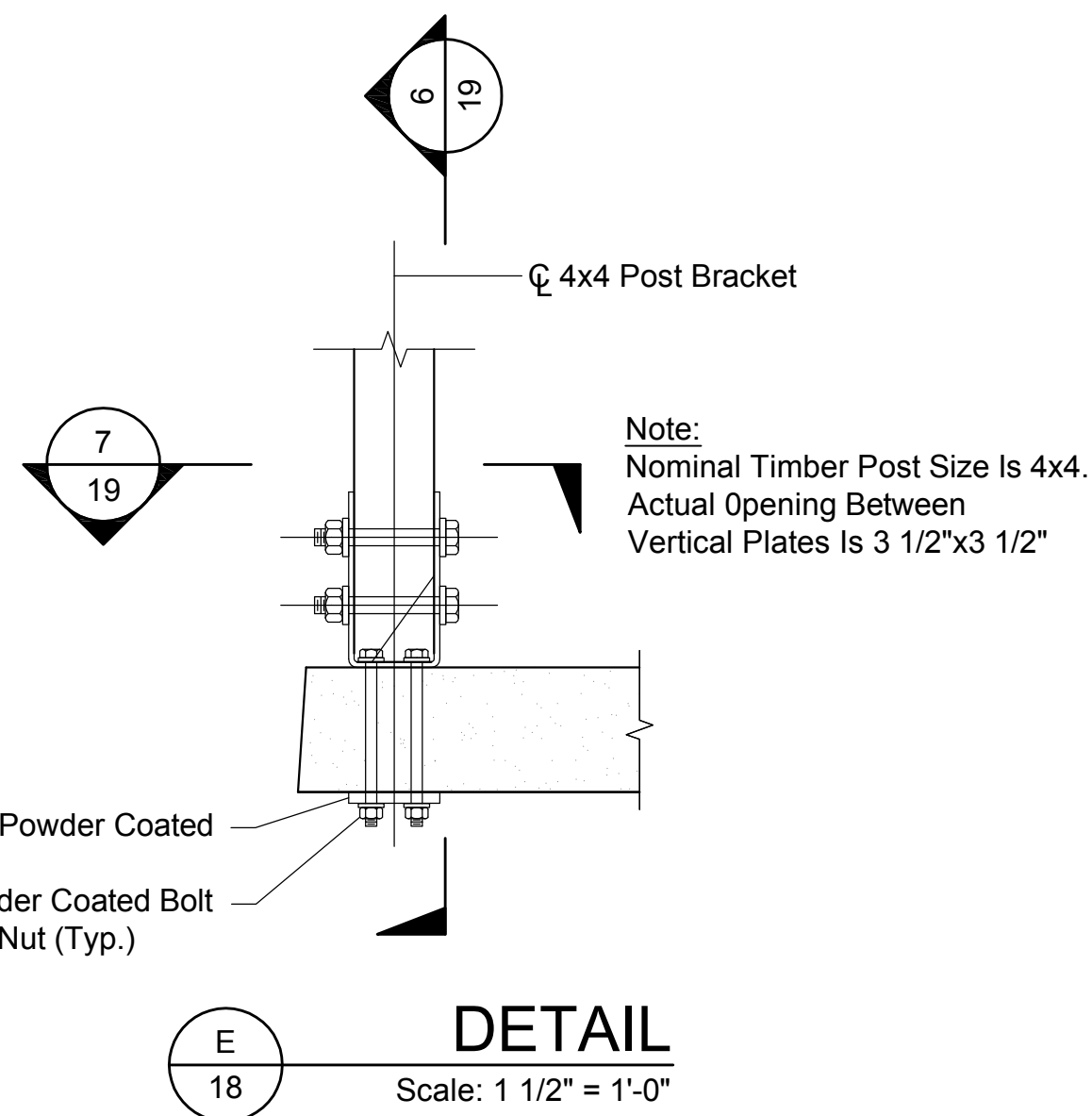
**PLAN VIEW**  
Scale: 1/8" = 1'-0"  
**BOARDWALK**



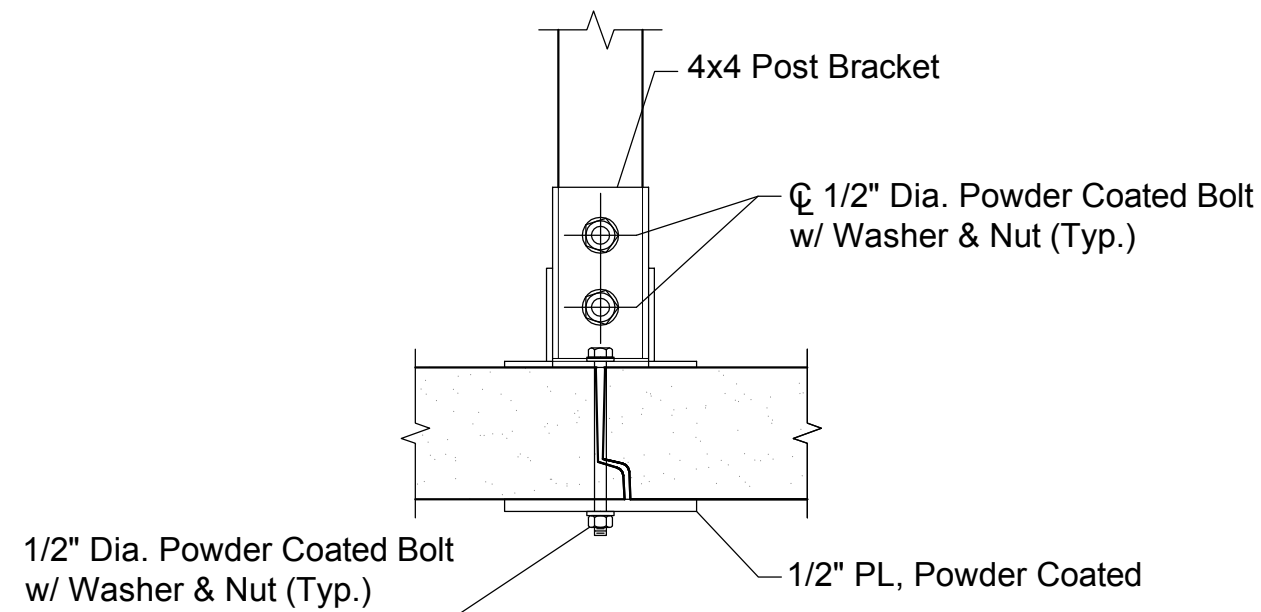
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**BOARDWALK**



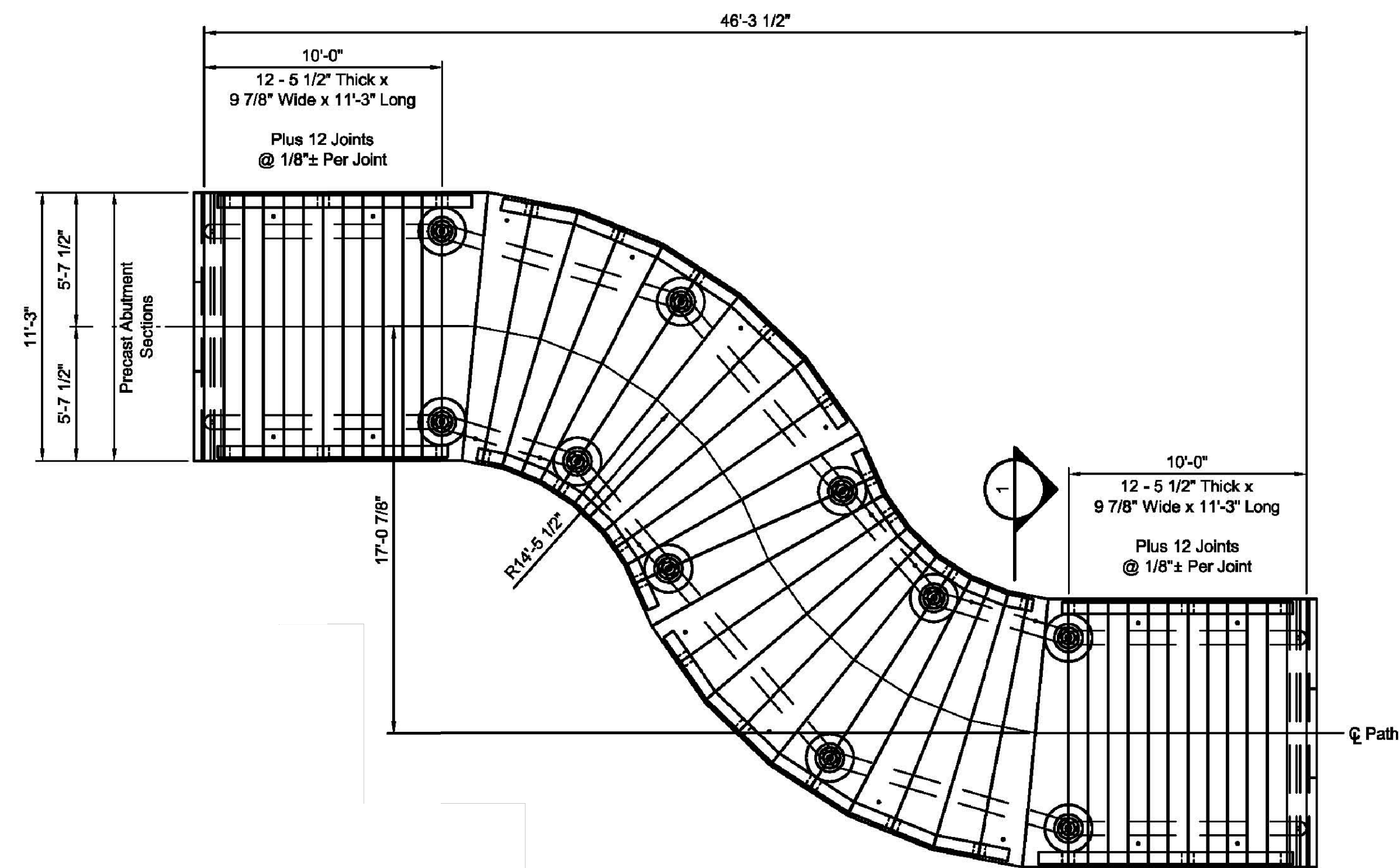
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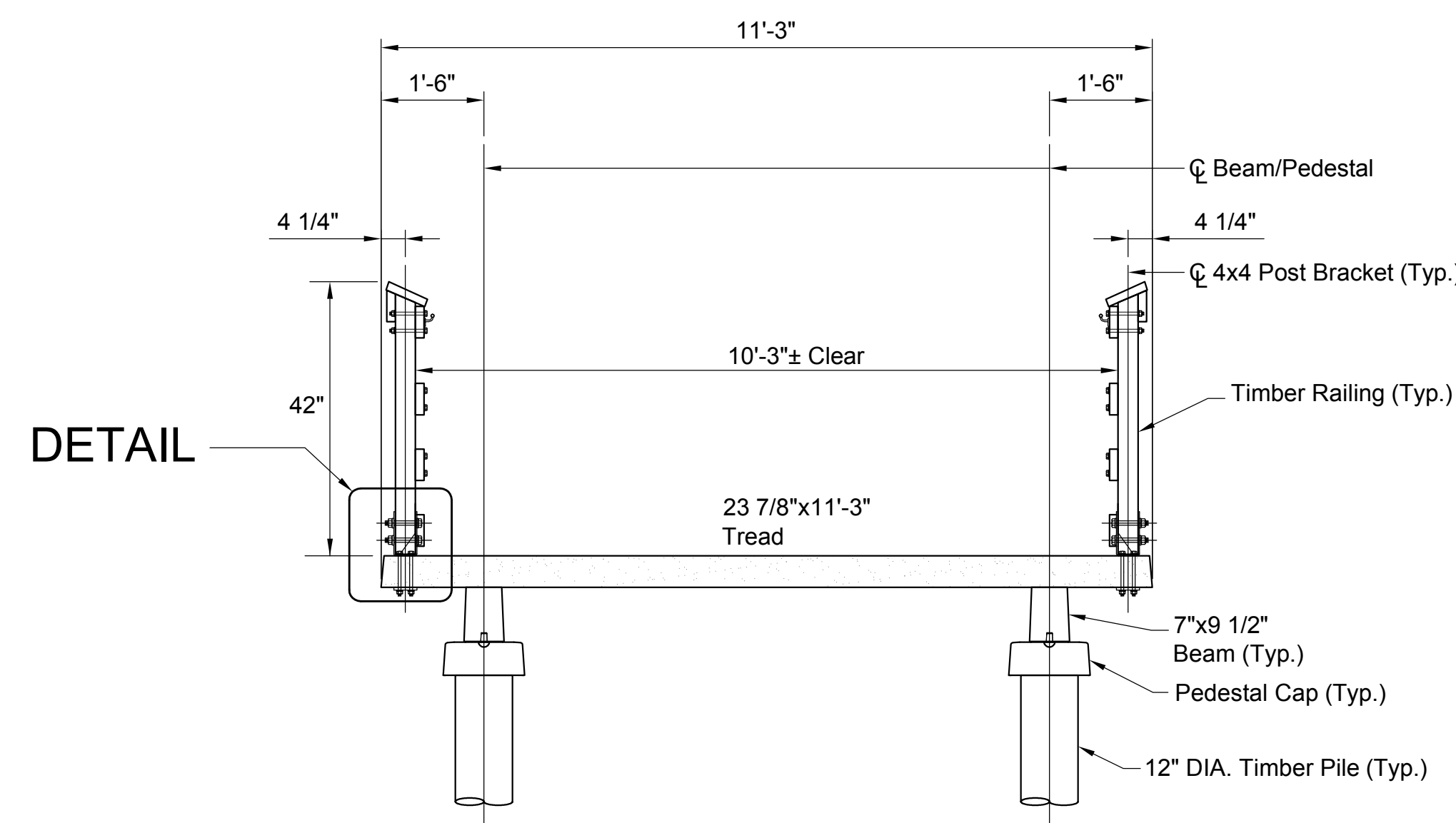
**DETAIL**  
Scale: 1 1/2" = 1'-0"



**SECTION**  
Scale: 1 1/2" = 1'-0"



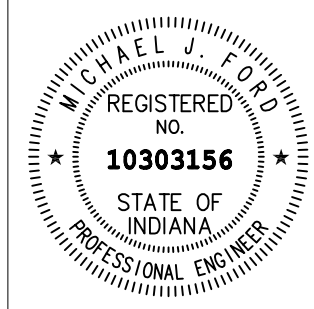
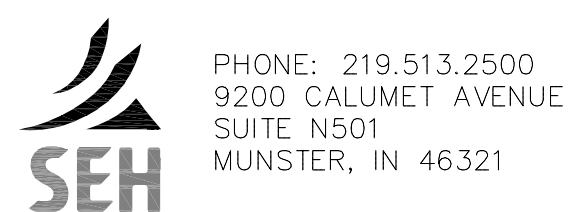
**PLAN VIEW**  
Scale: 1/8" = 1'-0"  
**BOARDWALK**



**BOARDWALK WITH RAIL SECTION**  
(REFER TO DETAIL 2/23 FOR LOCATION)

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LEGEND

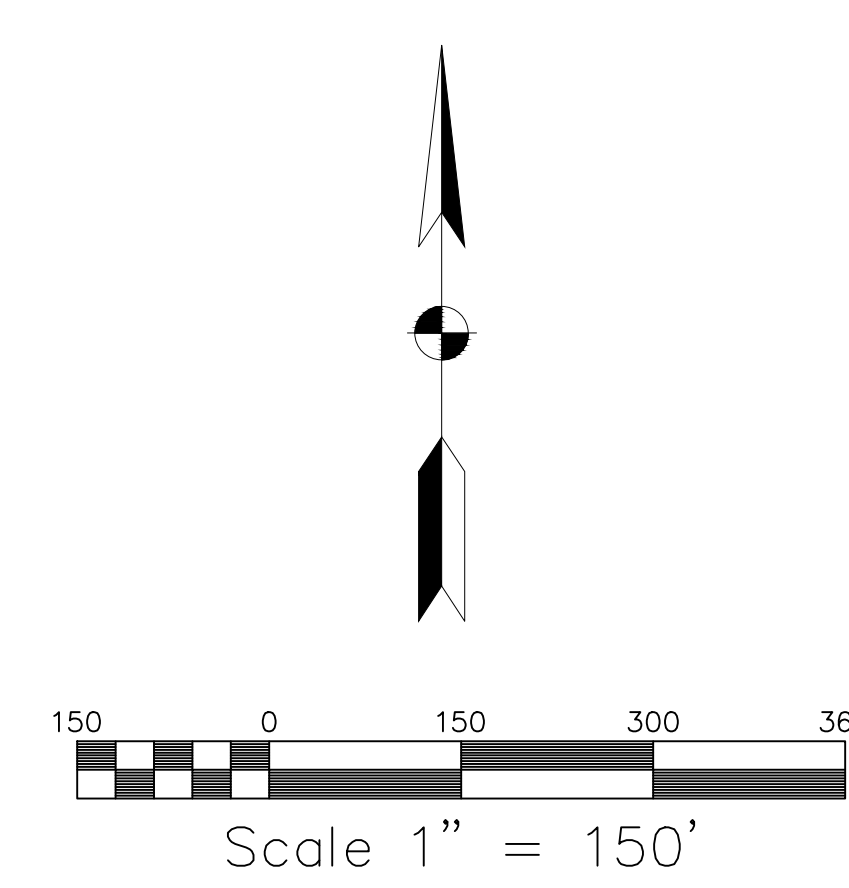
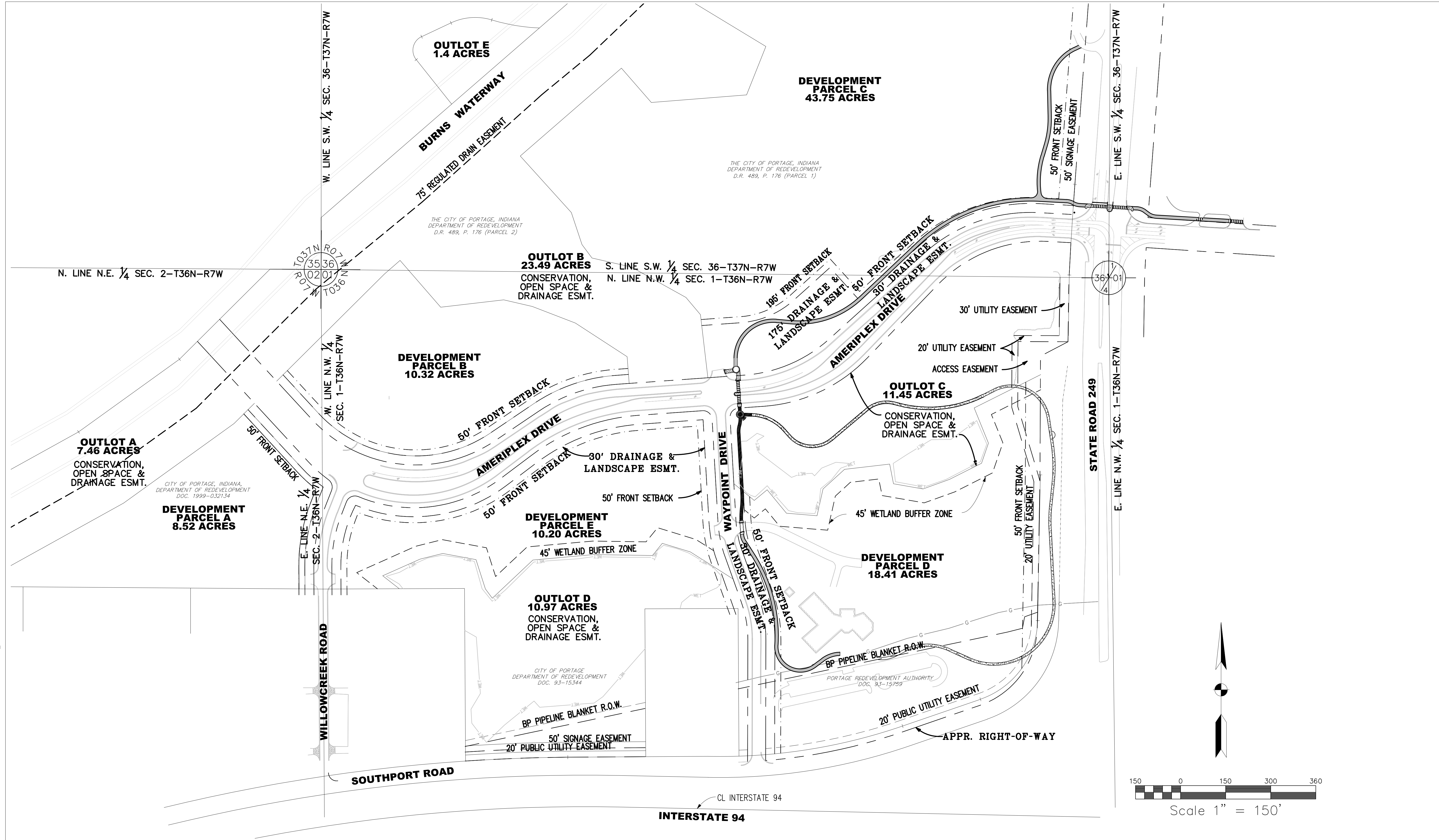



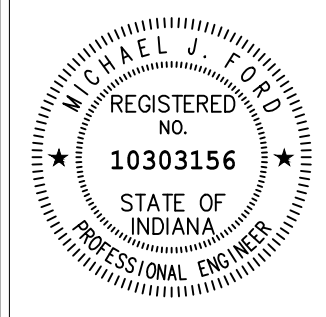
RECOMMENDED FOR APPROVAL	<i>Michael Ford</i>	DESIGN ENGINEER	05/22/2012	DATE
DESIGNED:	NM	DRAWN:	JS	
CHECKED:	MF	CHECKED:	CH	

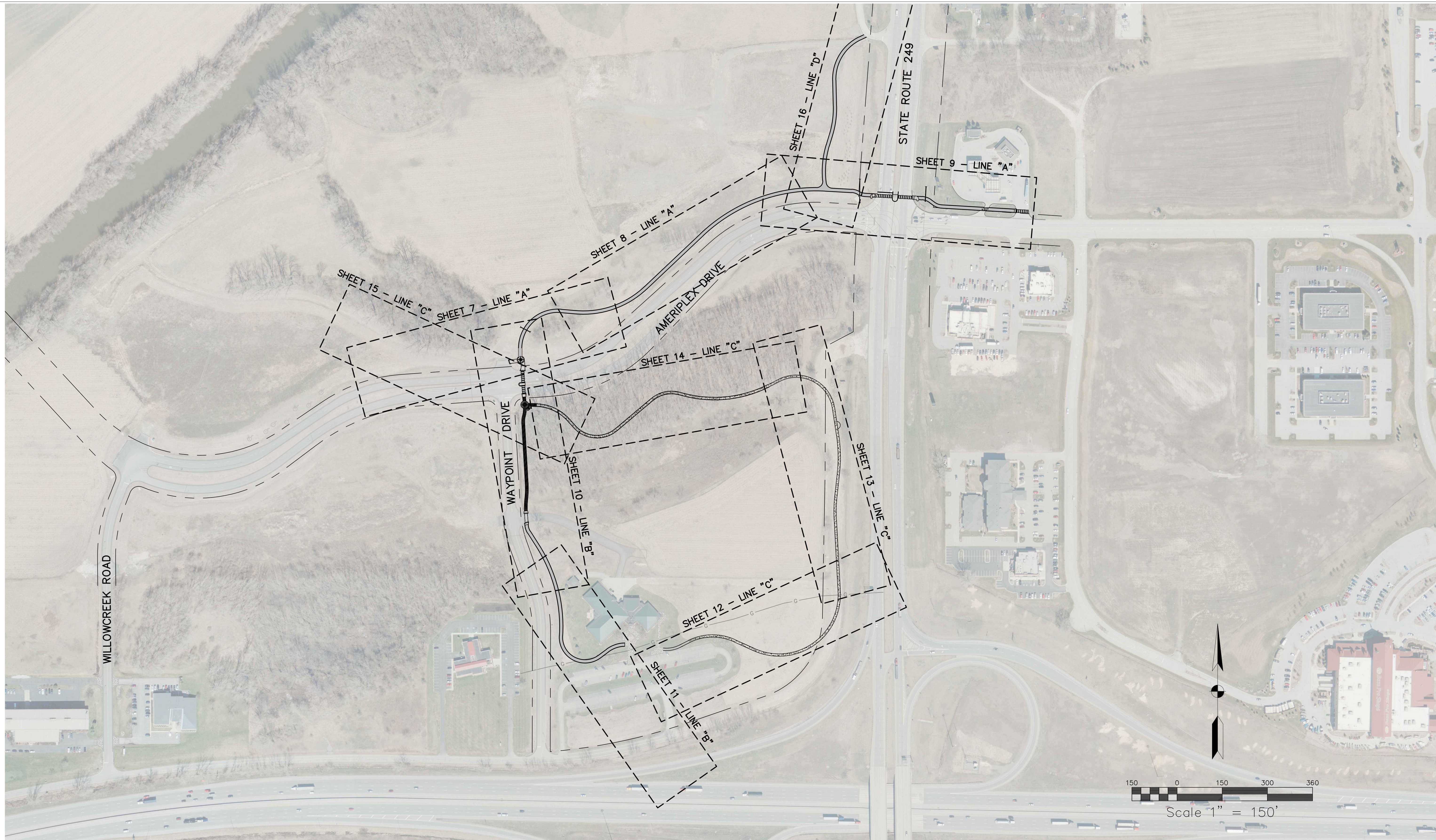
**INDIANA DEPARTMENT OF TRANSPORTATION**

**DETAILS BOARDWALK**

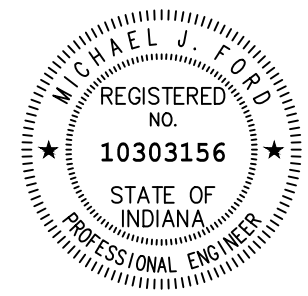
HORIZONTAL SCALE	BRIDGE FILE
N/A	
VERTICAL SCALE	DESIGNATION
N/A	1006017
SURVEY BOOK	SHEETS
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CONTRACT	PROJECT
R-35164	



 PHONE: 219.513.2500 9200 CALUMET AVENUE SUITE N501 MUNSTER, IN 46321		RECOMMENDED FOR APPROVAL: <i>Michael J. Ford</i> (DESIGN ENGINEER) DATE: 05/22/2012	<b>INDIANA DEPARTMENT OF TRANSPORTATION</b>  <b>OVERALL PLAN</b>	HORIZONTAL SCALE: 1" = 150'	BRIDGE FILE
		DESIGNED: NM      DRAWN: JS CHECKED: MF      CHECKED: CH		VERTICAL SCALE: N/A SURVEY BOOK: 1006017 CONTRACT: R-35164	DESIGNATION: 1006017 SHEETS: 5 of 41 PROJECT



**SEH**  
 PHONE: 219.513.2500  
 9200 CALUMET AVENUE  
 SUITE N501  
 MUNSTER, IN 46321



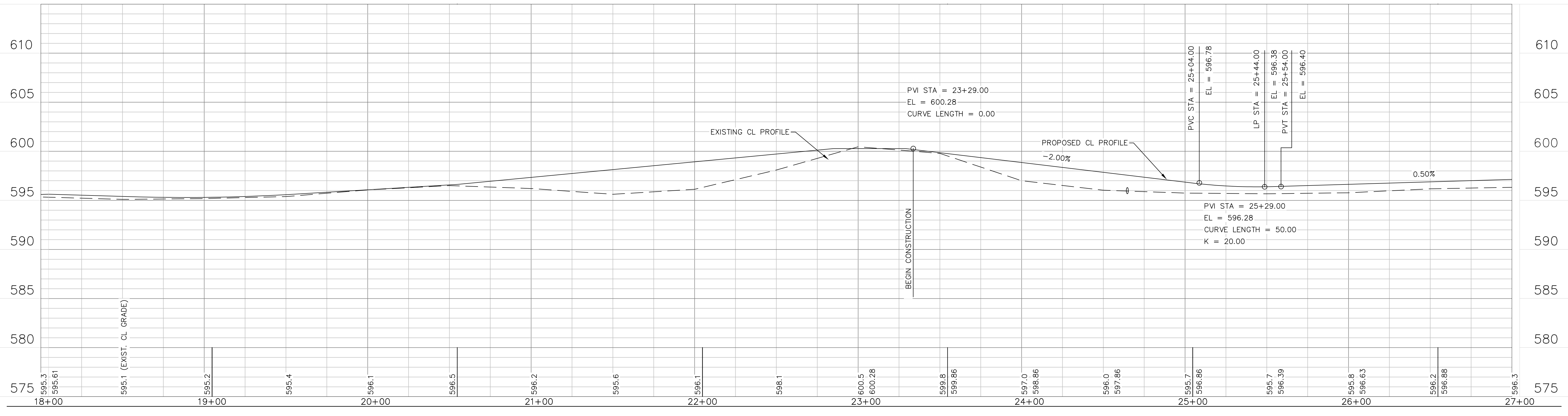
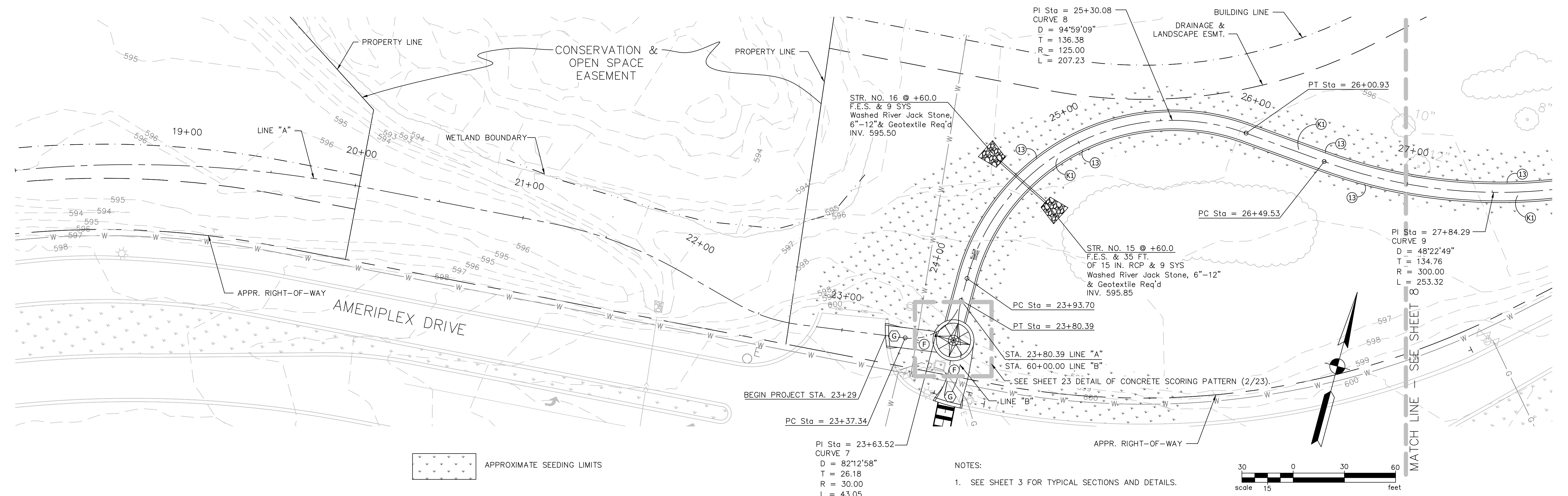
RECOMMENDED FOR APPROVAL	<i>Michael J. Ford</i>	05/22/2012
	DESIGN ENGINEER	DATE
DESIGNED:	NM	DRAWN: JS
CHECKED:	MF	CHECKED: CH

**INDIANA DEPARTMENT OF TRANSPORTATION**

**SHEET LAYOUT PLAN**

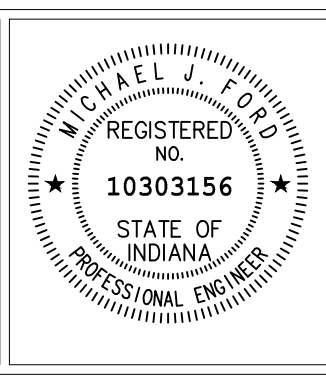
HORIZONTAL SCALE	BRIDGE FILE
1" = 150'	
VERTICAL SCALE	DESIGNATION
N/A	1006017
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LEGEND	
(13)	RIBBON CURB
(F)	SIDEWALK, CONCRETE, 6 IN.
(G)	CONCRETE CURB RAMP
(K1)	PAVEMENT SECTION 165#/SYD. (1 1/2") HMA SURFACE, 9.5mm 220#/SYD. (2") HMA INTERMEDIATE, 19.0mm 660#/SYD. (6") COMPACTED AGGREGATE BASE, "O", SIZE NO. 53

**SEH**  
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9200 CALUMET AVENUE  
SUITE N501  
MUNSTER, IN 46321



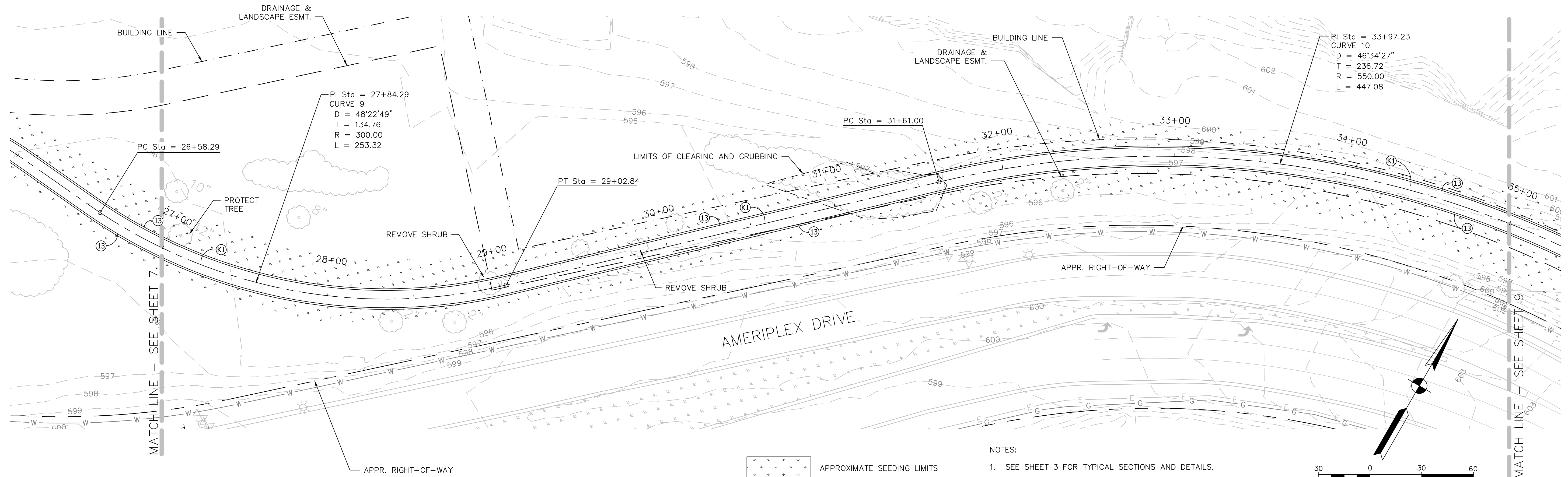
RECOMMENDED FOR APPROVAL	<i>Michael J. Fournier</i>	05/22/2012
DESIGN ENGINEER DATE		
DESIGNED:	NM	DRAWN: JS
CHECKED:	MF	CHECKED: CH

**INDIANA DEPARTMENT OF TRANSPORTATION**

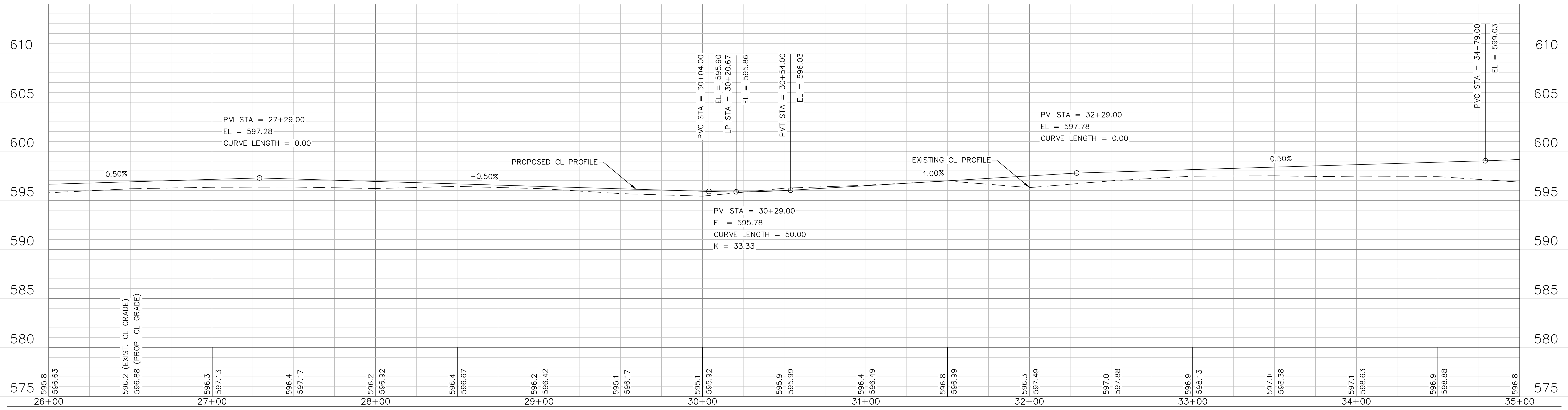
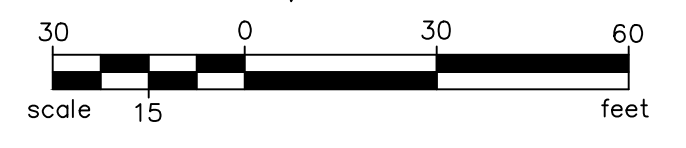
**PLAN & PROFILE  
LINE "A" STA. 19+00 to 27+00**

HORIZONTAL SCALE 1" = 30'	BRIDGE FILE
VERTICAL SCALE 1" = 5'	DESIGNATION 1006017
SURVEY BOOK	SHEETS 7 of 41
CONTRACT R-35164	PROJECT

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NOTES:  
1. SEE SHEET 3 FOR TYPICAL SECTIONS AND DETAILS.



LEGEND	
(13)	RIBBON CURB
(G)	CONCRETE CURB RAMP
(K1)	PAVEMENT SECTION 165#/SYD. (1 1/2") HMA SURFACE, 9.5mm 220#/SYD. (2") HMA INTERMEDIATE, 19.0mm 660#/SYD. (6") COMPACTED AGGREGATE BASE, "O", SIZE NO. 53

PHONE: 219.513.2500  
9200 CALUMET AVENUE  
SUITE N501  
MUNSTER, IN 46321

RECOMMENDED FOR APPROVAL	<i>Michael J. D'Amico</i>	05/22/2012
DESIGNED:	NM	DATE
DRAWN:	JS	
CHECKED:	MF	
	CH	

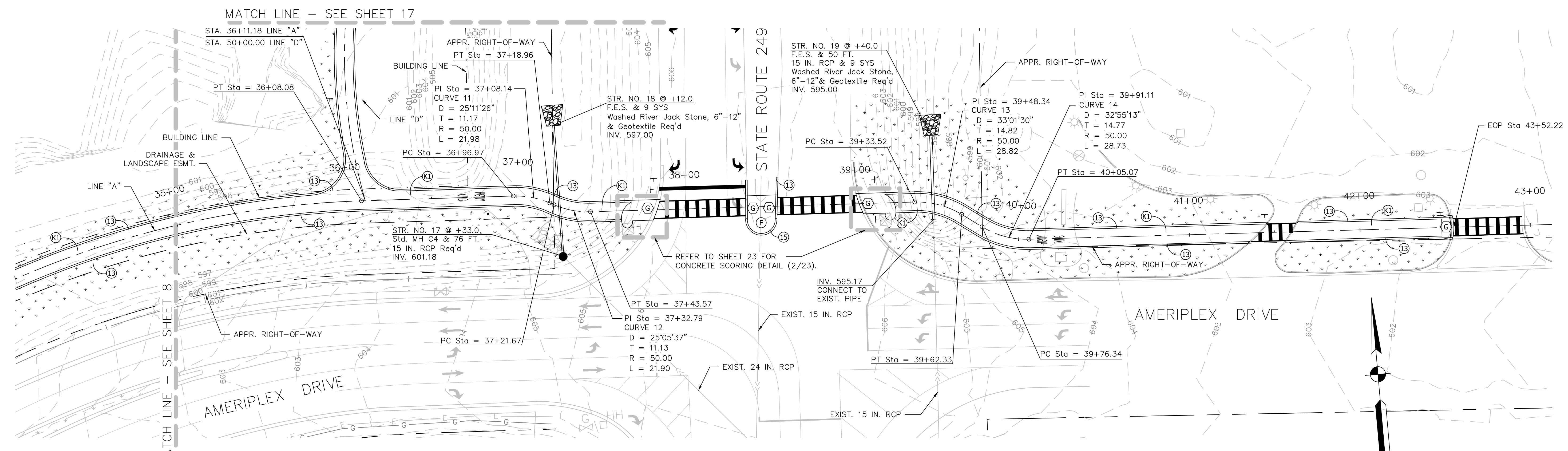
**INDIANA DEPARTMENT OF TRANSPORTATION**

**PLAN & PROFILE**  
**LINE "A" STA. 27+00 to 35+00**

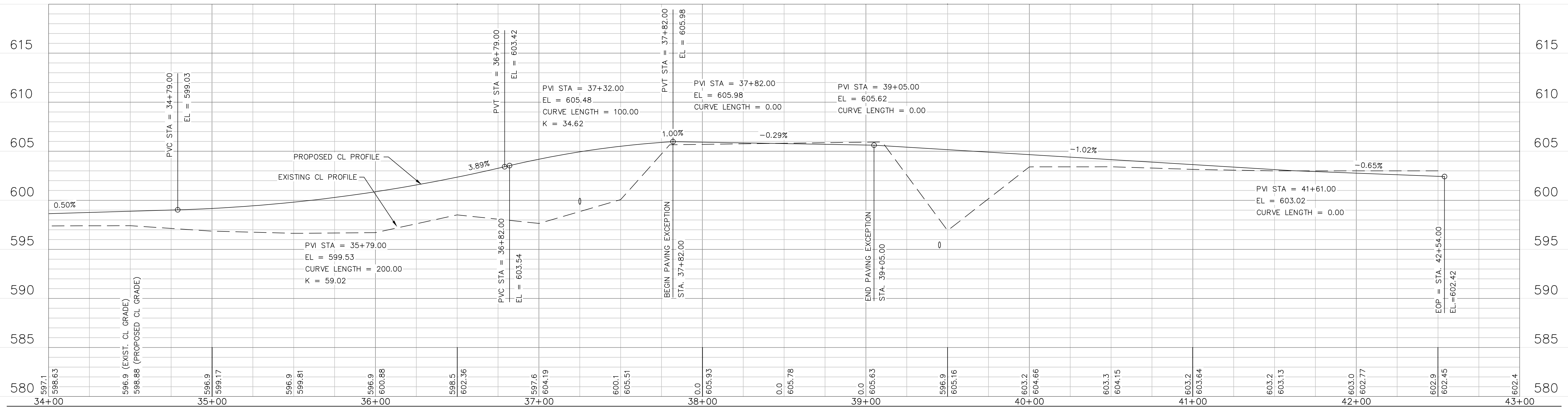
HORIZONTAL SCALE 1" = 30'	BRIDGE FILE
VERTICAL SCALE 1" = 5'	DESIGNATION 1006017
SURVEY BOOK	SHEETS 8 of 41
CONTRACT R-35164	PROJECT



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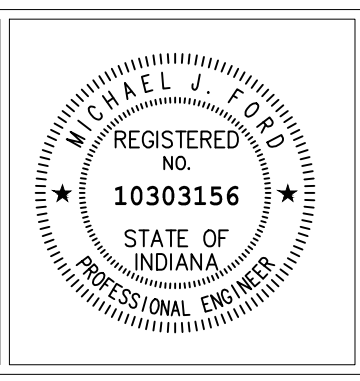


NOTES:  
1. SEE SHEET 3 FOR TYPICAL SECTIONS AND DETAILS.



LEGEND	
(13)	RIBBON CURB
(15)	CURB & GUTTER, CONCRETE, 4 IN. ROLL TYPE
(G)	CONCRETE CURB RAMP
(K1)	PAVEMENT SECTION 165#/SYD. (1 1/2") HMA SURFACE, 9.5mm 220#/SYD. (2") HMA INTERMEDIATE, 19.0mm 660#/SYD. (6") COMPACTED AGGREGATE BASE, "O", SIZE NO. 53
(F)	SIDEWALK, CONCRETE, 6 IN.

**SEH**  
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SUITE N501  
MUNSTER, IN 46321

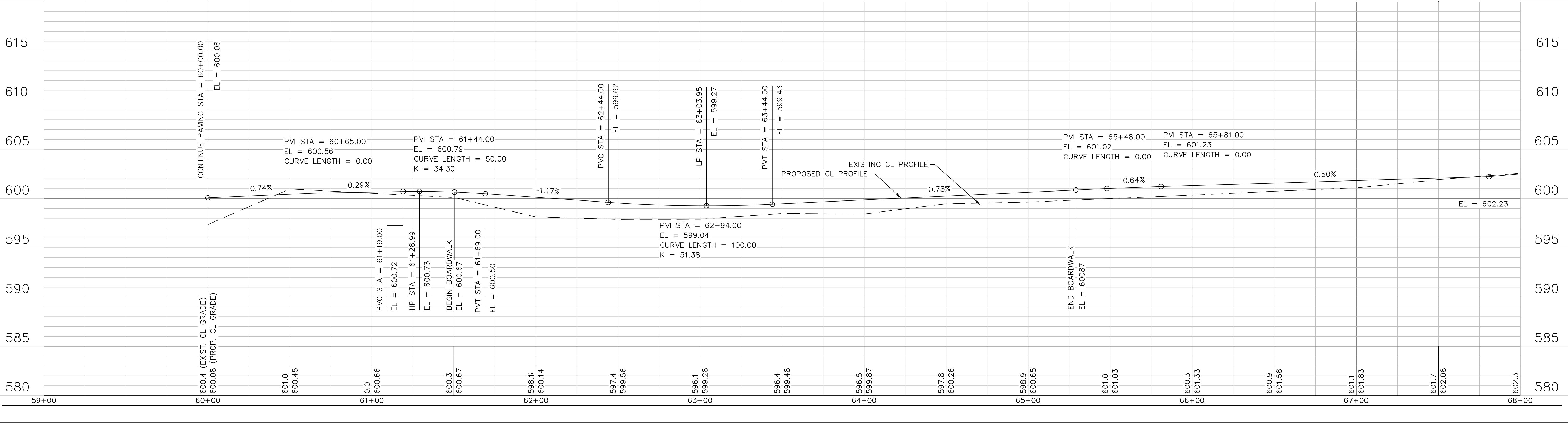
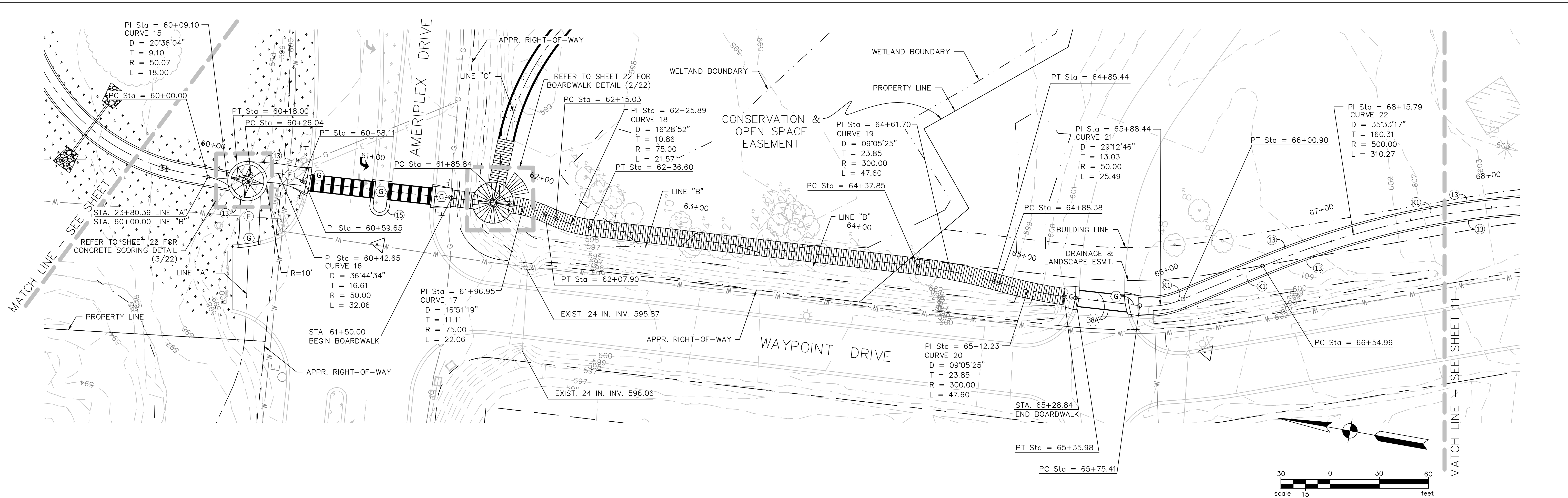


RECOMMENDED FOR APPROVAL	<i>Michael J. R.</i>	05/22/2012	
DESIGNED:	NM	DATE	
CHECKED:	MF	DESIGN ENGINEER	
		DATE	
DESIGNED:	NM	DRAWN:	JS
CHECKED:	MF	CHECKED:	CH

**INDIANA DEPARTMENT OF TRANSPORTATION**

**PLAN & PROFILE**  
**LINE "A" STA. 35+00 to 43+00**

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	
VERTICAL SCALE	DESIGNATION
1" = 5'	1006017
SURVEY BOOK	SHEETS
	9 of 41
CONTRACT	PROJECT
R-35164	



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LEGEND	
(13)	RIBBON CURB
(15)	CURB & GUTTER, CONCRETE, 4 IN., ROLL TYPE
(G)	CONCRETE CURB RAMP
(F)	SIDEWALK, CONCRETE, 6 IN.
(K)	PAVEMENT SECTION 165#/SYD. (1 1/2") HMA SURFACE, 9.5mm 220#/SYD. (2") HMA INTERMEDIATE, 19.0mm 660#/SYD. (6") COMPACTED AGGREGATE BASE, "O", SIZE NO. 53

**SEH**  
PHONE: 219.513.2500  
9200 CALUMET AVENUE  
SUITE N501  
MUNSTER, IN 46321

MICHAEL J. D'ADDA  
REGISTERED PROFESSIONAL ENGINEER  
NO. 10303156  
STATE OF INDIANA

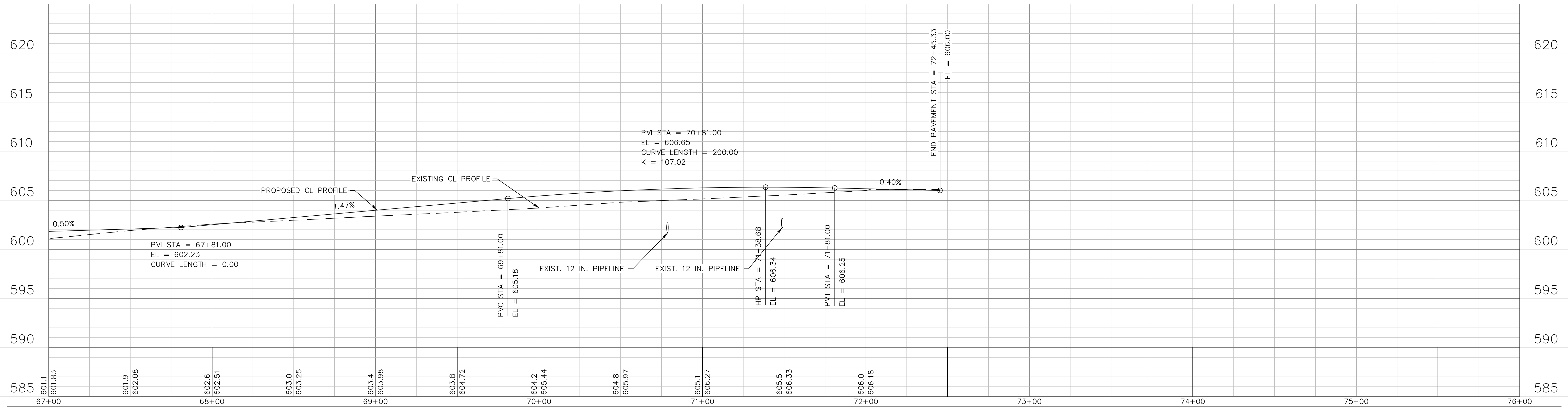
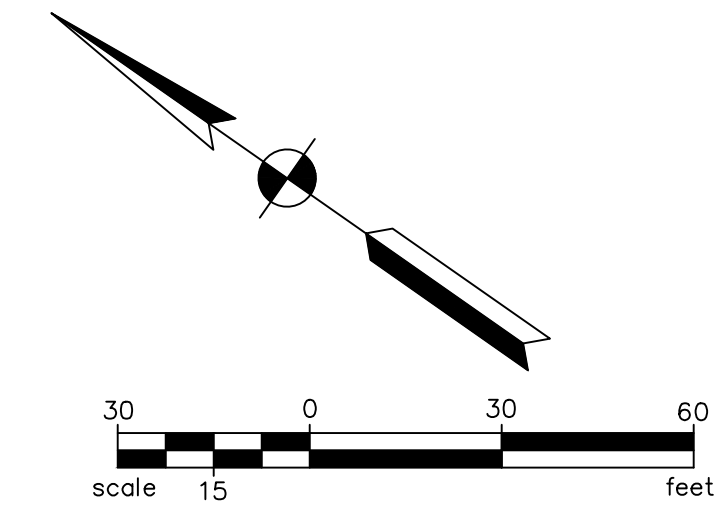
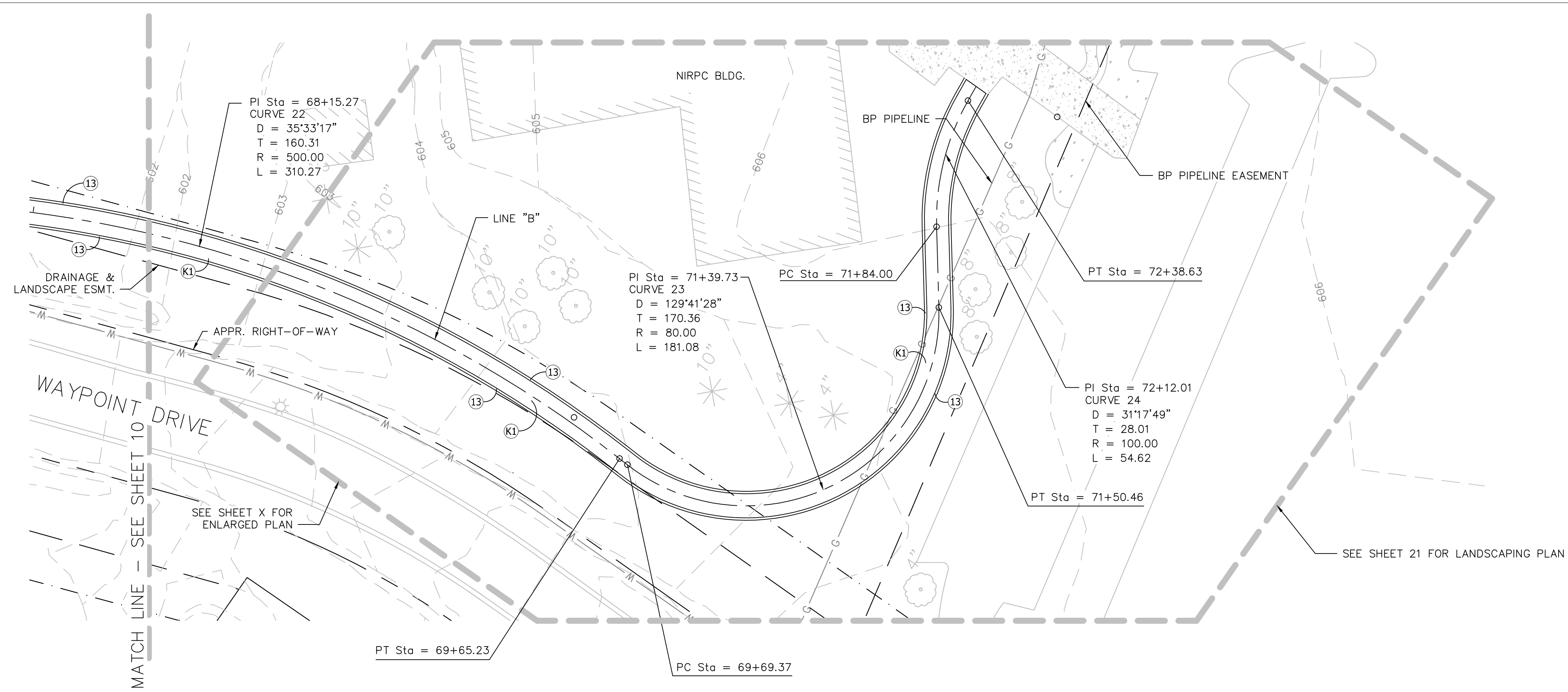
RECOMMENDED FOR APPROVAL	<i>Michael J. D'Adda</i>	DESIGN ENGINEER	05/22/2012	DATE
DESIGNED:	NM	DRAWN:	JS	
CHECKED:	MF	CHECKED:	CH	

**INDIANA DEPARTMENT OF TRANSPORTATION**

**PLAN & PROFILE  
LINE "B" STA. 60+00 to 67+50**

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	DESIGNATION
VERTICAL SCALE	1006017
N/A	SHEETS
SURVEY BOOK	10 of 41
CONTRACT	PROJECT
R-35164	

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LEGEND	
(13)	RIBBON CURB
(K1)	PAVEMENT SECTION 165#/SYD. (1 1/2") HMA SURFACE, 9.5mm 220#/SYD. (2") HMA INTERMEDIATE, 19.0mm 660#/SYD. (6") COMPACTED AGGREGATE BASE, "O", SIZE NO. 53
(G)	CONCRETE CURB RAMP

PHONE: 219.513.2500  
9200 CALUMET AVENUE  
SUITE N501  
MUNSTER, IN 46321

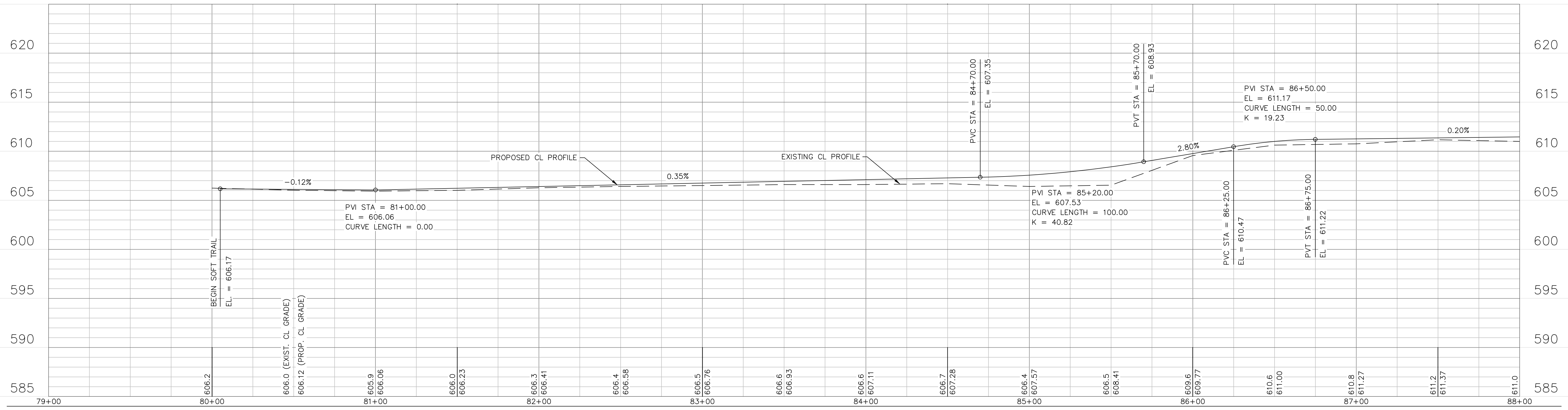
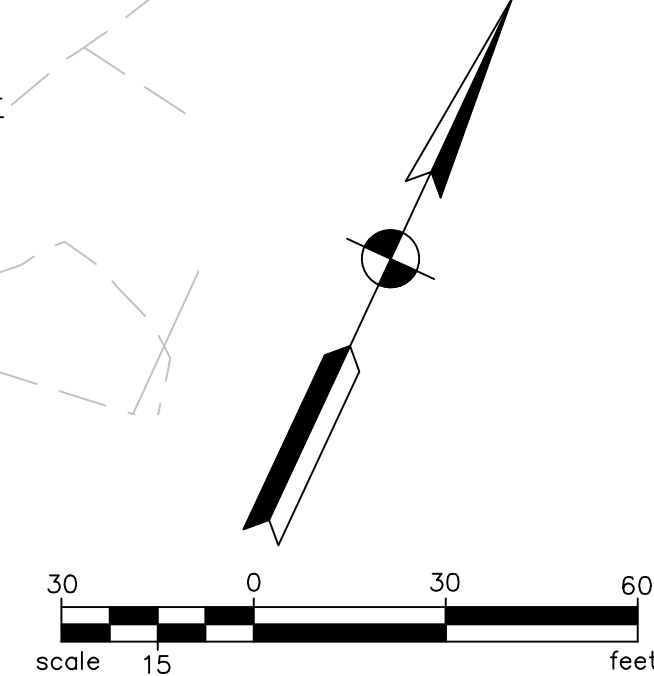
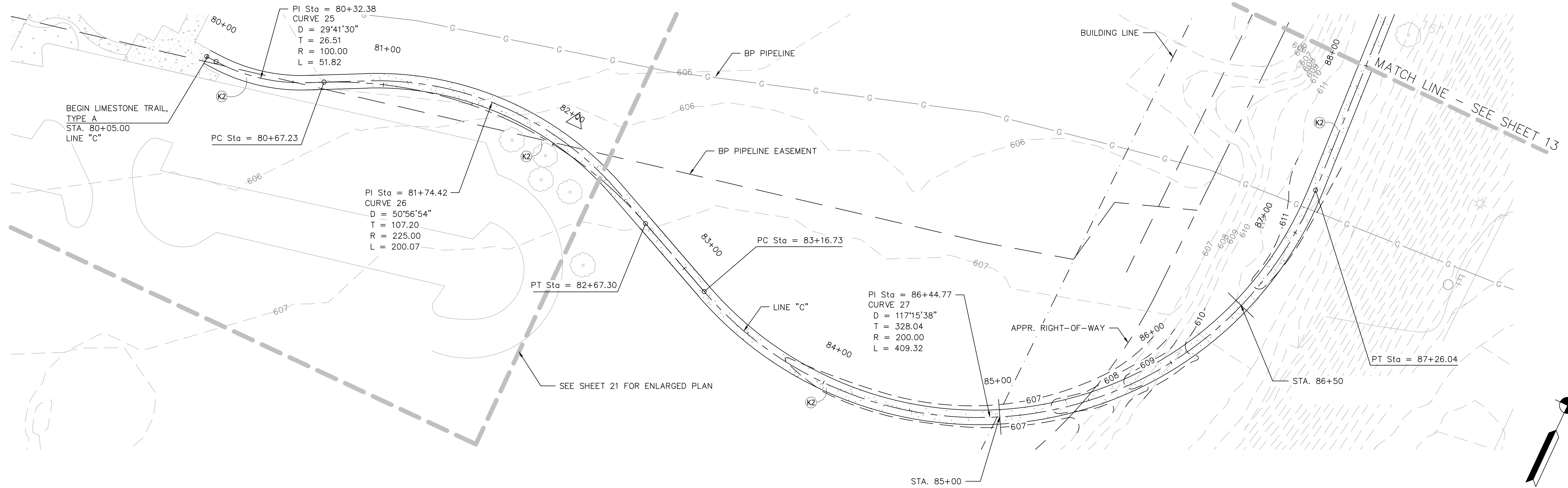
RECOMMENDED FOR APPROVAL	<i>Michael J. R.</i>	05/22/2012
	DESIGN ENGINEER	DATE
DESIGNED:	NM	DRAWN: JS
CHECKED:	MF	CHECKED: CH

**INDIANA DEPARTMENT OF TRANSPORTATION**

**PLAN & PROFILE  
LINE "B" STA. 67+50 to 73+00**

HORIZONTAL SCALE 1" = 30'	BRIDGE FILE
VERTICAL SCALE 1" = 5'	DESIGNATION 1006017
SURVEY BOOK	SHEETS 11 of 41
CONTRACT R-35164	PROJECT

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**LEGEND**

(K2) LIMESTONE TRAIL SECTION  
 330#/SYD. (3") COMPACTED LIMESTONE AGGREGATE  
 660#/SYD. (6") COMPACTED AGGREGATE BASE, "O", SIZE NO. 53

PHONE: 219.513.2500  
 9200 CALUMET AVENUE  
 SUITE N501  
 MUNSTER, IN 46321

RECOMMENDED FOR APPROVAL	<i>Michael J. Fedor</i>	05/22/2012
DESIGNED:	NM	DATE
DRAWN:	JS	
CHECKED:	MF	
	CH	

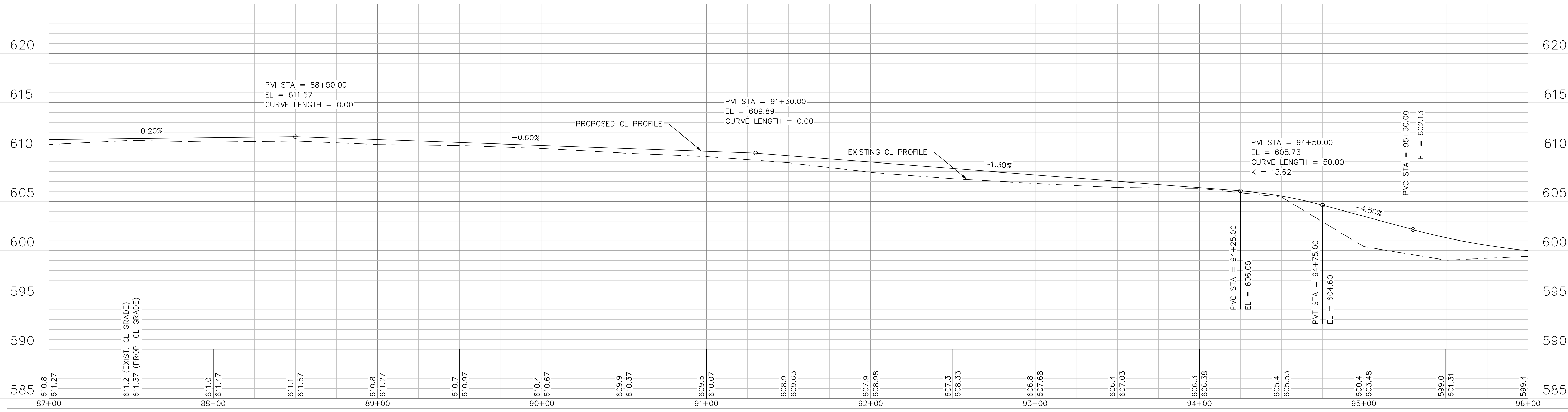
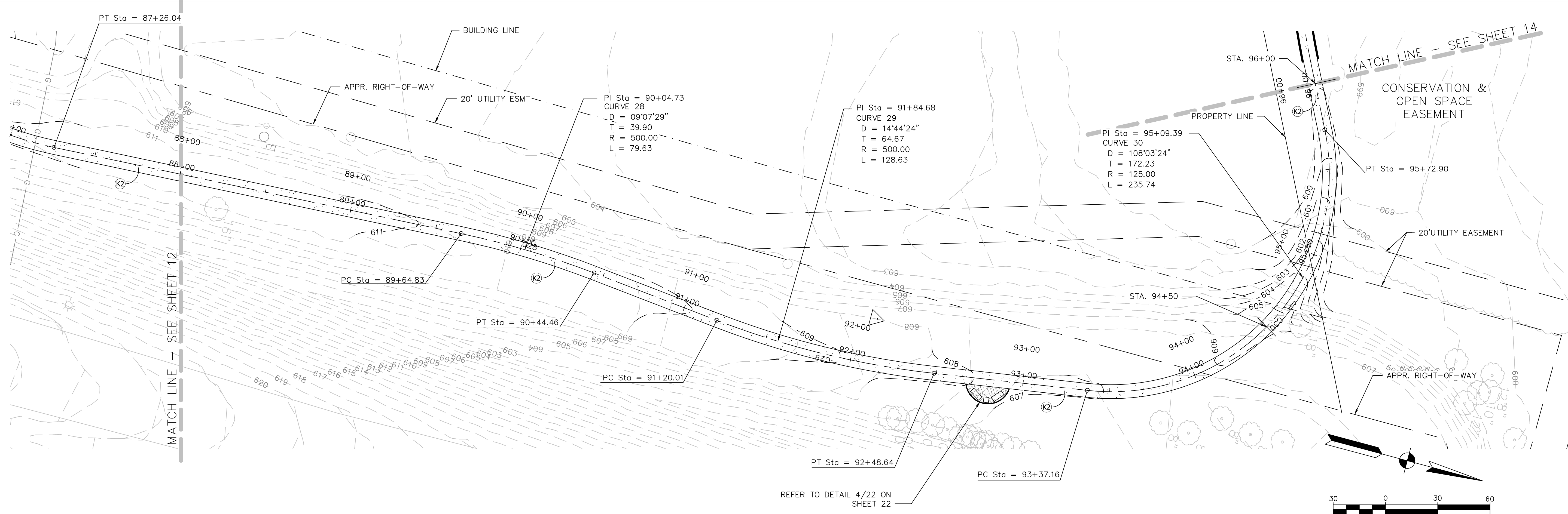
**INDIANA DEPARTMENT OF TRANSPORTATION**

**PLAN & PROFILE  
 LINE "C" STA. 80+00 to 88+00**

HORIZONTAL SCALE 1" = 30'	BRIDGE FILE
VERTICAL SCALE 1" = 5'	DESIGNATION 1006017
SURVEY BOOK	SHEETS 12 of 41
CONTRACT R-35164	PROJECT

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**LEGEND**

	LIMESTONE TRAIL SECTION 330#/SYD. (3") COMPACTED LIMESTONE AGGREGATE 660#/SYD. (6") COMPACTED AGGREGATE BASE, "0", SIZE NO. 53
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PHONE: 219.513.2500  
9200 CALUMET AVENUE  
SUITE N501  
MUNSTER, IN 46321

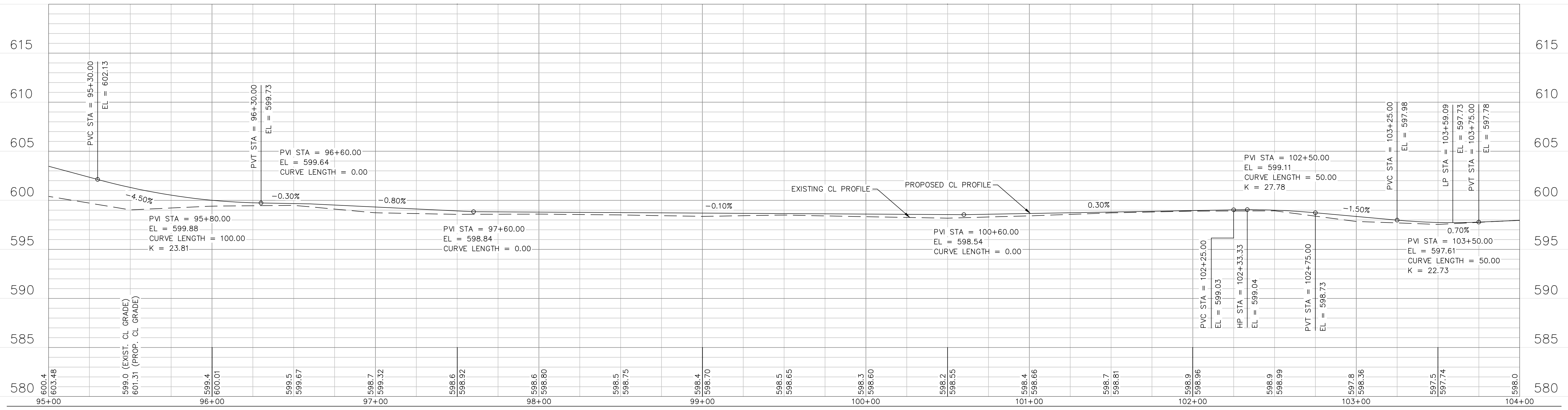
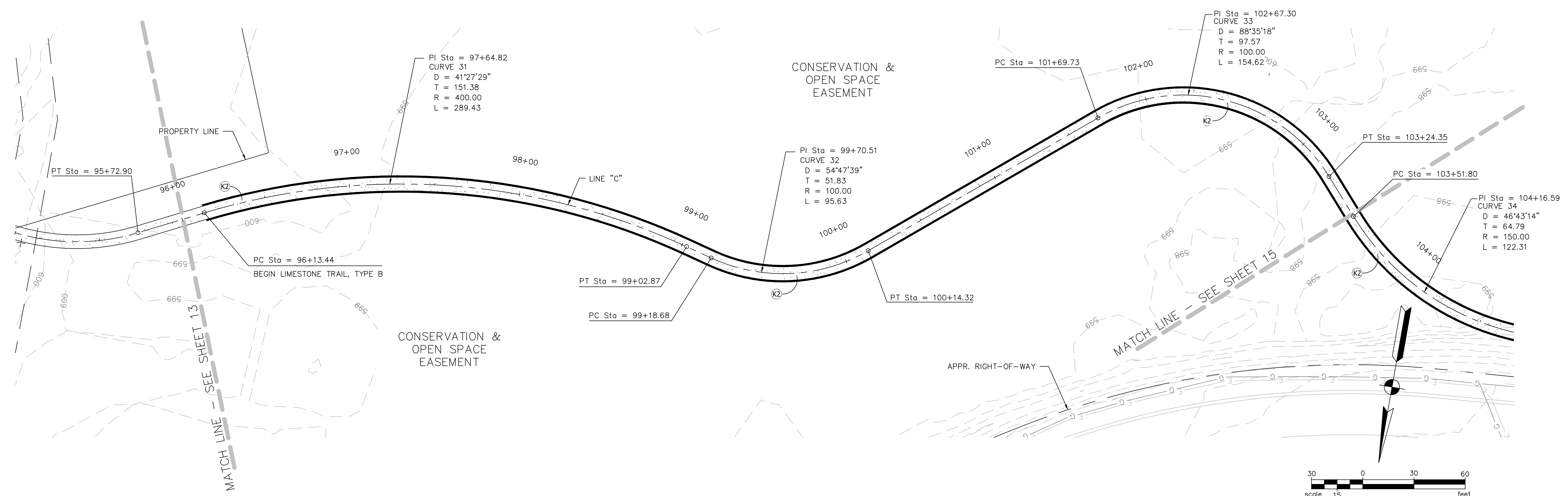
RECOMMENDED FOR APPROVAL	<i>Michael J. F. P.</i>	DESIGN ENGINEER	05/22/2012	DATE
DESIGNED:	NM	DRAWN:	JS	
CHECKED:	MF	CHECKED:	CH	

**INDIANA DEPARTMENT OF TRANSPORTATION**

**PLAN & PROFILE**  
**LINE "C" STA. 88+00 to 96+00**

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	
VERTICAL SCALE	DESIGNATION
1" = 5'	1006017
SURVEY BOOK	SHEETS
	13 of 41
CONTRACT	PROJECT
R-35164	

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**LEGEND**

(K2) LIMESTONE TRAIL SECTION  
330#/SYD. (3") COMPACTED LIMESTONE AGGREGATE  
660#/SYD. (6") COMPACTED AGGREGATE BASE, "O", SIZE NO. 53

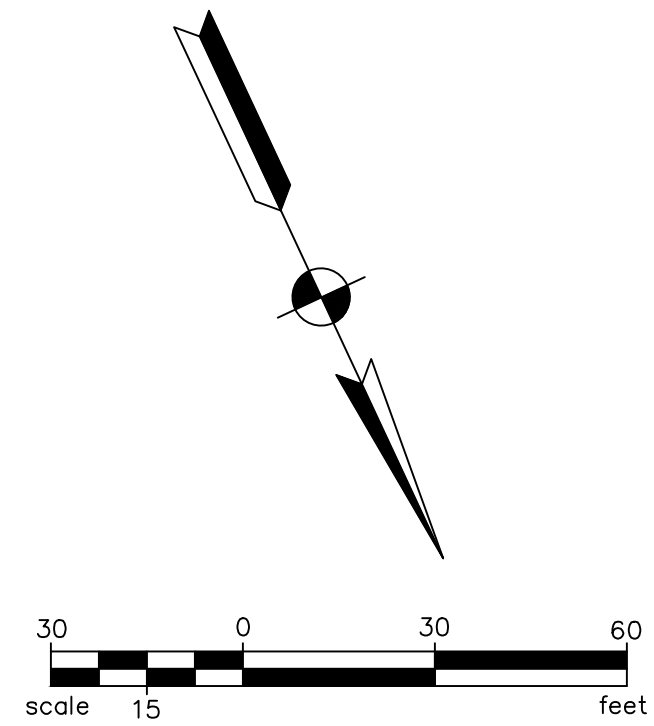
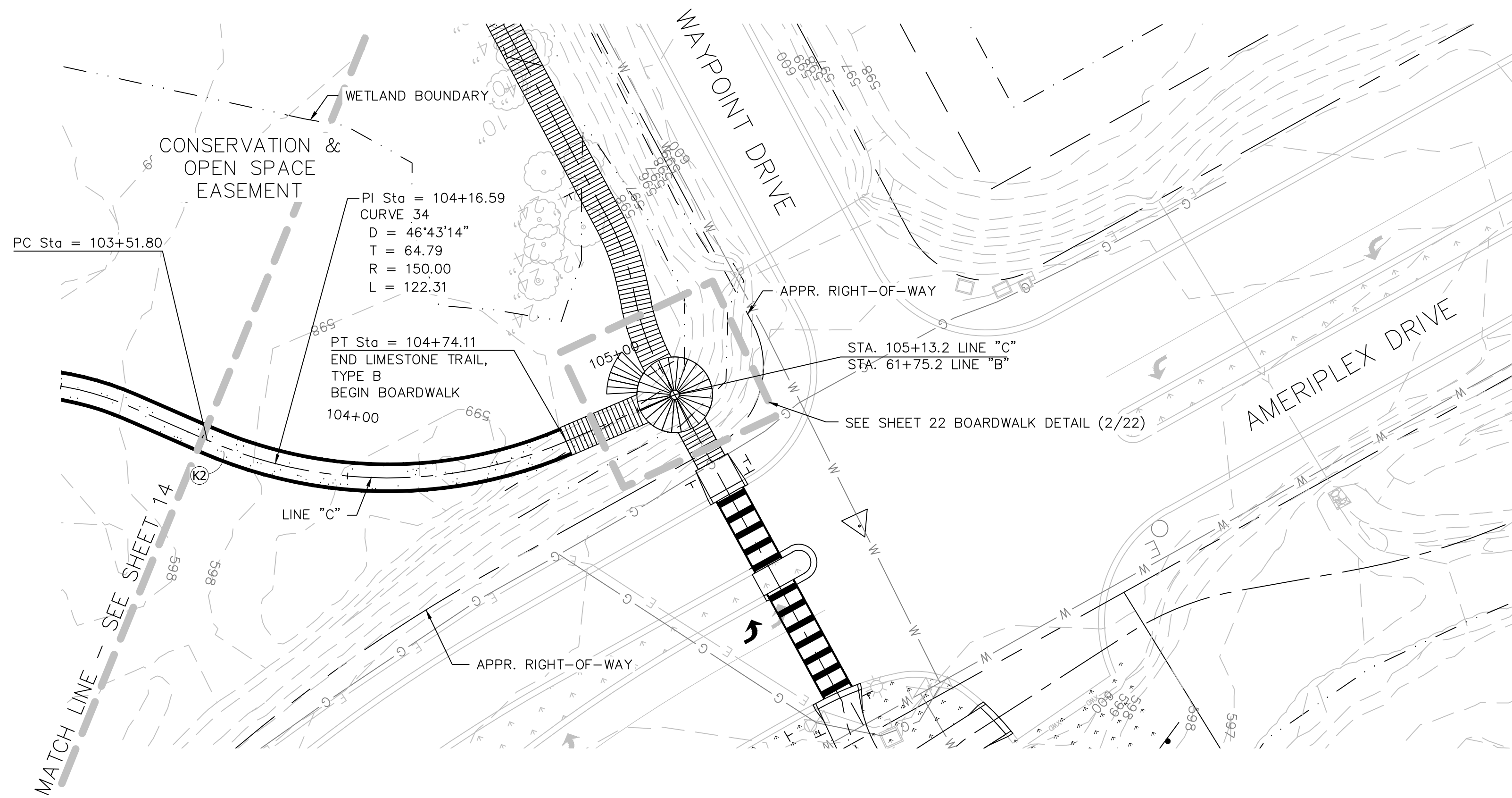
PHONE: 219.513.2500  
9200 CALUMET AVENUE  
SUITE N501  
MUNSTER, IN 46321

RECOMMENDED FOR APPROVAL	<i>Michael J. F. R.</i>	05/22/2012
DESIGNED:	NM	DRAWN: JS
CHECKED:	MF	CHECKED: CH

**INDIANA DEPARTMENT OF TRANSPORTATION**

**PLAN & PROFILE  
LINE "C" STA. 96+00 to 103+50**

HORIZONTAL SCALE 1" = 30'	BRIDGE FILE
VERTICAL SCALE 1" = 5'	DESIGNATION 1006017
SURVEY BOOK R-35164	SHEETS 14 of 41
	PROJECT



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LEGEND

(K2)	LIMESTONE TRAIL SECTION 330#/SYD. (3") COMPACTED LIMESTONE AGGREGATE 660#/SYD. (6") COMPACTED AGGREGATE BASE, "O", SIZE NO. 53
------	--

PHONE: 219.513.2500  
 9200 CALUMET AVENUE  
 SUITE N501  
 MUNSTER, IN 46321

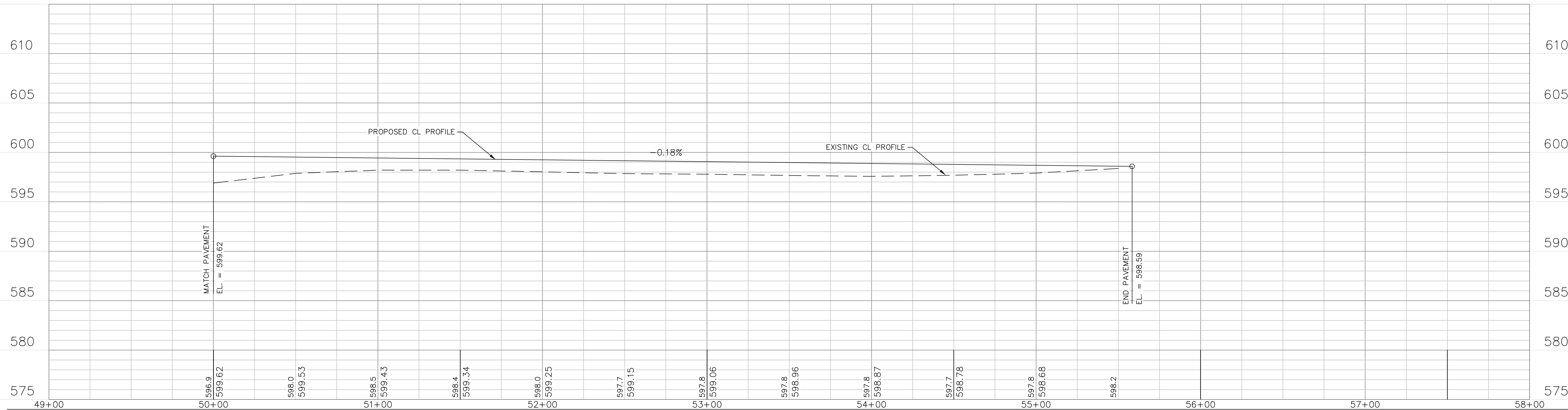
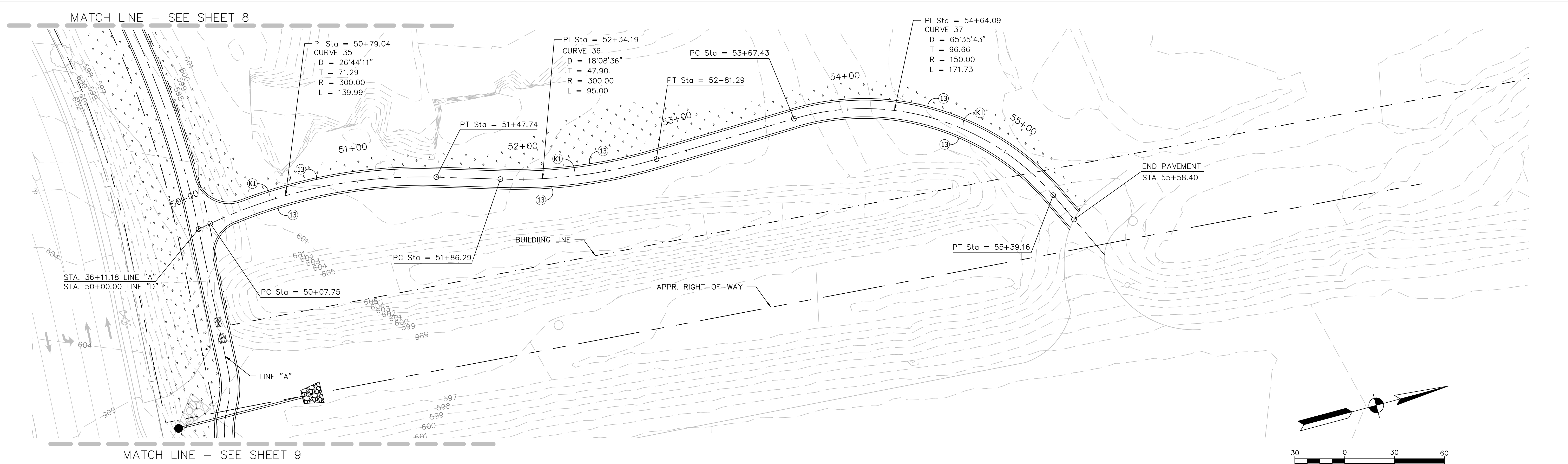
REGISTERED NO. 10303156  
 STATE OF INDIANA  
 PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL	<i>Michael Fox</i>	DESIGN ENGINEER	05/22/2012	DATE
DESIGNED:	NM	DRAWN:	JS	
CHECKED:	MF	CHECKED:	CH	

**INDIANA DEPARTMENT OF TRANSPORTATION**  
**PLAN & PROFILE**  
**LINE "C" STA. 103+50 to 105+13**

HORIZONTAL SCALE 1" = 30'	BRIDGE FILE
VERTICAL SCALE 1" = 5'	DESIGNATION 1006017
SURVEY BOOK	SHEETS 15 of 41
CONTRACT R-35164	PROJECT

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1/27/2011 2:22:17 PM



LEGEND	
(13)	RIBBON CURB
(G)	CONCRETE CURB RAMP
(K1)	PAVEMENT SECTION 165#/SYD. (1 1/2") HMA SURFACE, 9.5mm 220#/SYD. (2") HMA INTERMEDIATE, 19.0mm 660#/SYD. (6") COMPACTED AGGREGATE BASE, "O", SIZE NO. 53

**SEH**

PHONE: 219.513.2500  
9200 CALUMET AVENUE  
SUITE N501  
MUNSTER, IN 46321

REGISTERED PROFESSIONAL ENGINEER  
STATE OF INDIANA  
NO. 10303156  
MICHAEL J. GORDON

RECOMMENDED FOR APPROVAL	<i>Michael J. Gordon</i>	DESIGN ENGINEER	DATE
DESIGNED:	NM	DRAWN:	JS
CHECKED:	MF	CHECKED:	CH

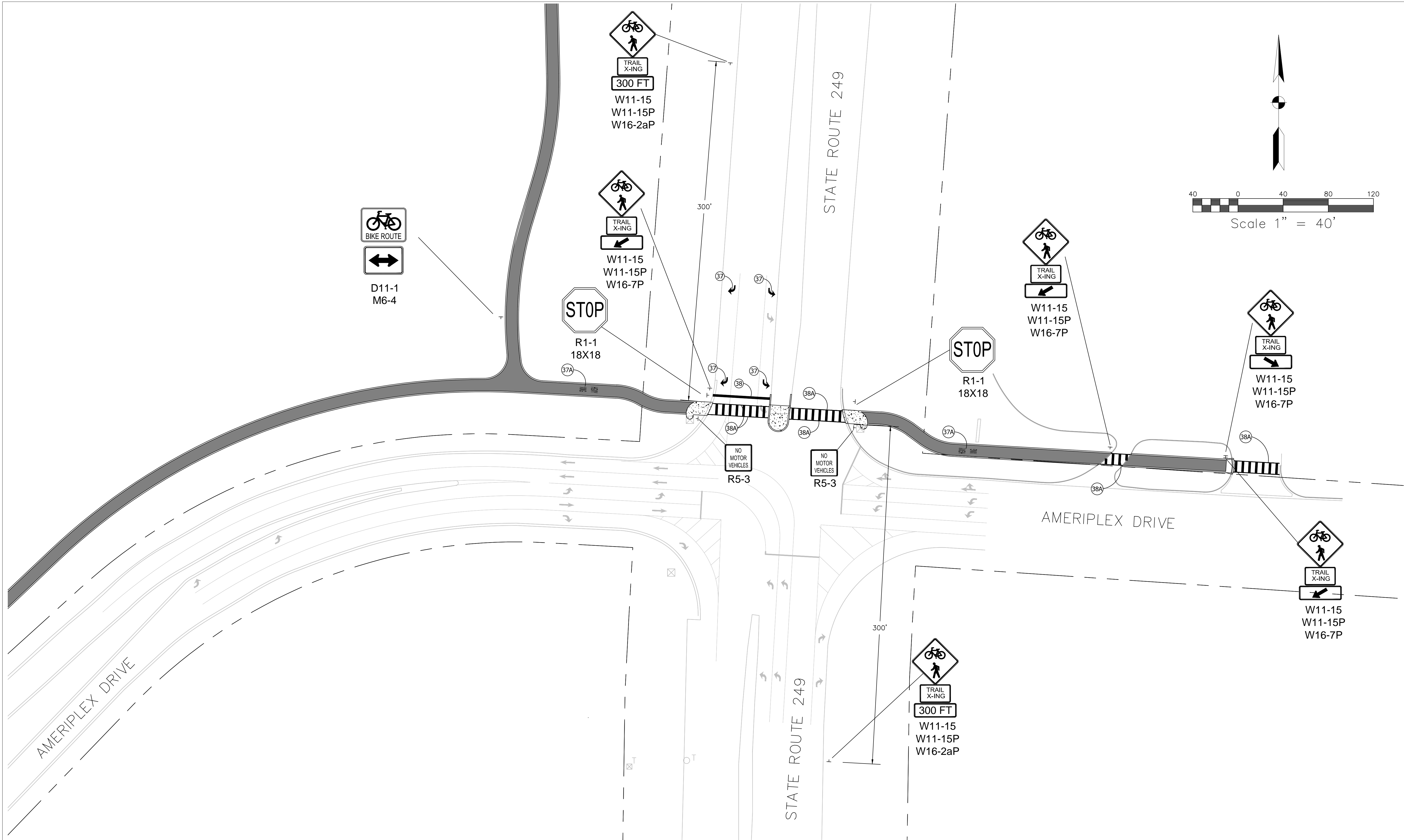
**INDIANA DEPARTMENT OF TRANSPORTATION**

**PLAN & PROFILE  
LINE "D" STA. 50+00 to 55+58.4**

HORIZONTAL SCALE 1" = 30'	BRIDGE FILE
VERTICAL SCALE 1" = 5'	DESIGNATION 1006017
SURVEY BOOK	SHEETS 16 of 41
CONTRACT R-35164	PROJECT



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1/27/2011 2:22:17 PM



**LEGEND**

	ARROW, THERMOPLASTIC PAVEMENT MESSAGE MARKING
	"HWY XING", THERMOPLASTIC PAVEMENT MESSAGE MARKING
	24 IN. STOPBAR WHITE THERMOPLASTIC TRANSVERSE MARKING
	6 IN. CROSSWALK WHITE THERMOPLASTIC TRANSVERSE MARKING W/ 24 IN. ZEBRA STRIPES, 6' ON CENTER

PHONE: 219.513.2500  
9200 CALUMET AVENUE  
SUITE N501  
MUNSTER, IN 46321

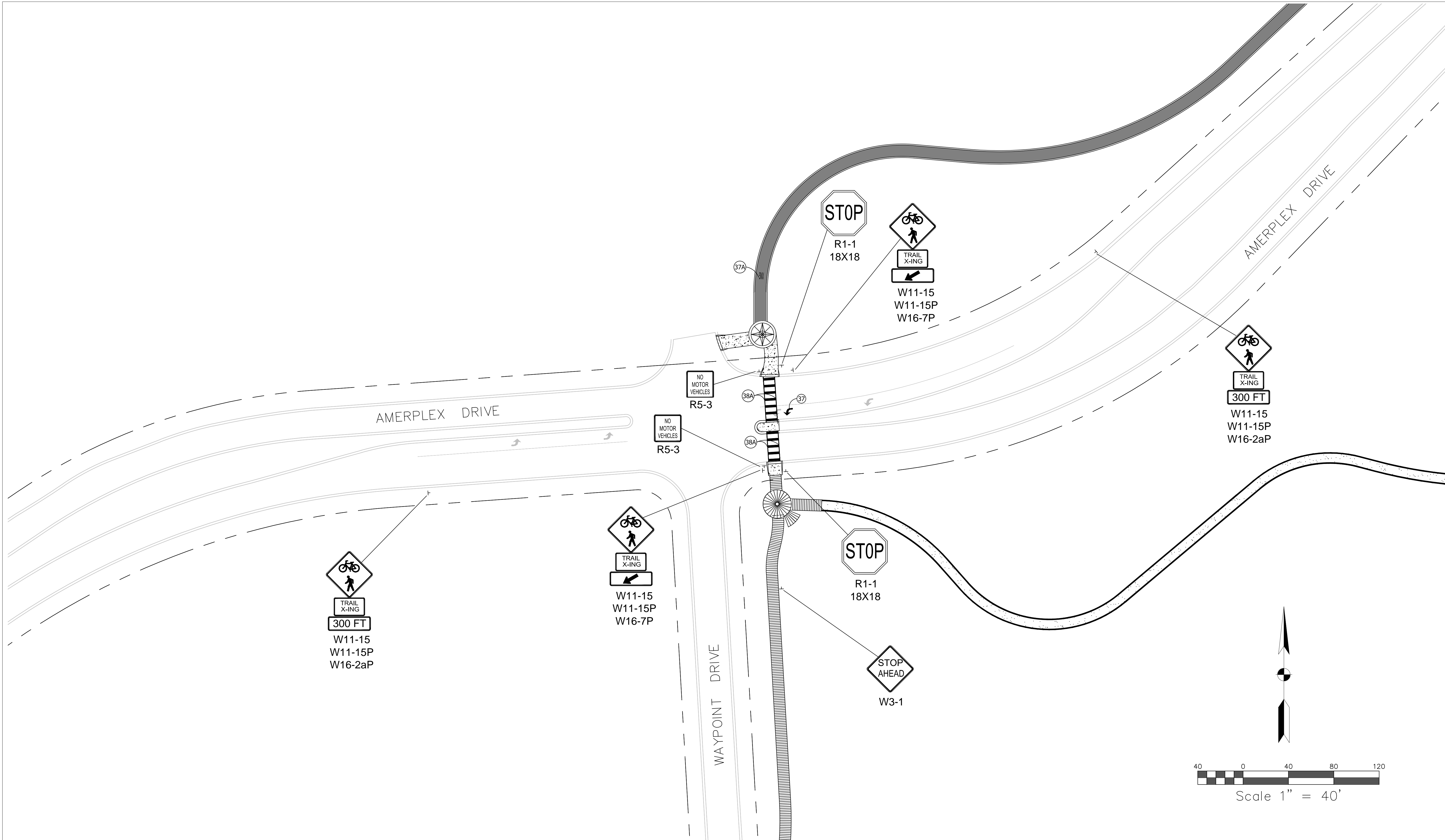
RECOMMENDED FOR APPROVAL	<i>Michael Ford</i>	05/22/2012
DESIGNED:	NM	DRAWN: JS
CHECKED:	MF	CHECKED: CH

**INDIANA DEPARTMENT OF TRANSPORTATION**

**SIGNAGE & STRIPING PLAN  
AMERIPLEX & S.R. 249**

HORIZONTAL SCALE	BRIDGE FILE
1" = 40'	
VERTICAL SCALE	DESIGNATION
N/A	1006017
SURVEY BOOK	SHEETS
	17 of 41
CONTRACT	PROJECT
R-35164	

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**LEGEND**

(37)	ARROW, THERMOPLASTIC PAVEMENT MESSAGE MARKING
(37A)	"XING", THERMOPLASTIC PAVEMENT MESSAGE MARKING
(38)	24 IN. STOPBAR WHITE THERMOPLASTIC TRANSVERSE MARKING
(38A)	6 IN. CROSSWALK WHITE THERMOPLASTIC TRANSVERSE MARKING W/ 24 IN. ZEBRA STRIPES, 6' ON CENTER

PHONE: 219.513.2500  
 9200 CALUMET AVENUE  
 SUITE N501  
 MUNSTER, IN 46321

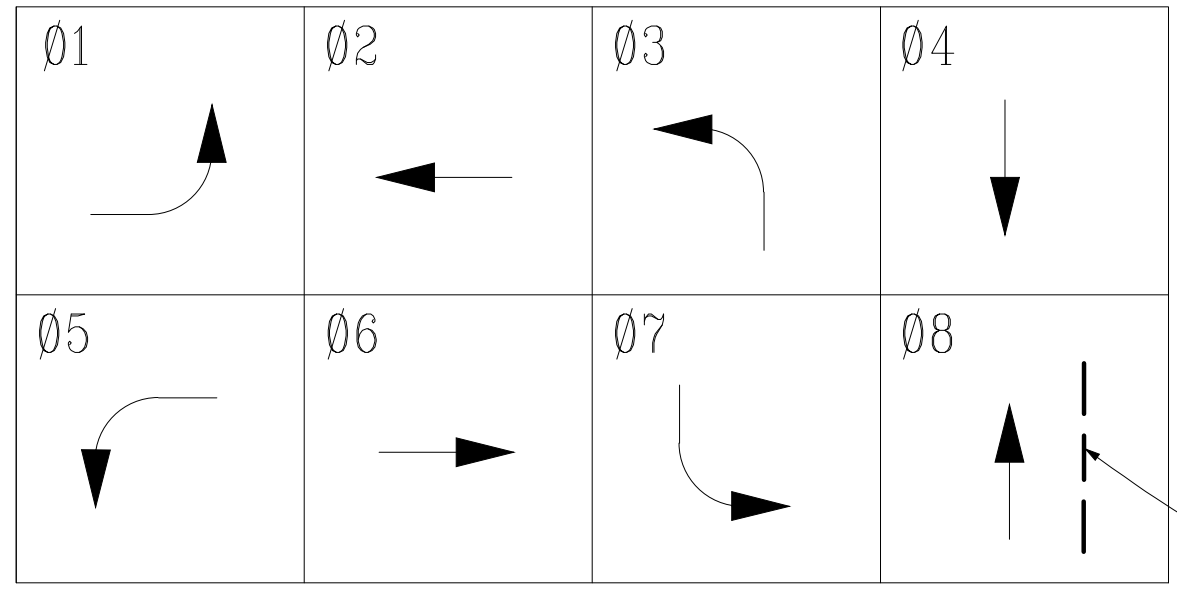
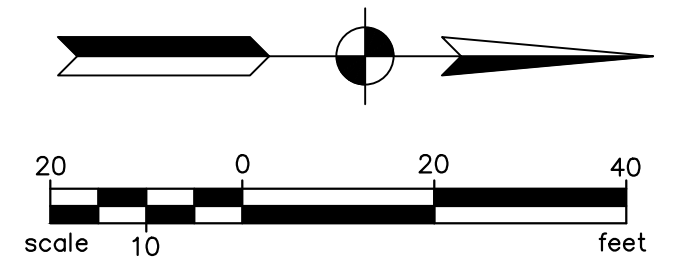
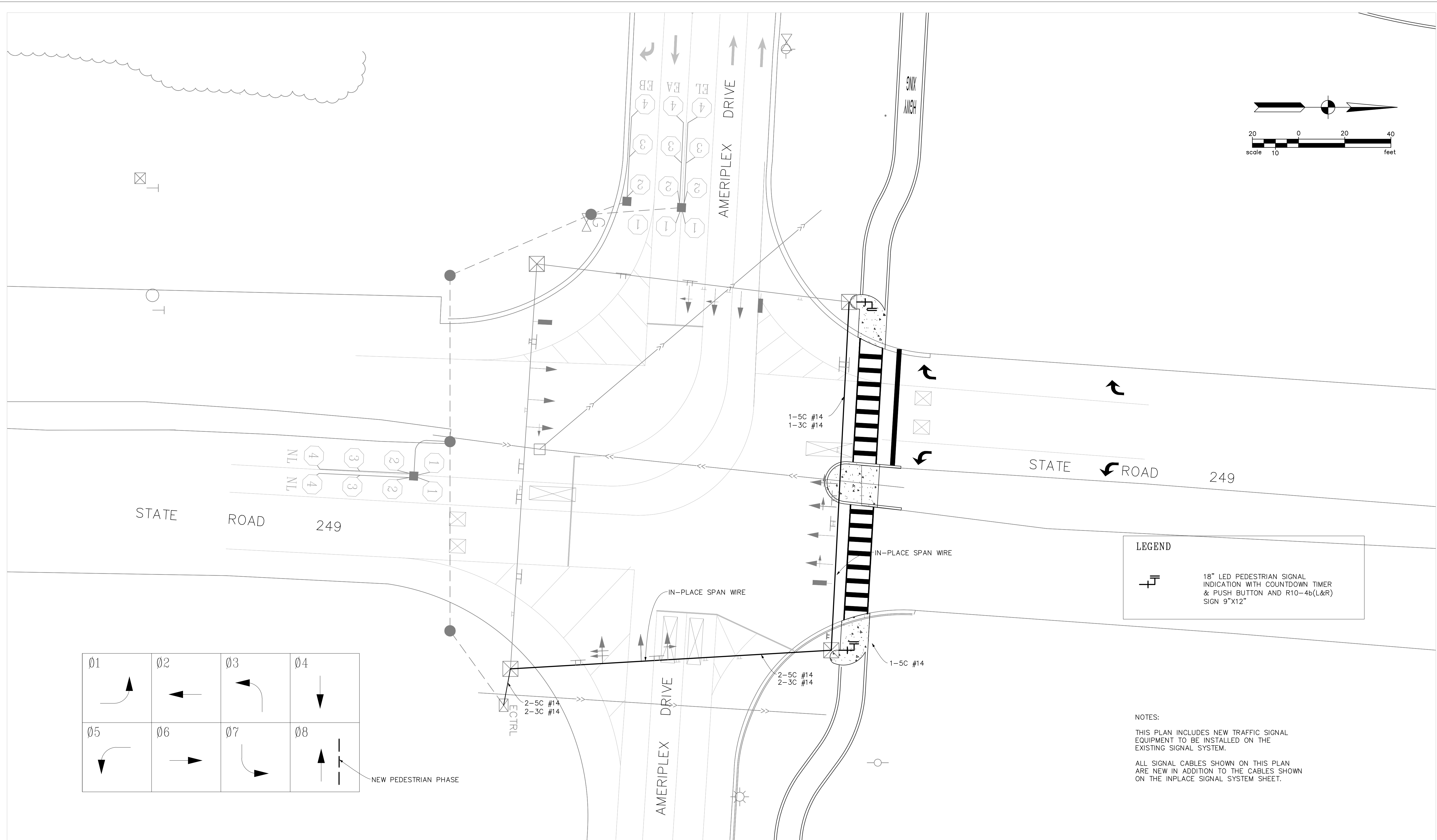
MICHAEL J. FORD  
 REGISTERED  
 NO. 10303156  
 STATE OF INDIANA  
 PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL	<i>Michael Ford</i>	DESIGN ENGINEER	05/22/2012	DATE
DESIGNED:	NM	DRAWN:	JS	
CHECKED:	MF	CHECKED:	CH	

**INDIANA DEPARTMENT OF TRANSPORTATION**  
  
**SIGNAGE & STRIPING PLAN**  
**AMERIPLEX & WAYPOINT**

HORIZONTAL SCALE	BRIDGE FILE
1" = 40'	
VERTICAL SCALE	DESIGNATION
N/A	10006017
SURVEY BOOK	SHEETS
	18 of 41
CONTRACT	PROJECT
R-35164	

1/27/2011 2:22:17 PM P:\PT\PORTAL\14970\5-DSGN\51-CADD\CIVIL\EP\PLAN SET\114970\_SIGNAL.DWG



**LEGEND**

18" LED PEDESTRIAN SIGNAL INDICATION WITH COUNTDOWN TIMER & PUSH BUTTON AND R10-4b(L&R) SIGN 9"X12"

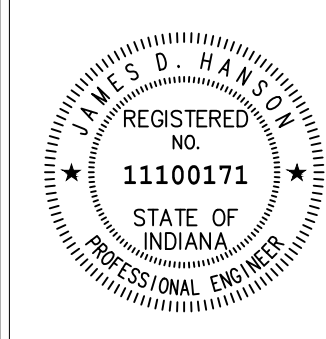
**NOTES:**

THIS PLAN INCLUDES NEW TRAFFIC SIGNAL EQUIPMENT TO BE INSTALLED ON THE EXISTING SIGNAL SYSTEM.

ALL SIGNAL CABLES SHOWN ON THIS PLAN ARE NEW IN ADDITION TO THE CABLES SHOWN ON THE INPLACE SIGNAL SYSTEM SHEET.

**SEH**

PHONE: 219.513.2500  
9200 CALUMET AVENUE  
SUITE N501  
MUNSTER, IN 46321



#11100171

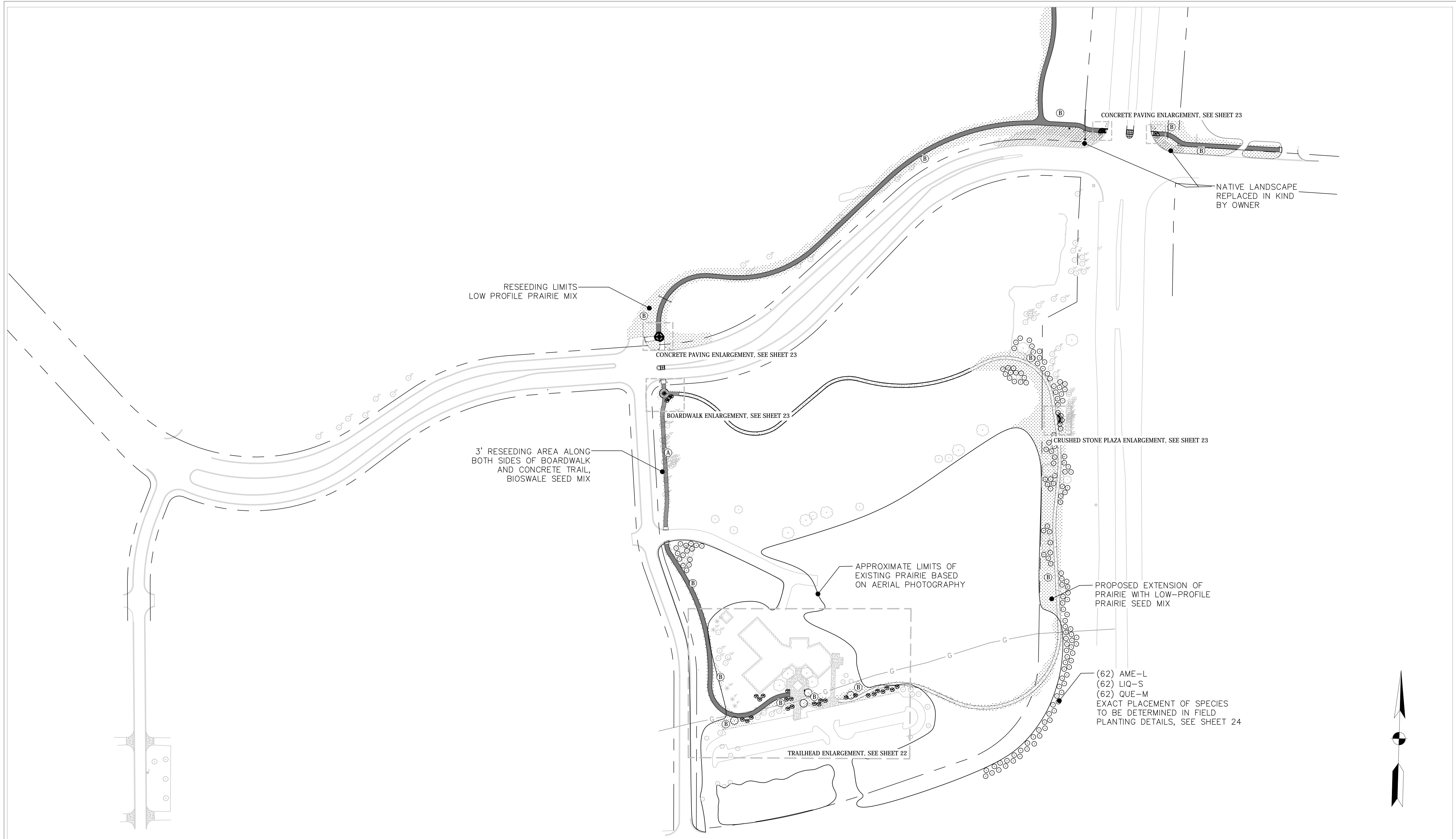
RECOMMENDED FOR APPROVAL *James D. Hand* 4/26/12  
DESIGN ENGINEER DATE

DESIGNED: JM DRAWN: JS  
CHECKED: MF CHECKED: NH

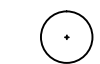


**INDIANA DEPARTMENT OF TRANSPORTATION**

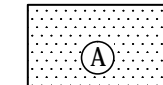
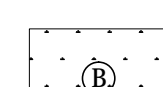
**TRAFFIC SIGNAL PLAN**

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	10006017
SURVEY BOOK	SHEETS
	19 of 41
CONTRACT	PROJECT
R-35164	



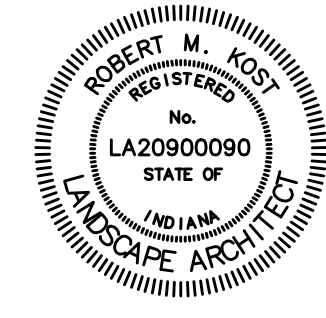
1/27/2011 2:22:17 PM

-  1 IN. WHIP FOR REFORESTATION
-  DECIDUOUS CLUMP TREE
-  DECIDUOUS TREE

-  SEEDING LIMIT USING BIOSWALE MIX
-  SEEDING LIMIT USING LOW PROFILE PRAIRIE MIX



PHONE: 219.513.2500  
9200 CALUMET AVENUE  
SUITE N501  
MUNSTER, IN 46321

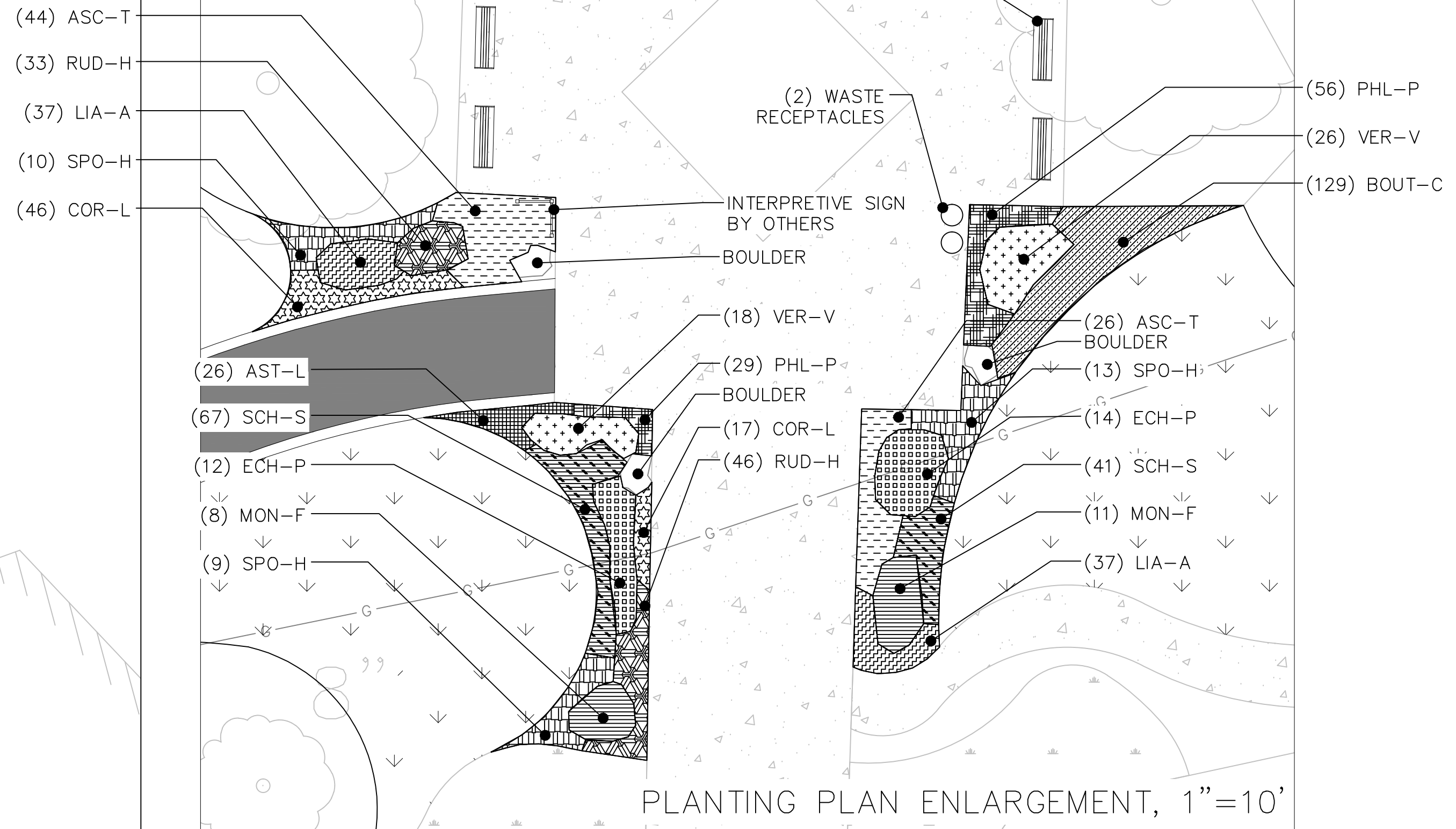
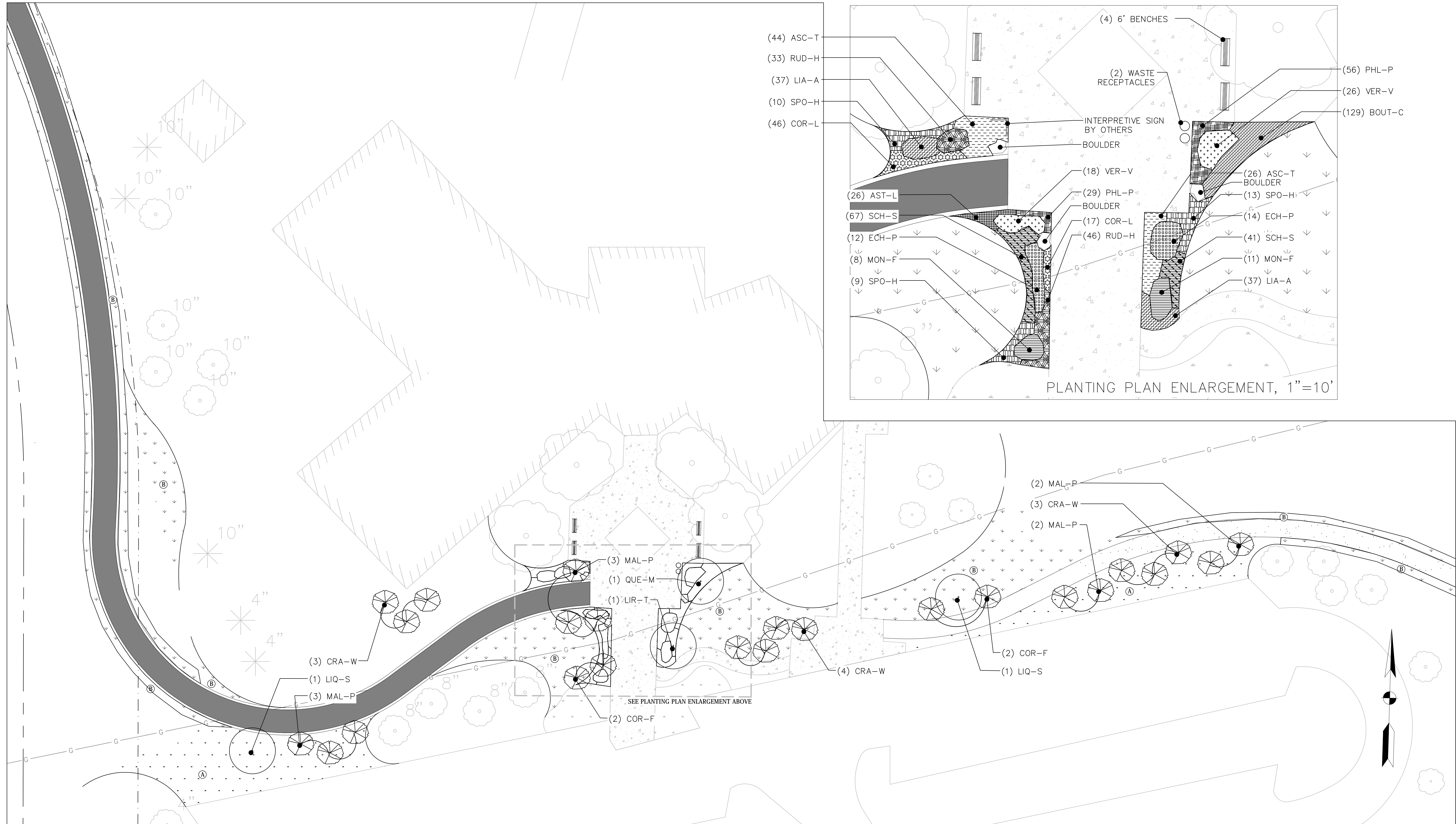


RECOMMENDED FOR APPROVAL	<i>Robert Kost</i>	05/22/2012
DESIGNED:	BS	DRAWN:
CHECKED:	GC	CHECKED:
		MF

**INDIANA DEPARTMENT OF TRANSPORTATION**

**NORTH SIDE TRAIL PROJECT  
OVERALL LANDSCAPE EXHIBIT**

HORIZONTAL SCALE	BRIDGE FILE
1"=120'	
VERTICAL SCALE	DESIGNATION
N/A	1006017
SURVEY BOOK	SHEETS
	20 of 41
CONTRACT	PROJECT
R-35164	



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	DECIDUOUS CLUMP TREE		SEEDING LIMIT USING BIOSWALE MIX		PERENNIAL BED HATCH
	DECIDUOUS TREE		SEEDING LIMIT USING LOW PROFILE PRAIRIE MIX		BENCH

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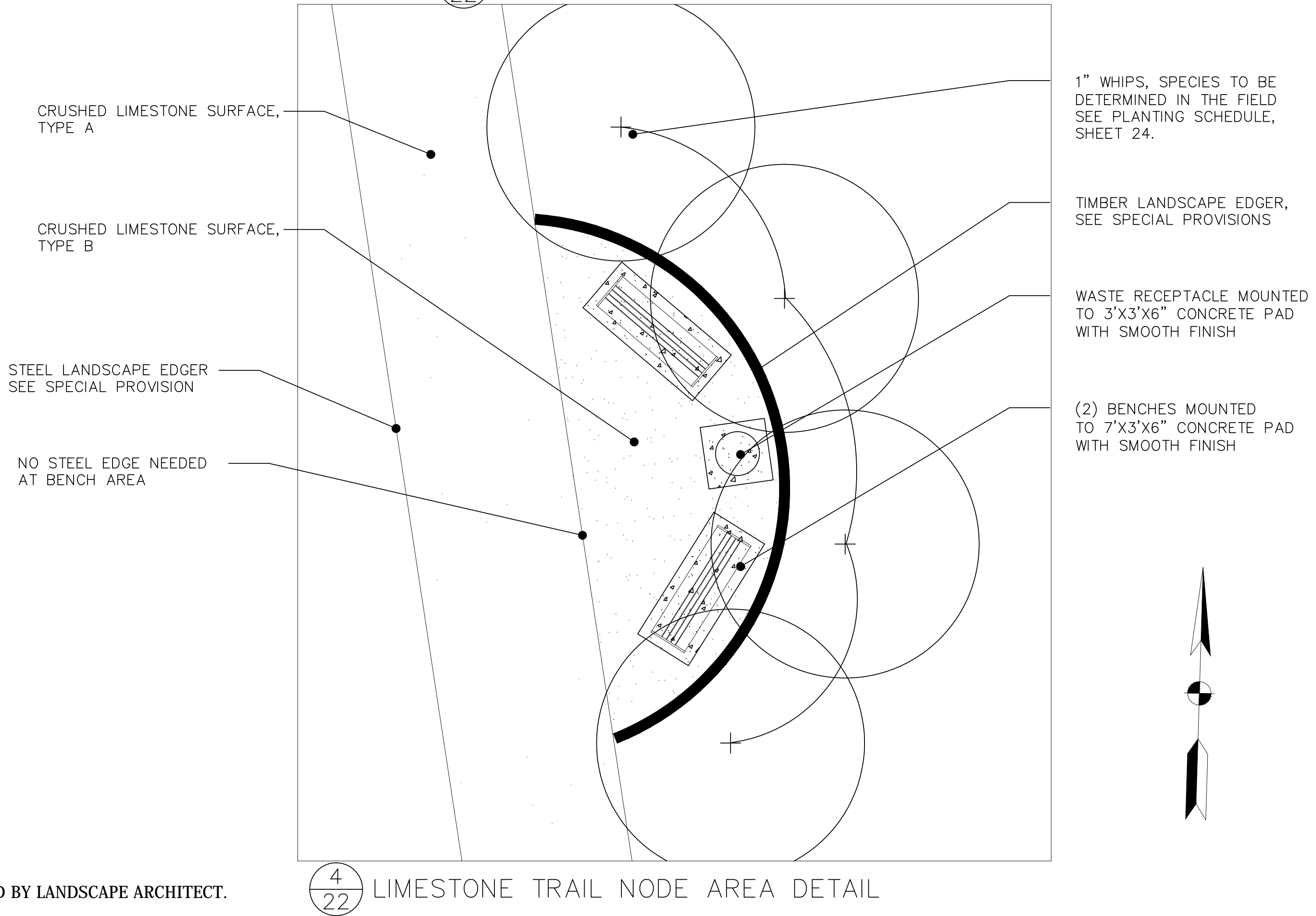
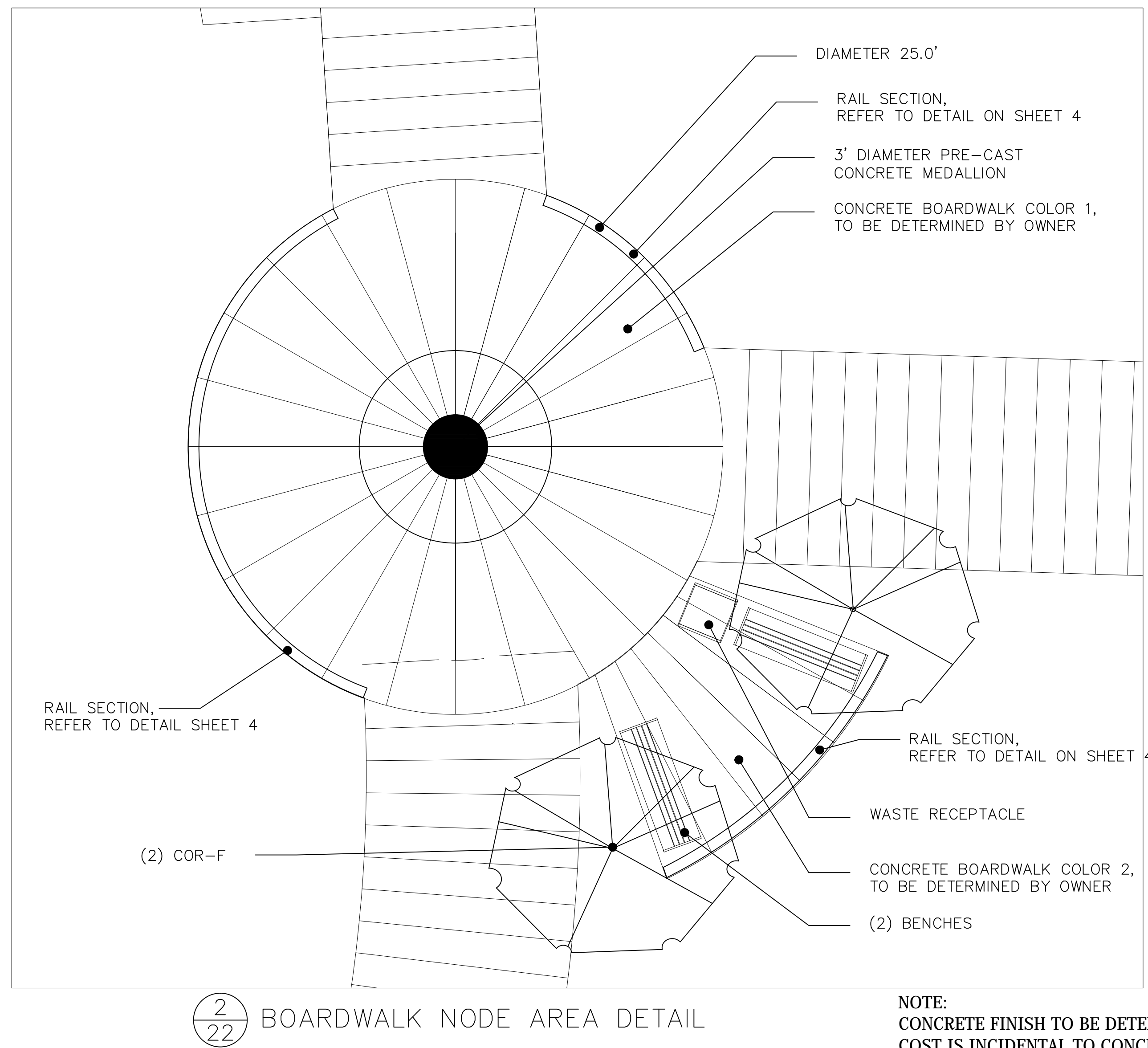
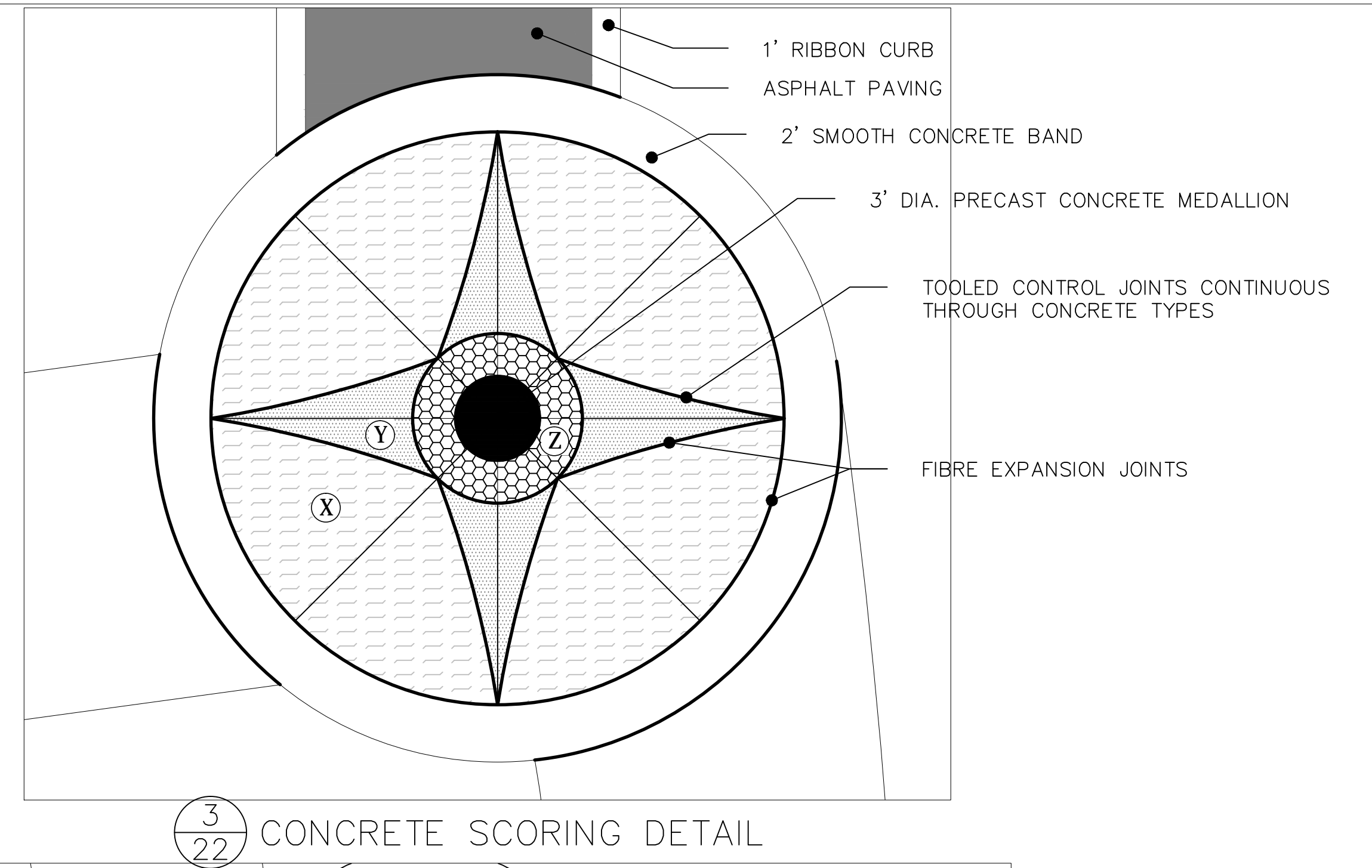
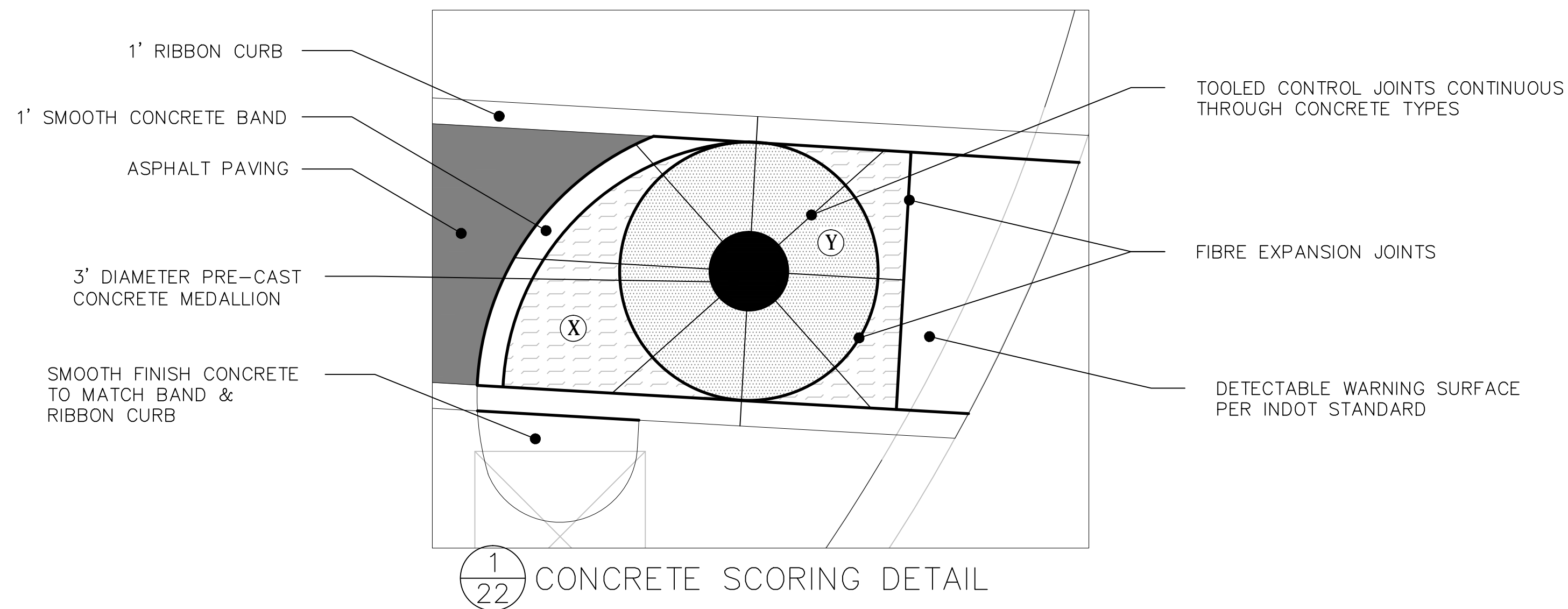
RECOMMENDED FOR APPROVAL: *Robert Kost* DESIGN ENGINEER 05/22/2012 DATE

DESIGNED: BS DRAWN: BS  
 CHECKED: GC CHECKED: MF

**INDIANA DEPARTMENT OF TRANSPORTATION**

**NORTH SIDE TRAIL PROJECT  
 NIRPC TRAILHEAD ENLARGEMENT**

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	DESIGNATION
VERTICAL SCALE	N/A
N/A	1006017
SURVEY BOOK	SHEETS
	21 of 41
CONTRACT	PROJECT
R-35164	



NOTE:  
 CONCRETE FINISH TO BE DETERMINED BY LANDSCAPE ARCHITECT.  
 COST IS INCIDENTAL TO CONCRETE.

- CONCRETE FINISH, TYPE A
- CONCRETE FINISH, TYPE B
- CONCRETE FINISH, TYPE C

**SEH**  
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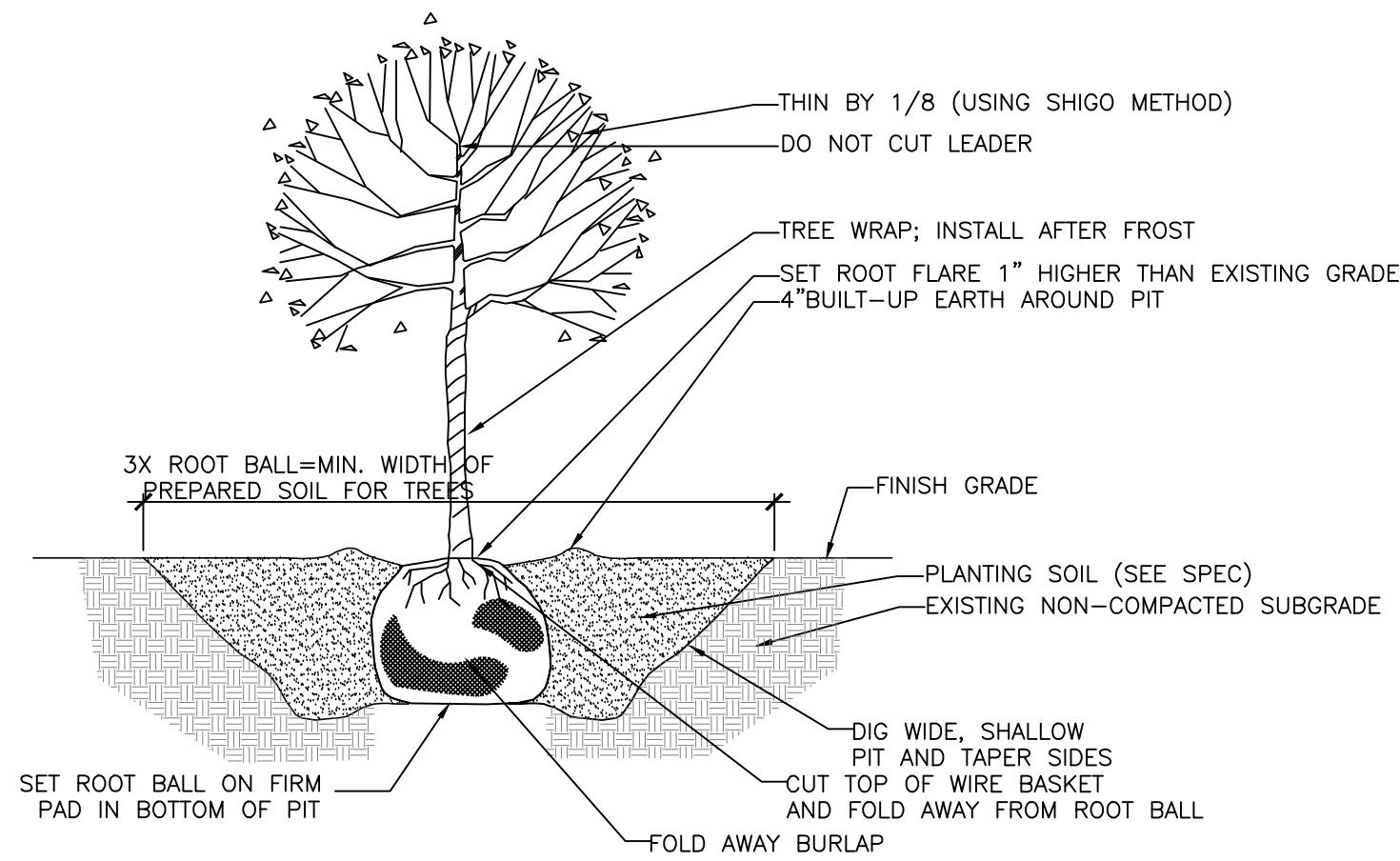
ROBERT M. KOOT  
 REGISTERED  
 No. LA20900090  
 STATE OF INDIANA  
 LANDSCAPE ARCHITECT

RECOMMENDED FOR APPROVAL	<i>Robert Koot</i>	DESIGN ENGINEER	05/22/2012	DATE
DESIGNED:	BS	DRAWN:	BS	
CHECKED:	GC	CHECKED:	MF	

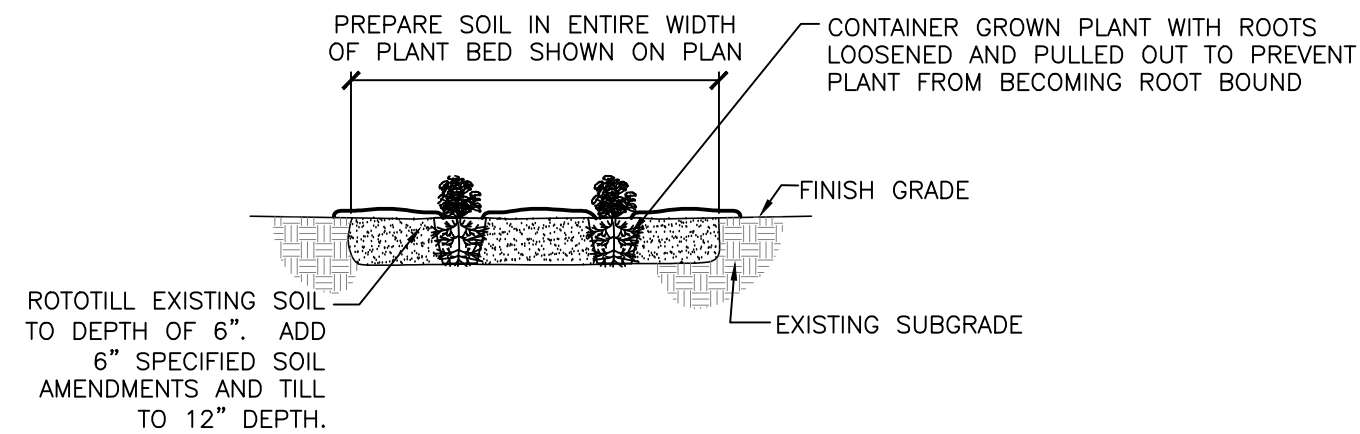
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**NORTH SIDE TRAIL PROJECT LANDSCAPING DETAILS**

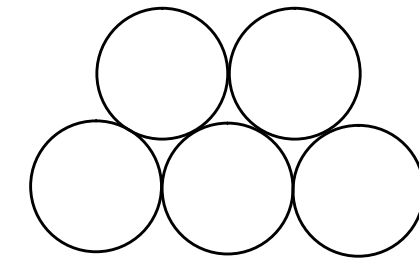
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VERTICAL SCALE	DESIGNATION
N/A	1006017
SURVEY BOOK	SHEETS
	22 of 41
CONTRACT	PROJECT
R-35164	



### DECIDUOUS TREE PLANTING



### PERENNIAL PLANTING



### TRIANGULAR SPACING OF PERENNIALS

### PLANTING NOTES

CONTRACTOR TO VERIFY PLANTS REQUIRED AS REFLECTED ON PLAN. QUANTITIES LISTED IN PLANT SCHEDULE ARE FOR REFERENCE ONLY. IF THERE IS A DISCREPANCY BETWEEN QUANTITIES LISTED IN PLANT SCHEDULE AND QUANTITIES SHOWN ON PLAN SHEETS, PLAN SHEETS SHALL GOVERN.

ALL TREE, SHRUB, AND PERENNIAL PLANTINGS SHALL BE MULCHED WITH 4" DEEP SHREDDED HARDWOOD MULCH WITHOUT FILTER FABRIC. MULCH SHALL BE INCIDENTAL TO PLANT MATERIALS.

CONTRACTOR IS RESPONSIBLE FOR ON-GOING MAINTENANCE OF ALL NEWLY INSTALLED MATERIALS UNTIL TIME OF OWNER ACCEPTANCE. ANY ACTS OF VANDALISM OR DAMAGE WHICH MAY OCCUR PRIOR TO OWNER ACCEPTANCE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

NO PLANT MATERIAL SUBSTITUTIONS WILL BE ACCEPTED UNLESS PRIOR APPROVAL IS REQUESTED OF THE LANDSCAPE ARCHITECT BY THE LANDSCAPE CONTRACTOR PRIOR TO THE SUBMISSION OF A BID AND/OR QUOTATION.

CONTRACTOR SHALL VISIT AND INSPECT SITE TO BECOME FAMILIAR WITH EXISTING CONDITIONS RELATING TO THE NATURE AND SCOPE OF WORK PRIOR TO SUBMITTING BID.

ALL PLANT BEDS SHALL BE EDGED USING SPADED GARDEN EDGE UNLESS OTHERWISE NOTED ON PLANS.

ALL SEEDED AREAS SHALL RECEIVE 3 INCHES DEPTH OF TOPSOIL. ALL PLANT BEDS SHALL RECEIVE 12 INCH DEPTH OF PREPARED PLANTING SOIL. EACH TREE AND SHRUB SHALL RECEIVE 1 CUBIC YARD OF PREPARED PLANTING SOIL AMENDED WITH NATIVE SOIL.

SEED DISTURBED AREAS ALONG THE BACK OF ALL NEW ROAD AND DRIVEWAY CURBING UP TO THE EDGE OF PLANTING BEDS OR TO EXISTING UNDISTURBED GROUND COVER.

ALL MASS PLANTING BEDS FOR SHRUBS AND PERENNIALS TO BE EXCAVATED TO A MINIMUM DEPTH OF 12 INCHES, ROTO-TILL SUBSOIL TO A DEPTH OF 6 INCHES AND RE-FILLED WITH PREPARED PLANTING SOIL CONSISTING OF TOPSOIL, SAND AND COMPOST (PERCENTAGES TO BE DETERMINED).

LAWN AREAS TO BE ROTO-TILLED TO A DEPTH OF 4 INCHES AND TOP-DRESSED WITH A MINIMUM OF 3 INCHES OF TOPSOIL.

AREAS TO BE SEEDED WITH "SWALE SEED MIX" AND "LOW PROFILE PRAIRIE SEED MIX" TO BE ROTO-TILLED TO A DEPTH OF 4 INCHES AND AMENDED WITH SAND AND/OR COMPOST AS SPECIFIED, RE-TILLED TO A DEPTH OF 6 INCHES, AND TOPDRESSED WITH TOPSOIL.

TREES SHALL BE PLANTED IN PITS 3 TIMES THE WIDTH OF THE ROOT BALL WITH ROOT CROWN SET 2 INCHES ABOVE FINAL GRADE. BACKFILL WITH A PLANTING MIX COMPRISED OF EQUAL PARTS NATIVE EXCAVATED SOIL, SAND, AND COMPOST AS SPECIFIED.

SPADED GARDEN EDGE TO BE PLACED BETWEEN MASS PLANTING BEDS AND LAWN AREAS.

PROTECT EXISTING TREES TO BE PRESERVED FROM DAMAGE DURING CONSTRUCTION.

### PLANTING SCHEDULE

CODE	Quantity	Botanical Name	Common Name	Spacing	Size	Root	Notes
<b>Shade trees</b>							
LIQ-S	2	<i>Liquidambar styraciflua</i>	Sweet Gum	per plan	2.5' cal	B&B	
LIR-T	1	<i>Liriodendron tulipifera</i>	Tulip Tree	per plan	2.5' cal	B&B	
QUE-M	1	<i>Quercus macrocarpa</i>	Burr Oak	per plan	2.5' cal	B&B	
<b>Ornamental trees</b>							
COR-F	6	<i>Cornus florida</i>	Flowering Dogwood	per plan	6'-7'	B&B	clump
CRA-W	10	<i>Crataegus viridis 'Winter King'</i>	Winter King Hawthorn	per plan	6'-7'	B&B	clump
MAL-P	10	<i>Malus x 'Prairifire'</i>	Prairifire Crabapple	per plan	6'-7'	B&B	clump
<b>Reforestation trees</b>							
AME-L	62	<i>Amelanchier laevis</i>	Smooth Serviceberry	per plan	1" whip	bare root	Species placement determined in field
LIQ-W	62	<i>Liquidambar styraciflua</i>	Sweet Gum	per plan	1" whip	bare root	
QUE-W	62	<i>Quercus macrocarpa</i>	Burr Oak	per plan	1" whip	bare root	
<b>Herbaceous perennials</b>							
ASC-T	70	<i>Asclepias tuberosa</i>	Butterfly Weed	18"	gallon	container	
AST-L	26	<i>Aster laevis</i>	Smooth Blue Aster	12"	gallon	container	
COR-L	63	<i>Careopsis lanceolata</i>	Sand Coreopsis	12"	gallon	container	
ECH-P	26	<i>Echinacea purpurea</i>	Purple Coneflower	24"	gallon	container	
LIA-A	74	<i>Liatris aspera</i>	Rough Blazing Star	12"	gallon	container	
MON-F	19	<i>Monarda fistulosa</i>	Wild Bergamot	24"	gallon	container	
PHL-P	85	<i>Phlox pilosa</i>	Sand Prairie Phlox	12"	gallon	container	
RUD-H	79	<i>Rudbeckia hirta</i>	Black-eyed Susan	12"	gallon	container	
VER-V	44	<i>Veronicastrum virginicum</i>	Culver's Root	18"	gallon	container	
<b>Perennial Grasses</b>							
BOU-C	129	<i>Bouteloua curtipendula</i>	Side-Oats Grama	12"	gallon	container	
SCH-S	108	<i>Schizocarum scaparium</i>	Little Blue-Stem	12"	gallon	container	
SPO-H	32	<i>Sporobolus heterolepis</i>	Prairie Dropseed	24"	gallon	container	
<b>Seeding</b>							
Hatch "A"		0.02 Acres Bioswale Seed Mix, Applied @ 20.34 lbs/acre					
Hatch "B"		3.75 Acres Low Profile Prairie Seed Mix, Applied @ 17.126 lbs/acre					

NOTE: ORNAMENTAL TREES SHALL HAVE 1 IN. MINIMUM TRUNK DIAMETER

### CUSTOM SEED MIXES

#### MIX A

#### Custom Bioswale Seed Mix Specification Apply @ 20.34 pounds per acre

- 0.56% *Asclepias incarnata*
- 0.28% *Asclepias sullivanti*
- 50.44% *Avena sativa*
- 0.56% *Bidens cernua*
- 0.28% *Calamagrostis canadensis*
- 0.94% *Carex scoparia*
- 0.18% *Carex squarrosa*
- 3.36% *Carex vulpinoidea*
- 1.58% *Echinochloa crusgali*
- 0.48% *Eleocharis ovata (Eleocharis obtusa)*
- 0.08% *Eleocharis smallii*
- 4.48% *Elymus canadensis*
- 2.24% *Elymus virginicus*
- 0.14% *Euthamia graminifolia (Solidago graminifolia)*
- 1.12% *Glyceria striata*
- 0.42% *Iris virginica*
- 0.28% *Juncus effusus*
- 0.07% *Juncus tenuis*
- 0.00% *Juncus tenuis v. dudleyi*
- 0.07% *Juncus torreyi*
- 1.12% *Liatris spicata*
- 0.28% *Lobelia siphilitica*
- 3.93% *Lolium multiflorum*
- 0.07% *Ludwigia alternifolia*
- 0.56% *Lycopus species blend*
- 0.56% *Mondarda fistulosa*
- 0.28% *Panicum virgatum*
- 0.14% *Penstemon digitalis*
- 0.42% *Physostegia virginiana*
- 0.56% *Pycnanthemum virginianum*
- 8.98% *Schizachyrium scaparium (Adropogon scoparius)*
- 1.12% *Scirpus atrovirens*
- 2.90% *Scirpus cyperinus*
- 0.28% *Solidago riddellii*
- 8.97% *Sorghastrum nutans*
- 1.12% *Spartina pectinata*
- 0.28% *Thalictrum dasycarpum*
- 0.56% *Vernonia fasciculata*
- 0.28% *Zizia aurea*
- 100.00%

#### MIX B

#### Custom Low Profile Grass Seed Mix Specification Apply @ 17.126 pounds per acre

- 5.84% *Agropyron trachycaulum*
- 0.73% *Aster laevis*
- 1.46% *Aster novae-angliae*
- 8.75% *Bouteloua curtipendula*
- 1.46% *Chamaecrista fasciculata (Cassia fasciculata)*
- 5.84% *Coreopsis lanceolata*
- 2.93% *Dalea purpurea*
- 3.65% *Desmanthus illinoensis*
- 3.65% *Echinacea purpurea*
- 11.68% *Elymus canadensis*
- 11.68% *elymus virginicus*
- 1.46% *Heliopsis helianthoides*
- 0.73% *Juncus tenuis*
- 1.46% *Liatris spicata*
- 1.46% *Lupinus perennis*
- 0.37% *Mondard fistulosa*
- 1.10% *Penstemon digitalis*
- 3.65% *Ratibida pinnata*
- 4.38% *Rudbeckia hirta*
- 26.27% *Schizachyrium scaparium*
- 0.73% *Solidago rigida*
- 0.73% *Verbena stricta*
- 100.00%

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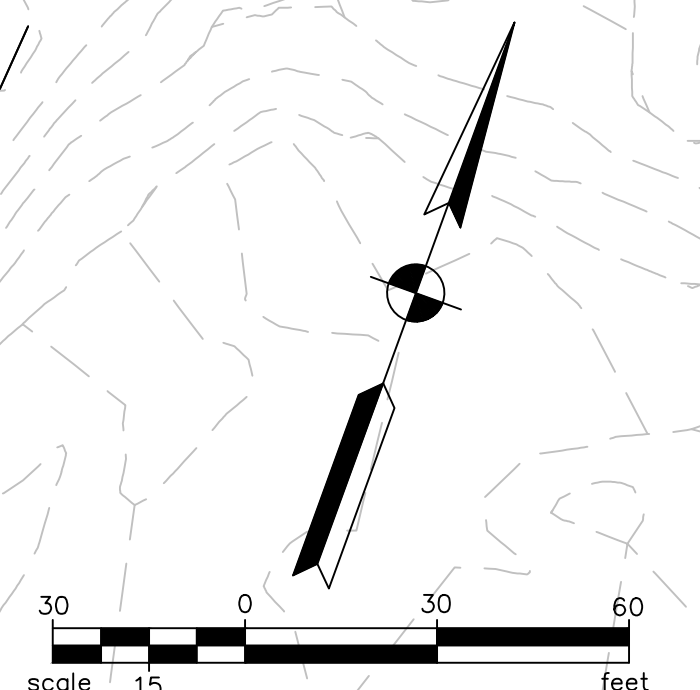
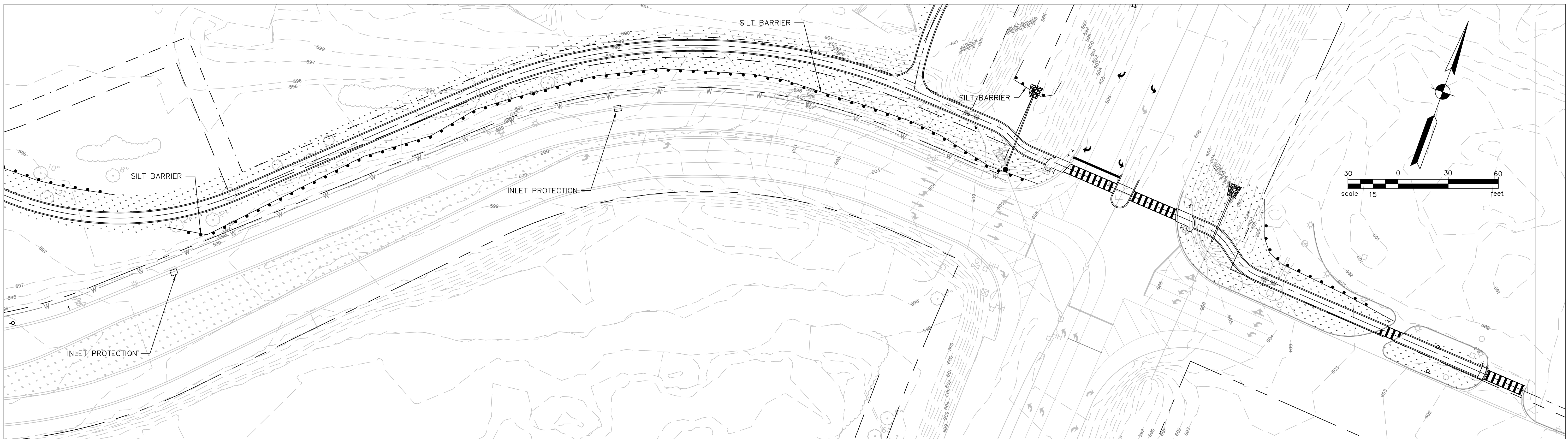
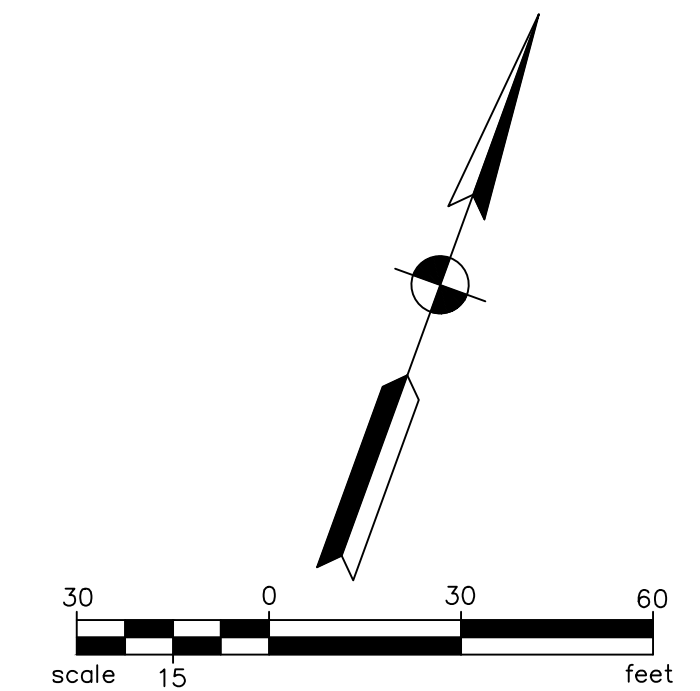
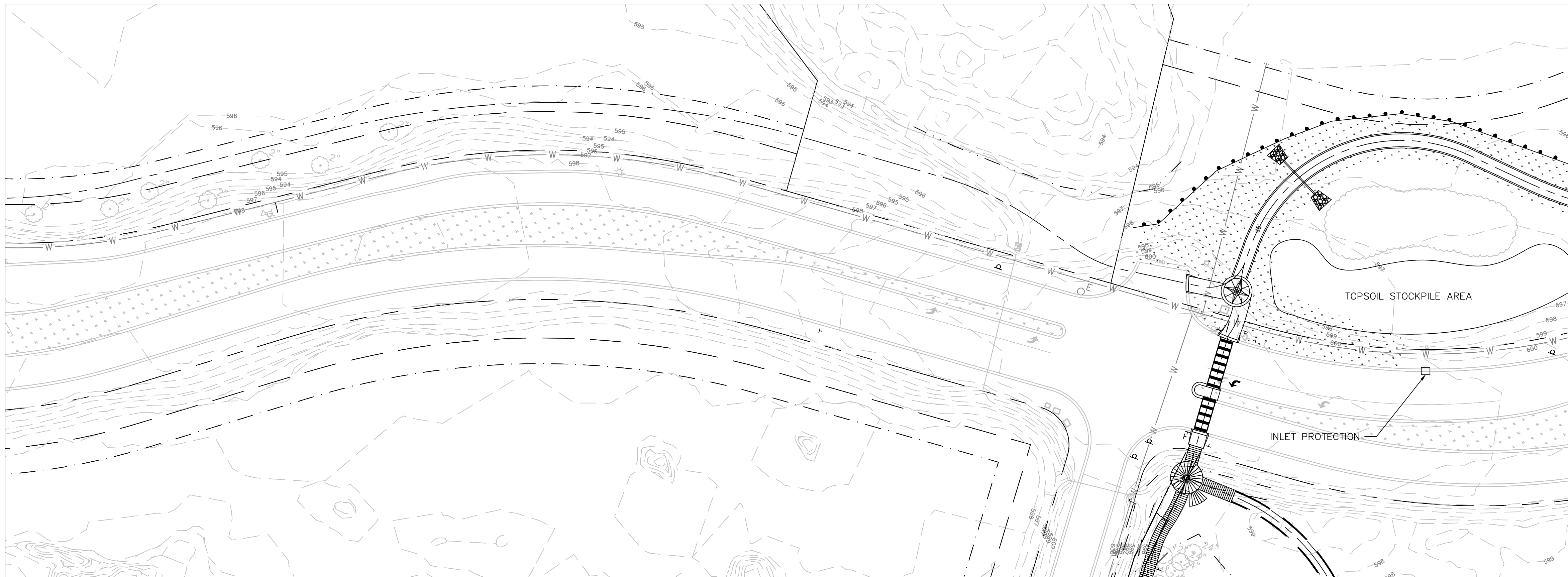
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CHECKED: GC CHECKED: MF

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NORTH SIDE TRAIL PROJECT  
LANDSCAPING DETAILS

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VERTICAL SCALE	DESIGNATION
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SURVEY BOOK	SHEETS
	23 of 41
CONTRACT	PROJECT
R-35164	



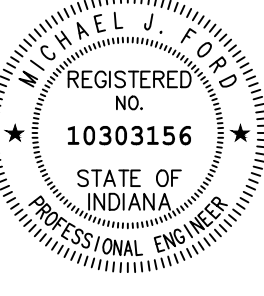
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LEGEND



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	DESIGN ENGINEER	DATE
DESIGNED:	NM	DRAWN: JS
CHECKED:	MF	CHECKED: CH

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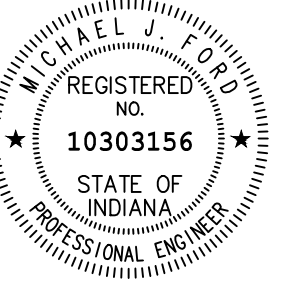
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VERTICAL SCALE	DESIGNATION
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SURVEY BOOK	SHEETS
	24 of 41
CONTRACT	PROJECT
R-35164	



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9200 CALUMET AVENUE  
SUITE N501  
MUNSTER, IN 46321



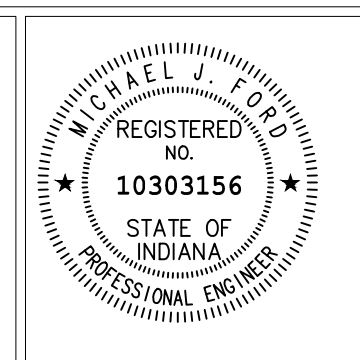
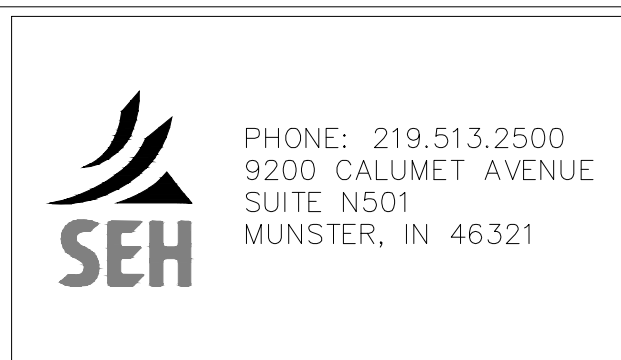
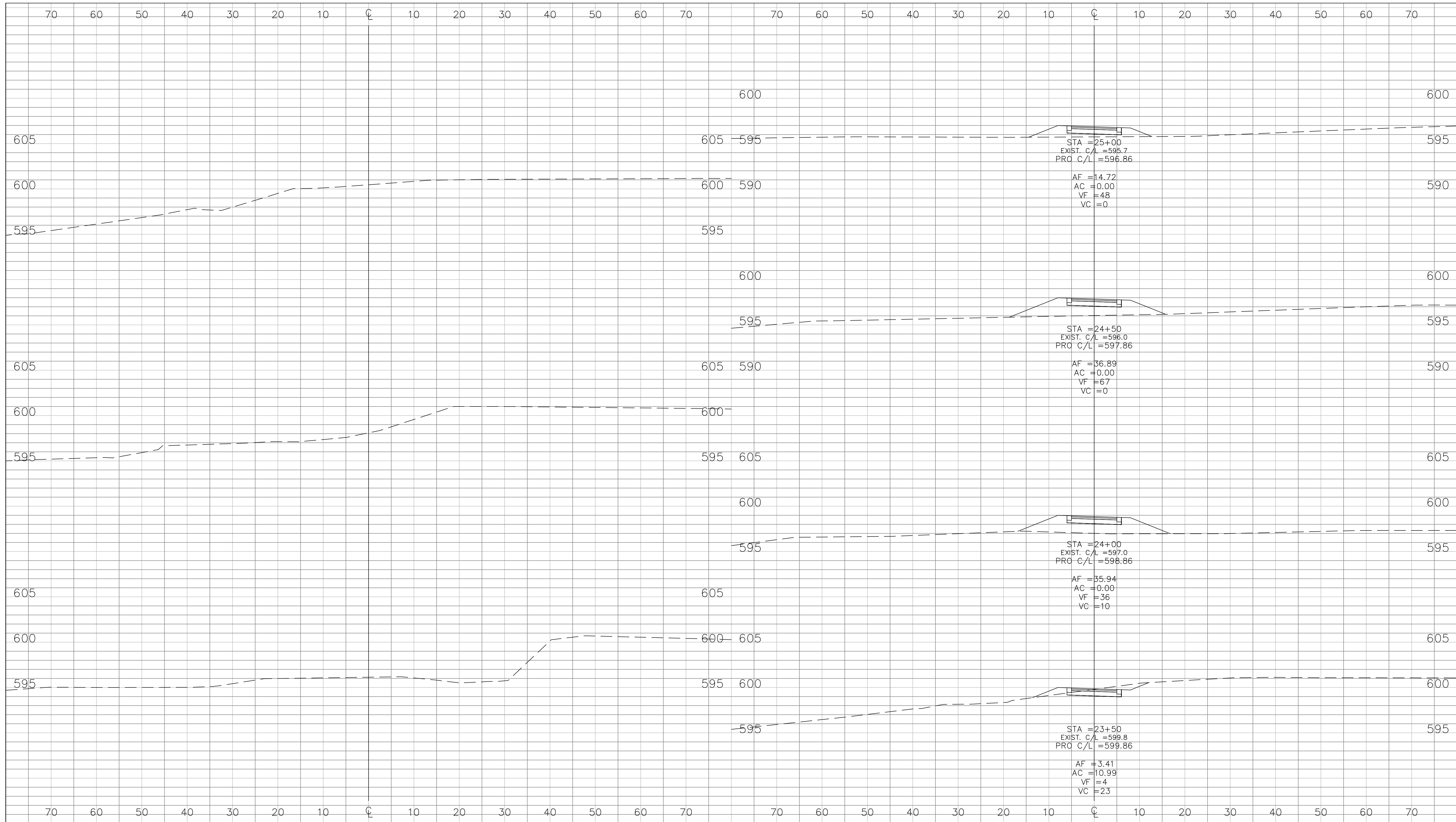
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**PLAN & PROFILE**  
**LINE "B" STA. 60+00 to 67+50**

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VERTICAL SCALE	N/A	DESIGNATION	1006017
SURVEY BOOK		SHEETS	25 of 41
CONTRACT	R-35164	PROJECT	

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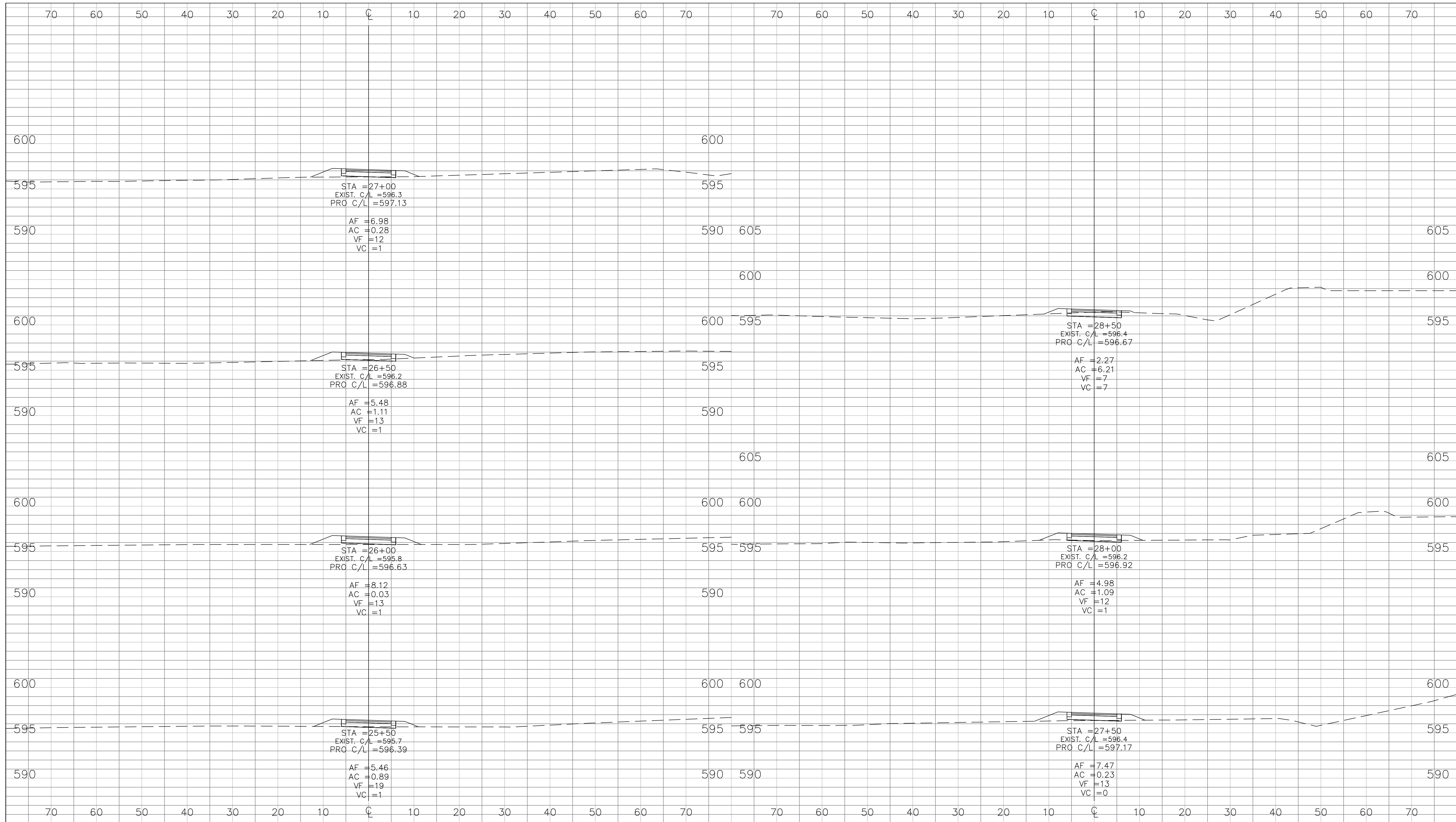
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DESIGNED:	NM	DRAWN:	JS	
CHECKED:	MF	CHECKED:	CH	

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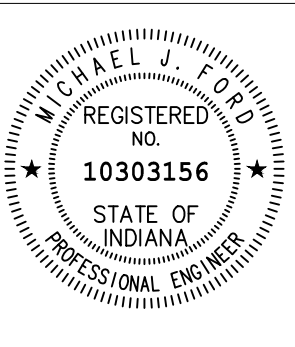
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VERTICAL SCALE	1" = 5'	DESIGNATION
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CONTRACT	R-35164	26 of 41
		PROJECT

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SUITE N501  
MUNSTER, IN 46321



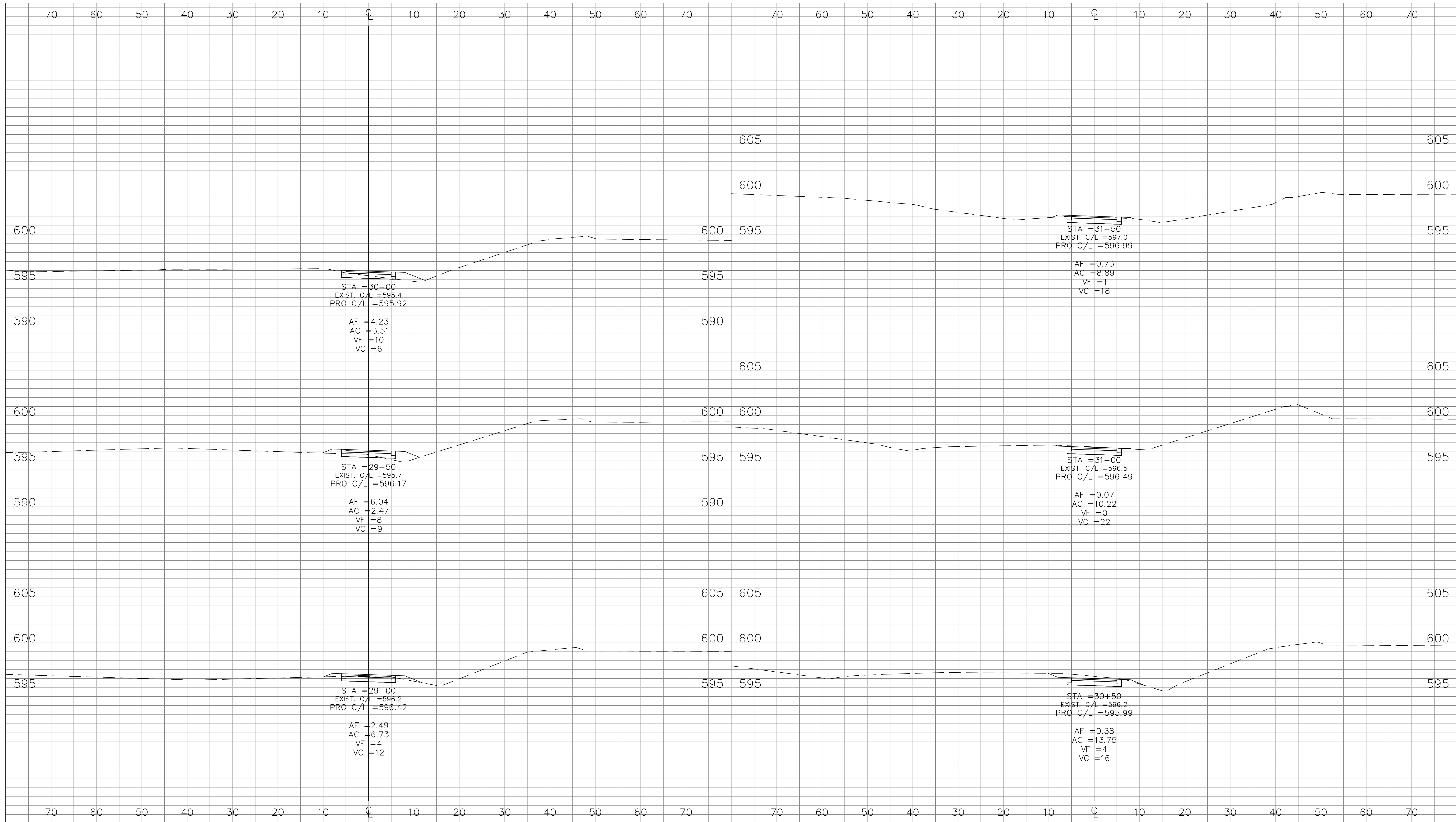
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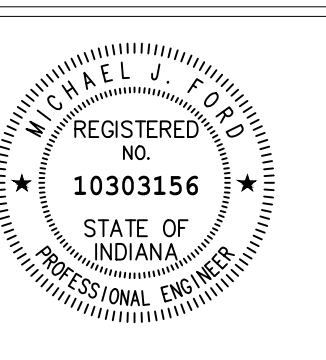
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SURVEY BOOK		SHEETS	27 of 41
CONTRACT	R-35164	PROJECT	

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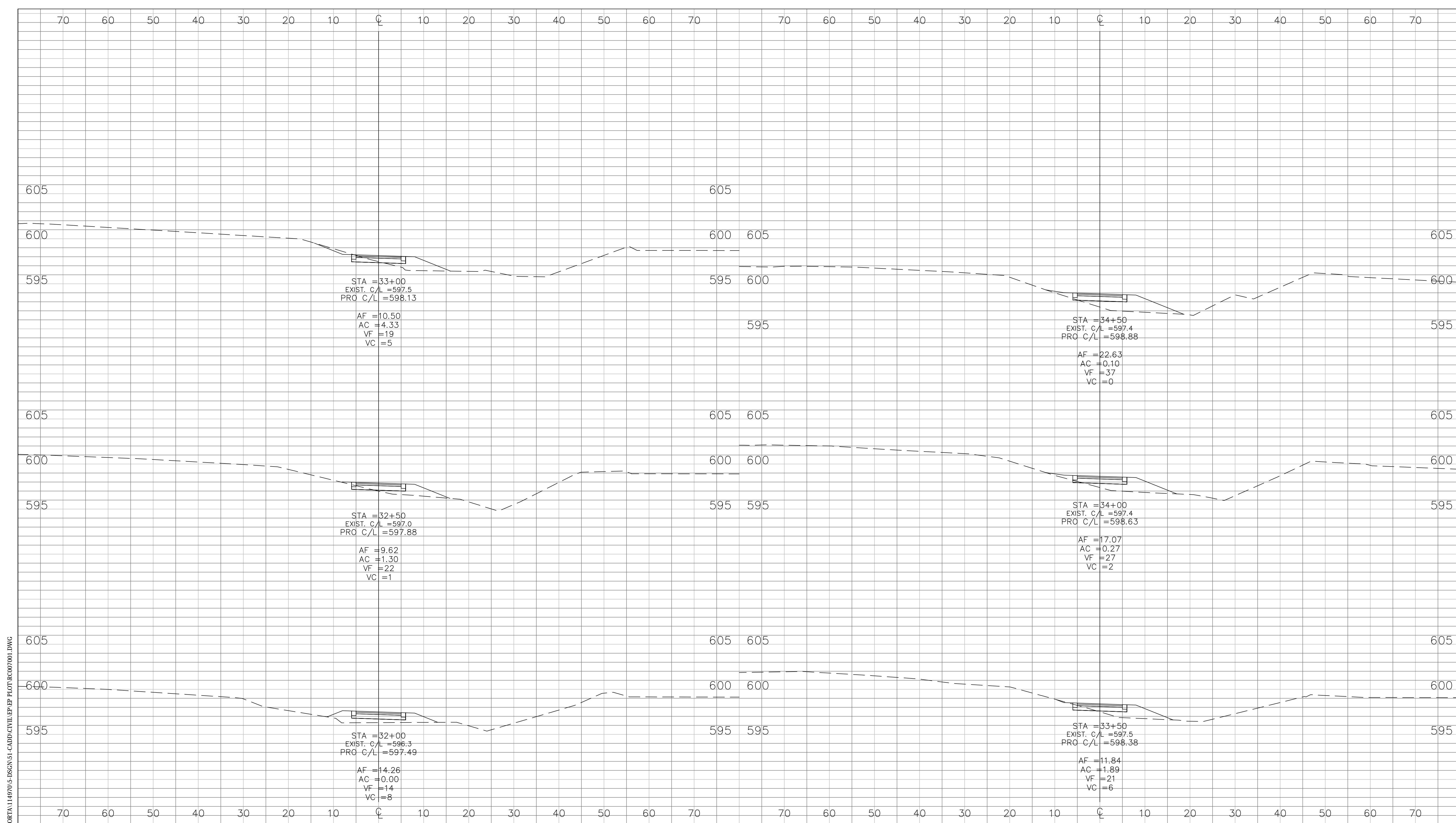


RECOMMENDED FOR APPROVAL	<i>Michael J. O'Donnell</i>	DESIGN ENGINEER	05/22/2012
DESIGNED:	NM	DRAWN:	JS
CHECKED:	MF	CHECKED:	CH


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**CROSS SECTIONS  
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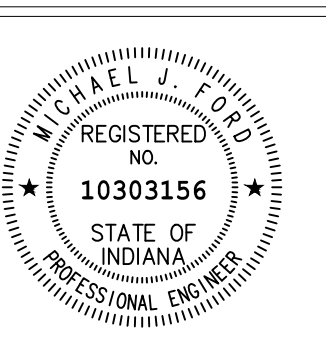
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CONTRACT R-35164	28 of 41 PROJECT



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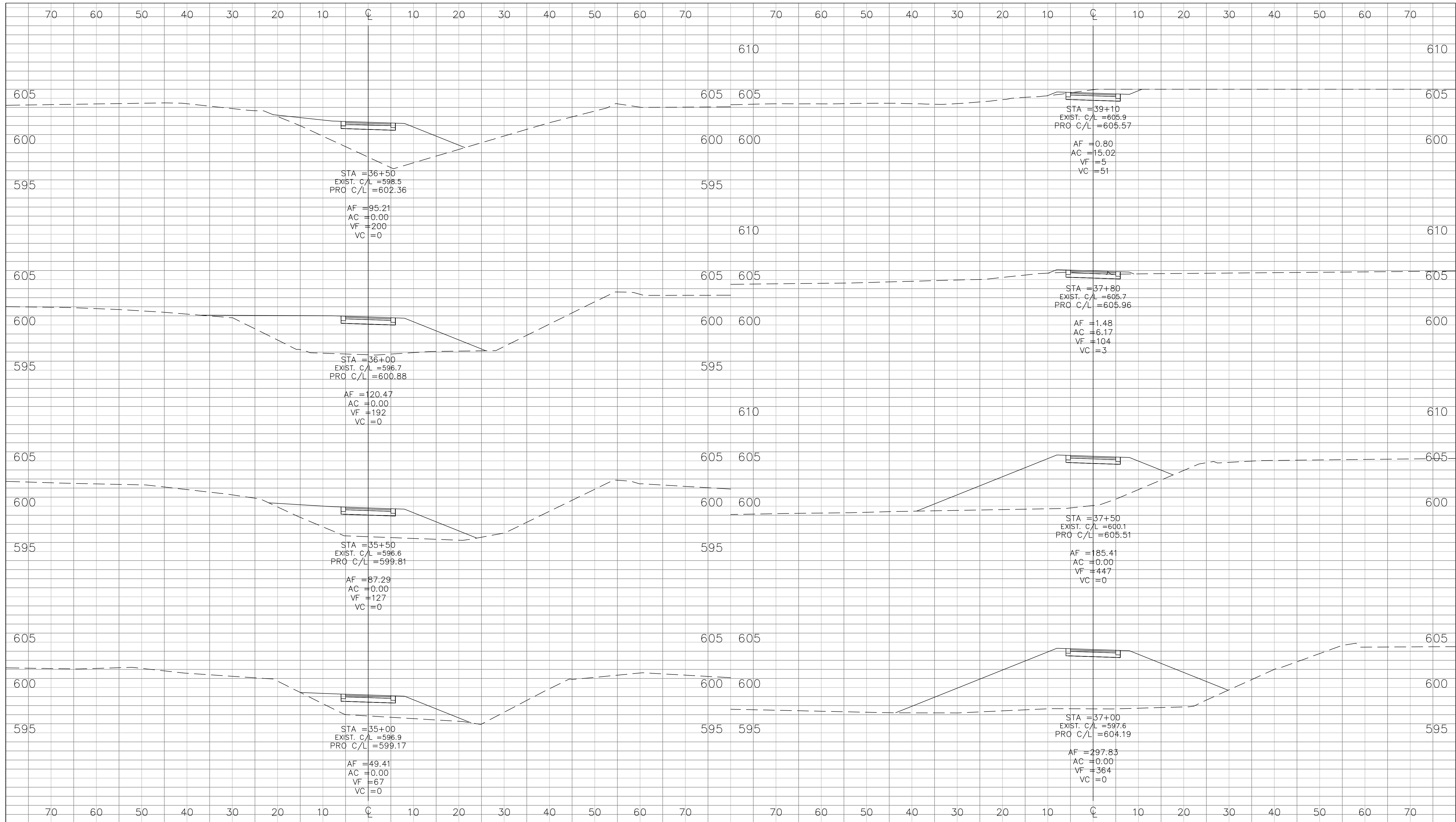

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**CROSS SECTIONS**  
**LINE "A" STA. 32+00 to 34+50**

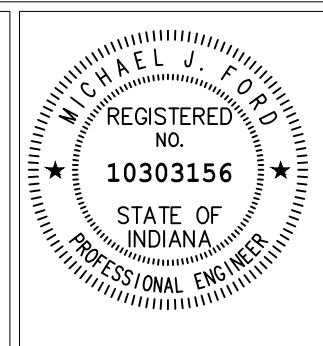
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VERTICAL SCALE	1006017
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	29 of 41
CONTRACT	PROJECT
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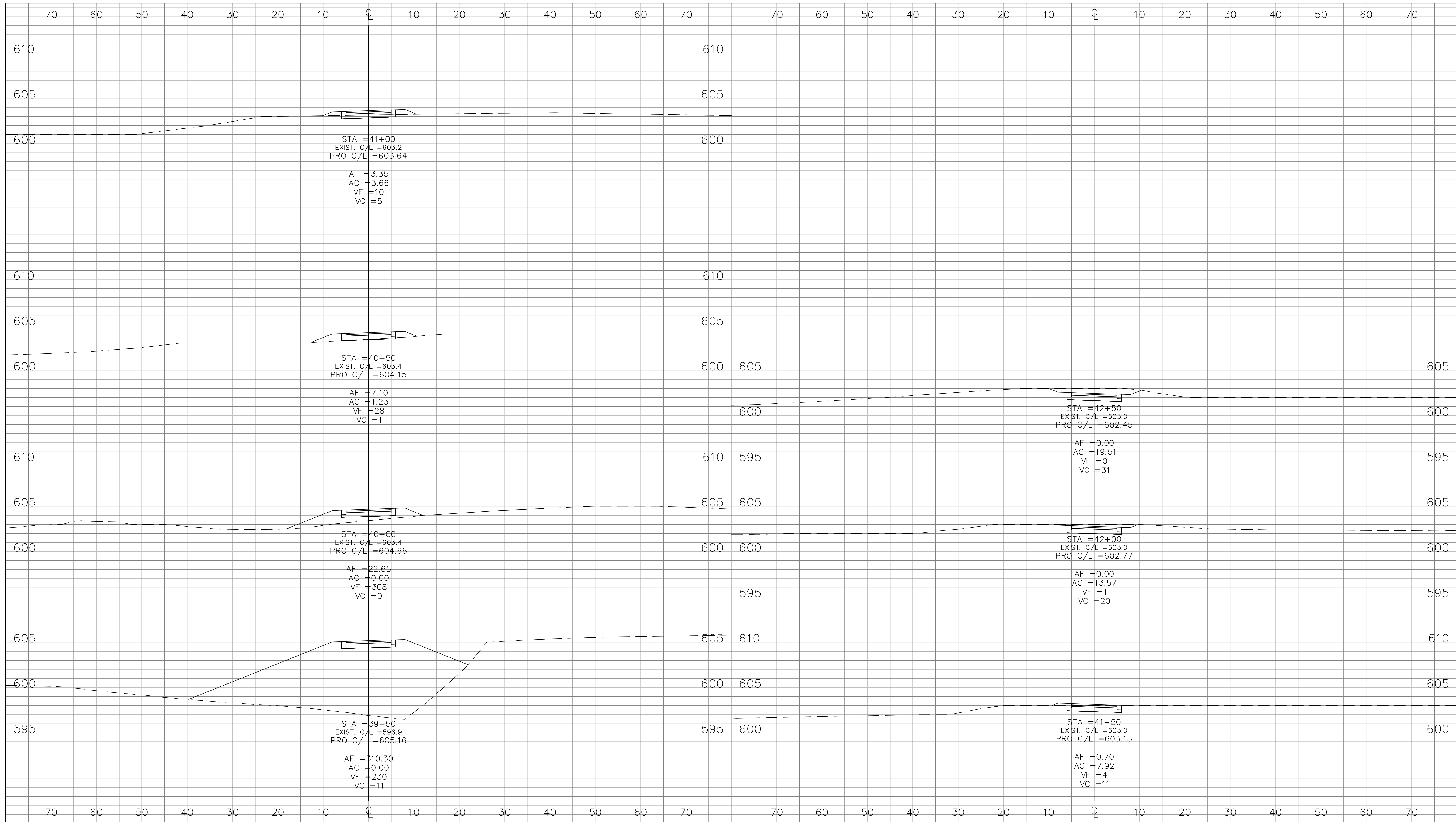

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	DESIGN ENGINEER	DATE
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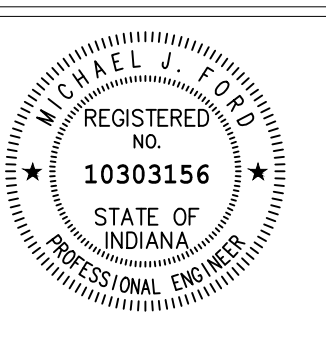
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SURVEY BOOK	SHEETS
	30 of 41
CONTRACT R-35164	PROJECT

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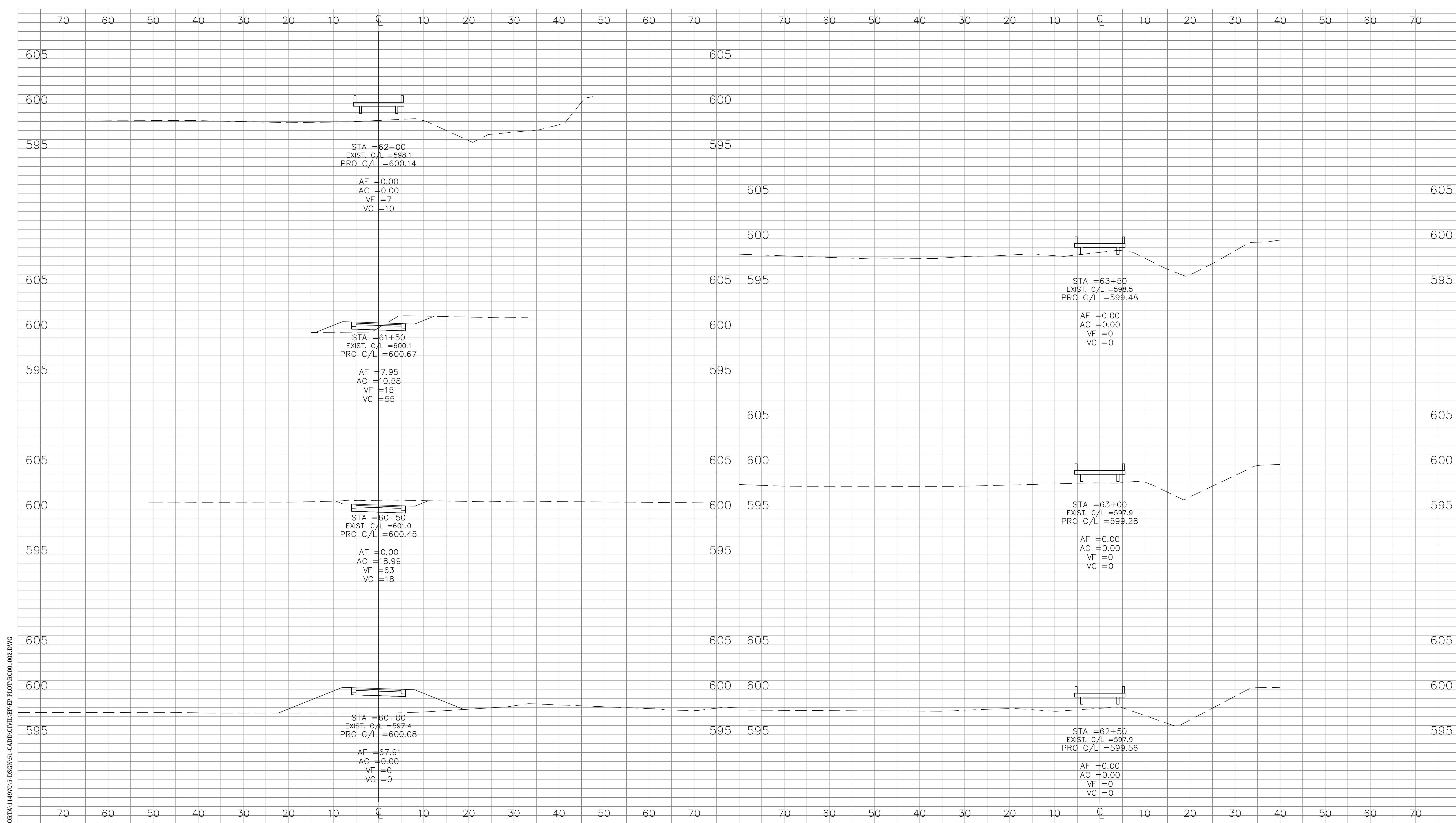


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DESIGNED:	NM	DRAWN:
CHECKED:	MF	CHECKED:

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**CROSS SECTIONS  
 LINE "A" STA. 39+50 to 42+50**

HORIZONTAL SCALE 1" = 10'	BRIDGE FILE
VERTICAL SCALE 1" = 5'	DESIGNATION 1006017
SURVEY BOOK	SHEETS
CONTRACT R-35164	31 of 41 PROJECT



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MUNSTER, IN 46321

REGISTERED NO. 10303156  
STATE OF INDIANA  
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL	<i>Michael Ford</i>	DESIGN ENGINEER	05/22/2012	DATE
DESIGNED:	NM	DRAWN:	JS	
CHECKED:	MF	CHECKED:	CH	

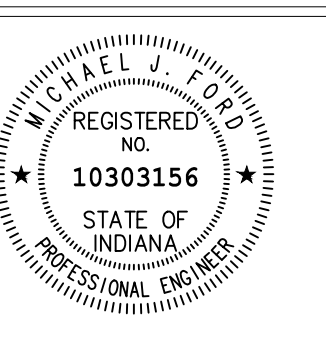
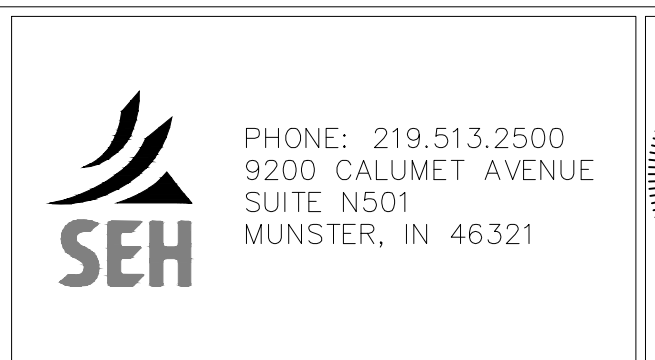
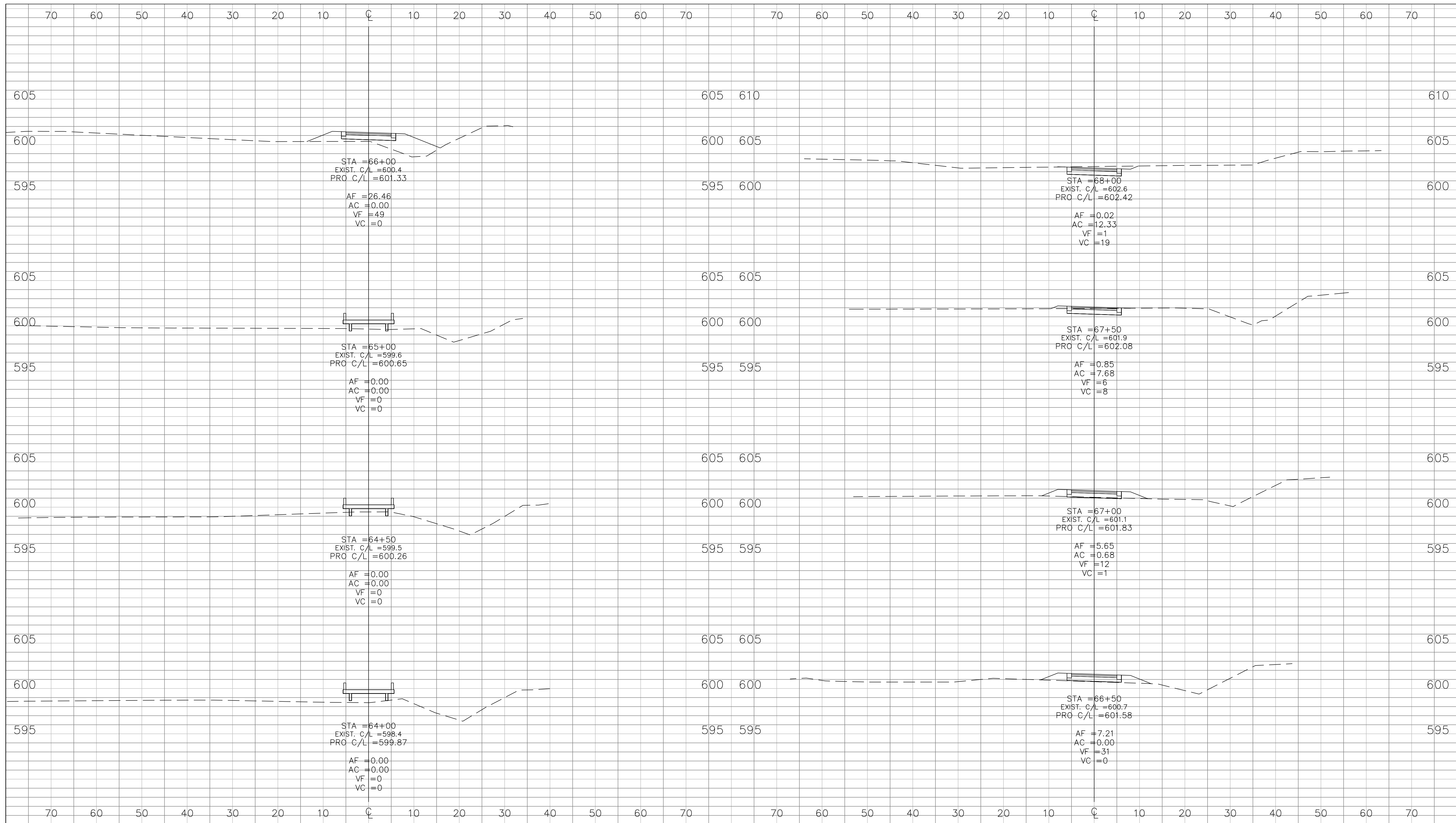
**INDIANA DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS**  
**LINE "B" STA. 60+00 to 63+50**

HORIZONTAL SCALE	1" = 10'	BRIDGE FILE	
VERTICAL SCALE	1" = 5'	DESIGNATION	1006017
SURVEY BOOK		SHEETS	32 of 41
CONTRACT	R-35164	PROJECT	



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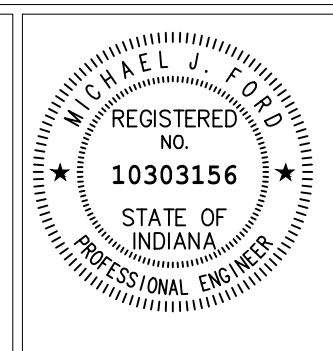
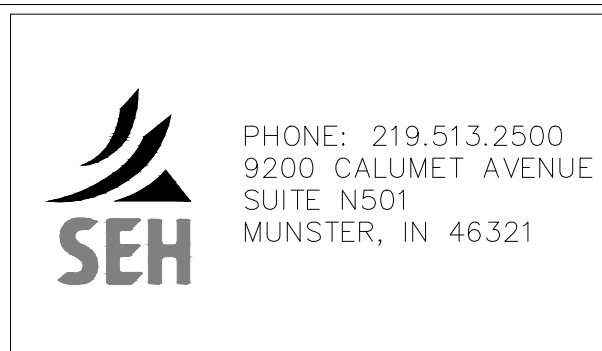
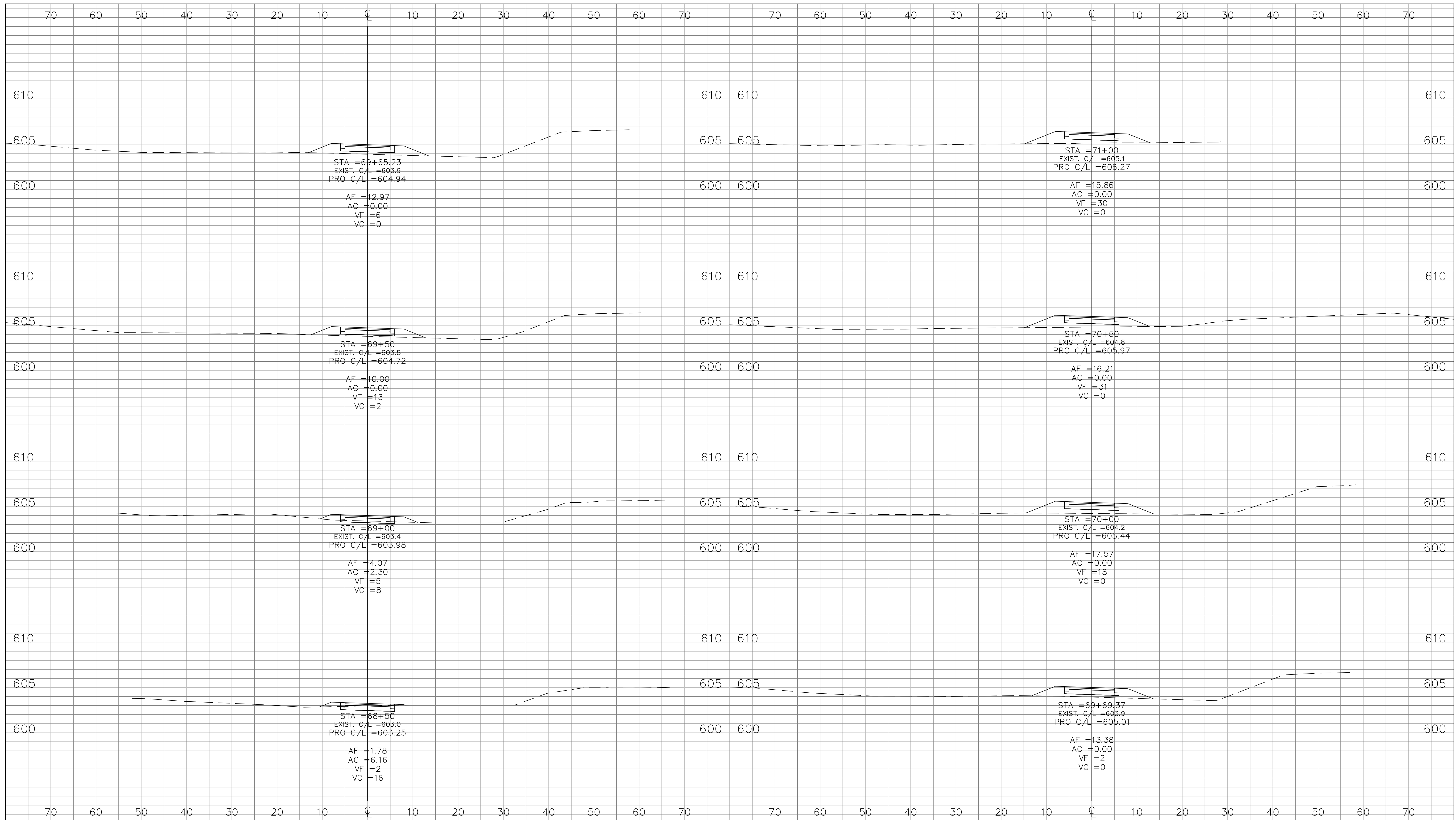
RECOMMENDED FOR APPROVAL	<i>Michael J. J.</i>	DESIGN ENGINEER	05/22/2012	DATE
DESIGNED:	NM	DRAWN:	JS	
CHECKED:	MF	CHECKED:	CH	

**INDIANA DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS**  
**LINE "B" STA. 64+00 to 68+00**

HORIZONTAL SCALE	1" = 10'	BRIDGE FILE	
VERTICAL SCALE	1" = 5'	DESIGNATION	1006017
SURVEY BOOK		SHEETS	33 of 41
CONTRACT	R-35164	PROJECT	

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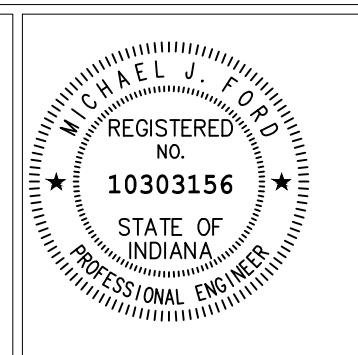
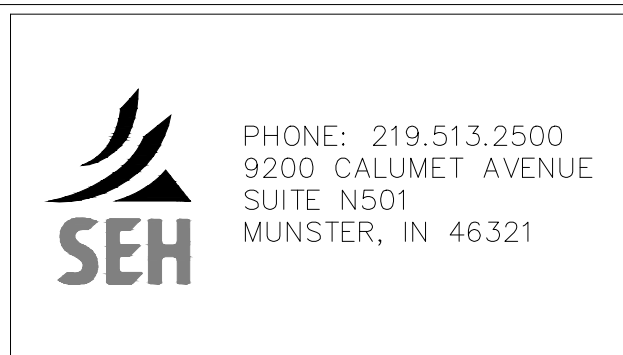
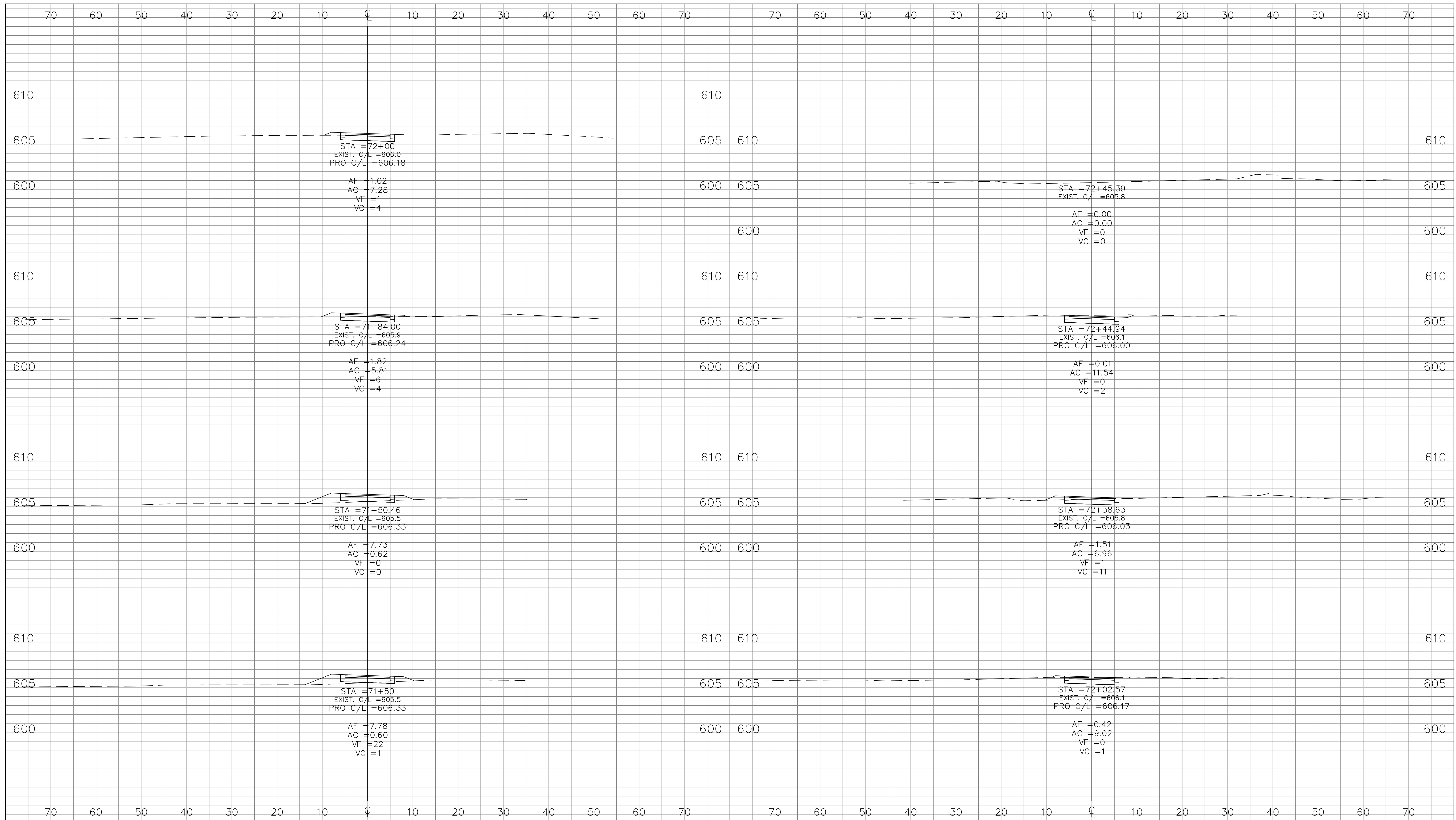
RECOMMENDED FOR APPROVAL	<i>Michael J. Ford</i>	05/22/2012
DESIGNED:	NM	DRAWN: JS
CHECKED:	MF	CHECKED: CH

**INDIANA DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
LINE "B" STA. 68+50 to 71+00**

HORIZONTAL SCALE 1" = 10'	BRIDGE FILE
VERTICAL SCALE 1" = 5'	DESIGNATION 1006017
SURVEY BOOK	SHEETS 34 of 41
CONTRACT R-35164	PROJECT

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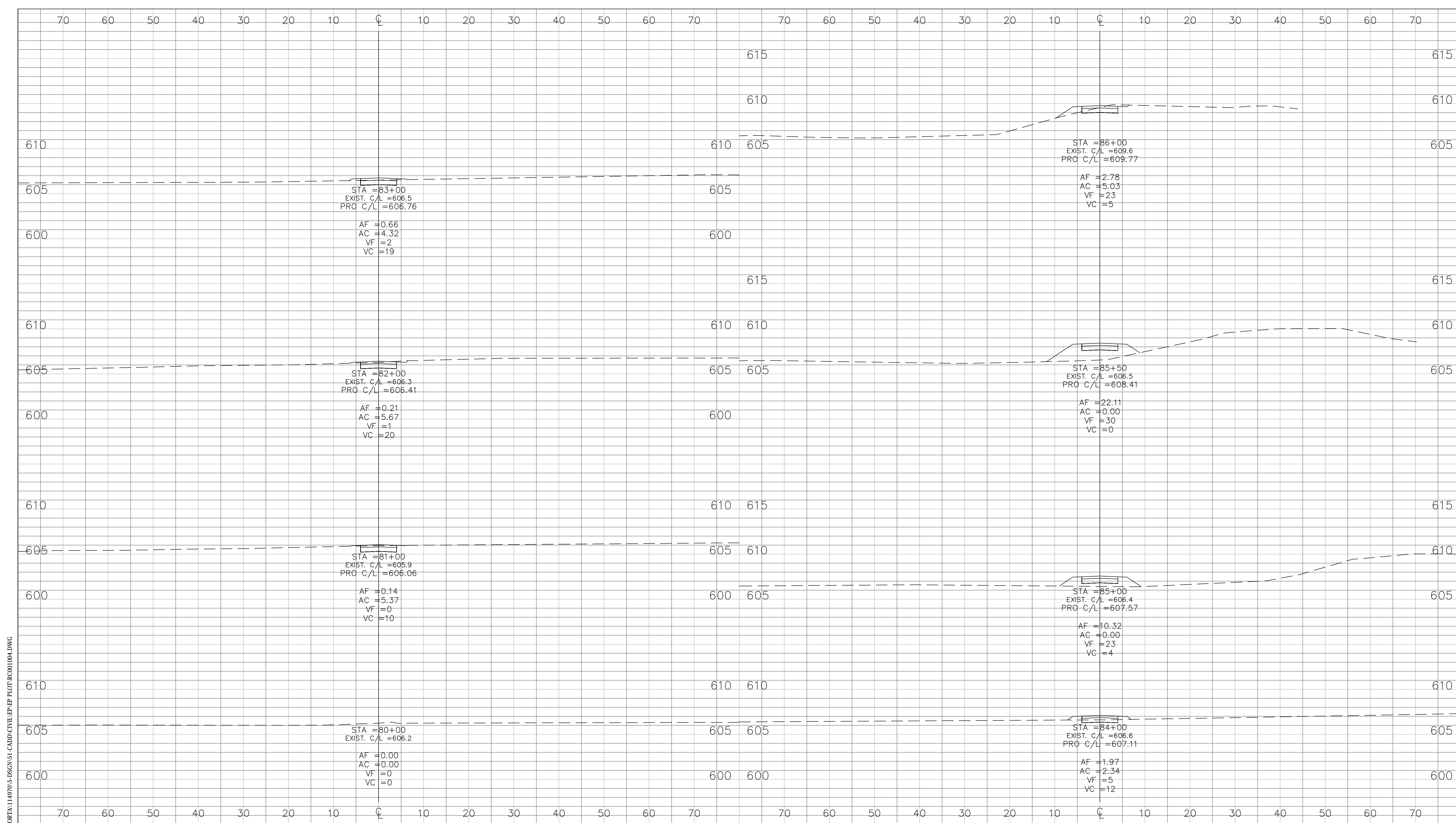


RECOMMENDED FOR APPROVAL	<i>Michael Ferrell</i>	05/22/2012
DESIGNED:	NM	DRAWN: JS
CHECKED:	MF	CHECKED: CH


**INDIANA DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
LINE "B" STA. 71+50 to 72+45**

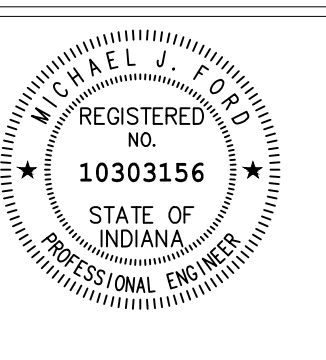
HORIZONTAL SCALE 1" = 10'	BRIDGE FILE
VERTICAL SCALE 1" = 5'	DESIGNATION 1006017
SURVEY BOOK	SHEETS 35 of 41
CONTRACT R-35164	PROJECT



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PHONE: 219.513.2500  
9200 CALUMET AVENUE  
SUITE N501  
MUNSTER, IN 46321



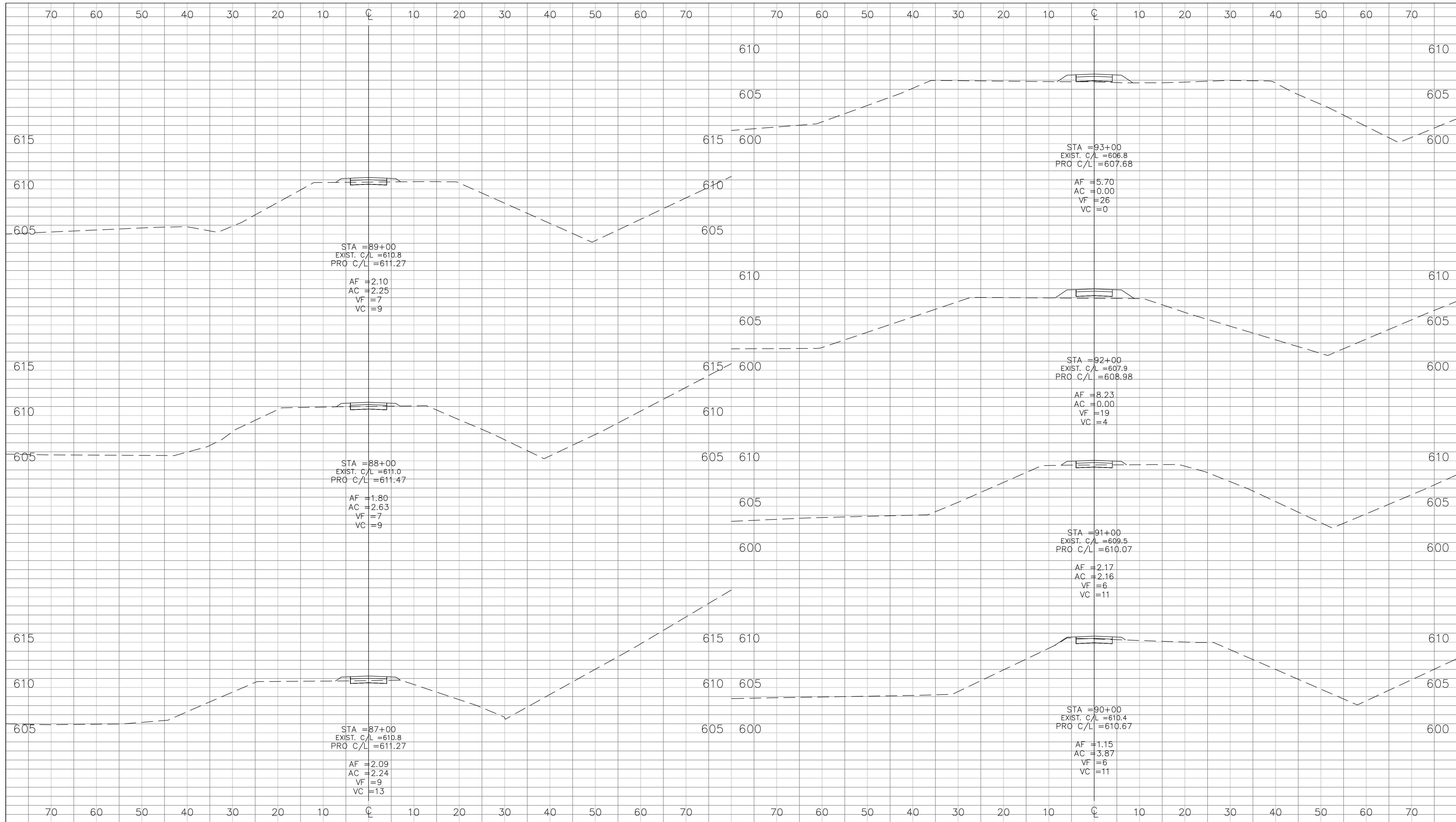
RECOMMENDED FOR APPROVAL	<i>Michael J. Johnson</i>	05/22/2012
DESIGNED:	NM	DRAWN:
CHECKED:	MF	CHECKED:
		DATE
		DATE

**INDIANA DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS**  
**LINE "C" STA. 80+00 to 86+00**

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	DESIGNATION
VERTICAL SCALE	1006017
1" = 5'	SHEETS
SURVEY BOOK	36 of 41
CONTRACT	PROJECT
R-35164	

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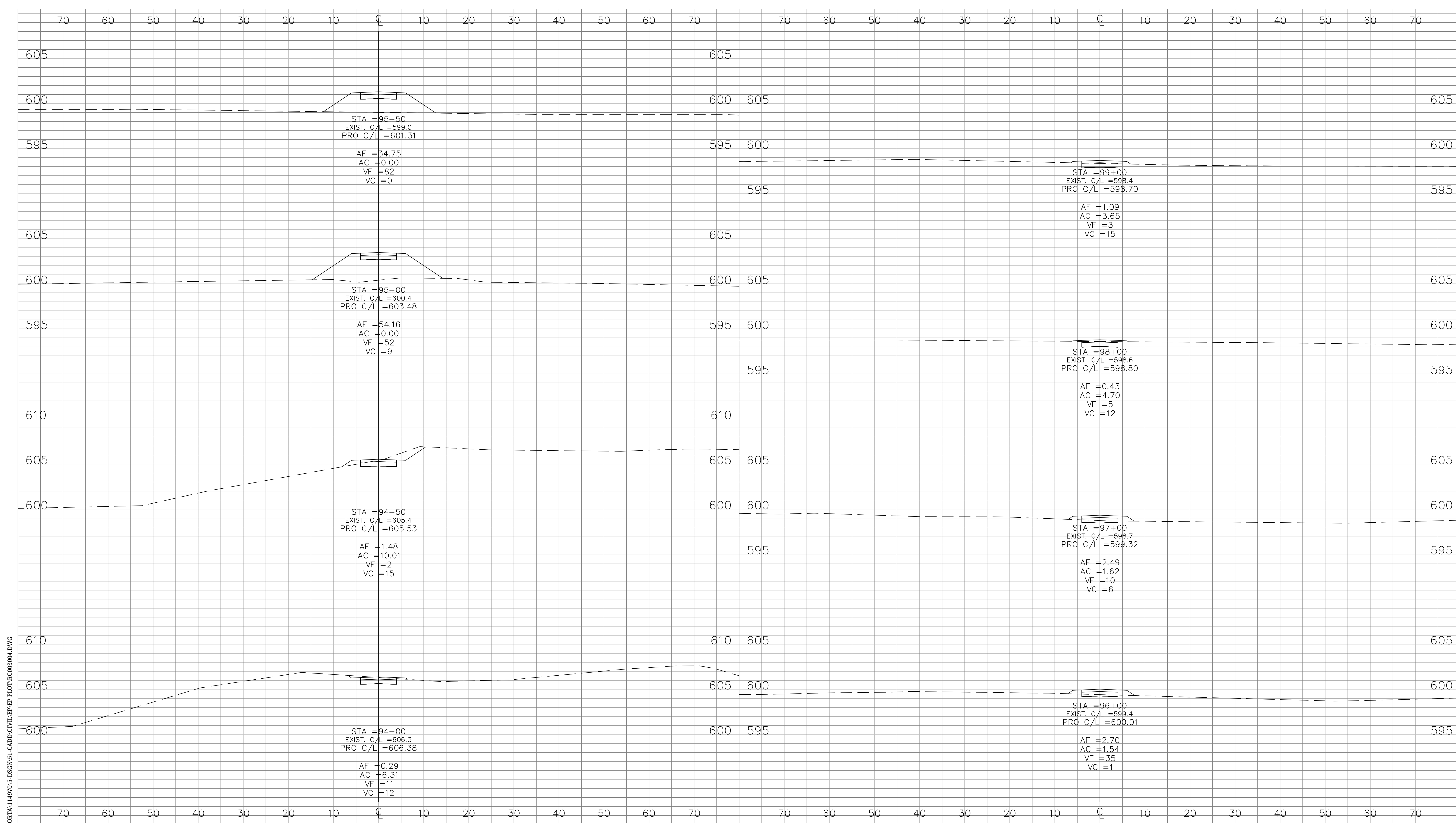
PHONE: 219.513.2500  
9200 CALUMET AVENUE  
SUITE N501  
MUNSTER, IN 46321

RECOMMENDED FOR APPROVAL	<i>Michael J. Fiedor</i>	DESIGN ENGINEER	DATE
DESIGNED:	NM	DRAWN:	JS
CHECKED:	MF	CHECKED:	CH


**INDIANA DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS**  
**LINE "C" STA. 87+00 to 93+00**

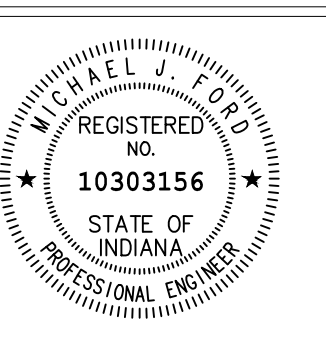
HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	DESIGNATION
VERTICAL SCALE	1006017
1" = 5'	SURVEY BOOK
	37 of 41
CONTRACT	PROJECT
R-35164	



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9200 CALUMET AVENUE  
SUITE N501  
MUNSTER, IN 46321



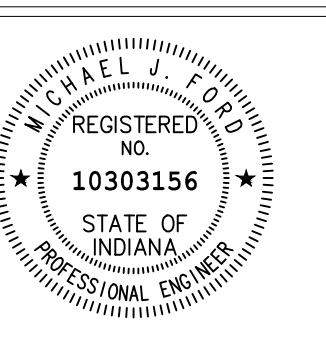
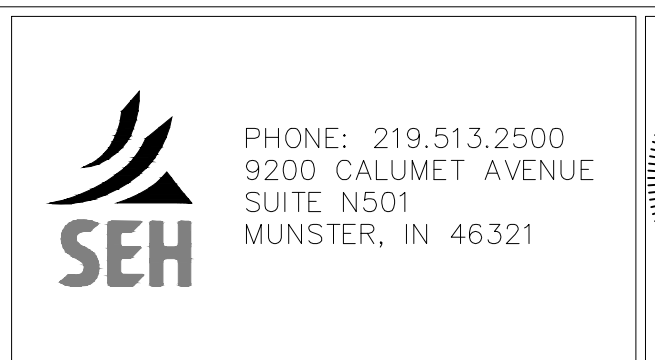
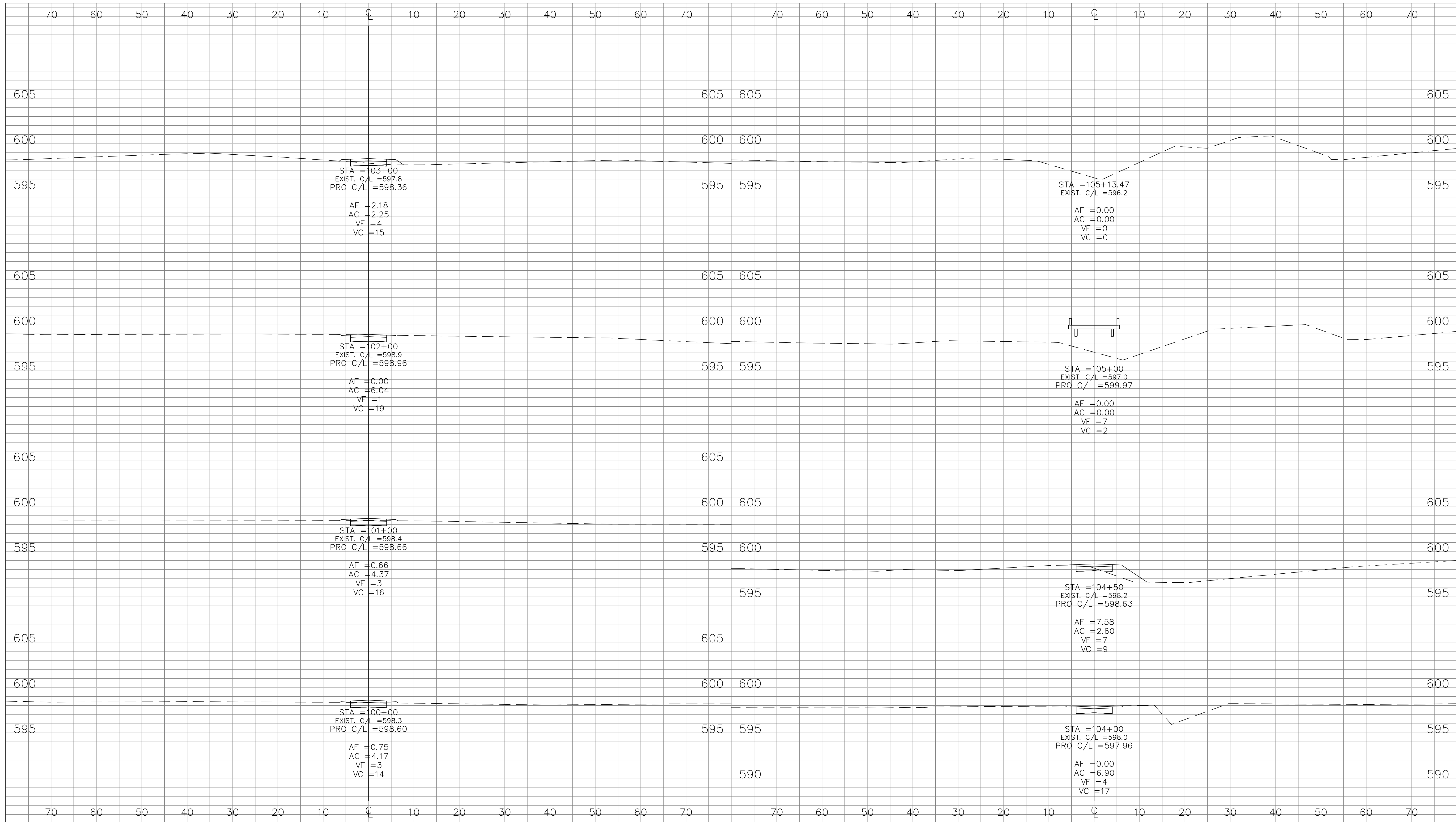
RECOMMENDED FOR APPROVAL	<i>Michael J. D'Adda</i>	05/22/2012
	DESIGN ENGINEER	DATE
DESIGNED:	NM	DRAWN:
		JS
CHECKED:	MF	CHECKED:
		CH

**INDIANA DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
LINE "C" STA. 94+00 to 99+00**

HORIZONTAL SCALE 1" = 10'	BRIDGE FILE
VERTICAL SCALE 1" = 5'	DESIGNATION 1006017
SURVEY BOOK	SHEETS
	38 of 41
CONTRACT R-35164	PROJECT

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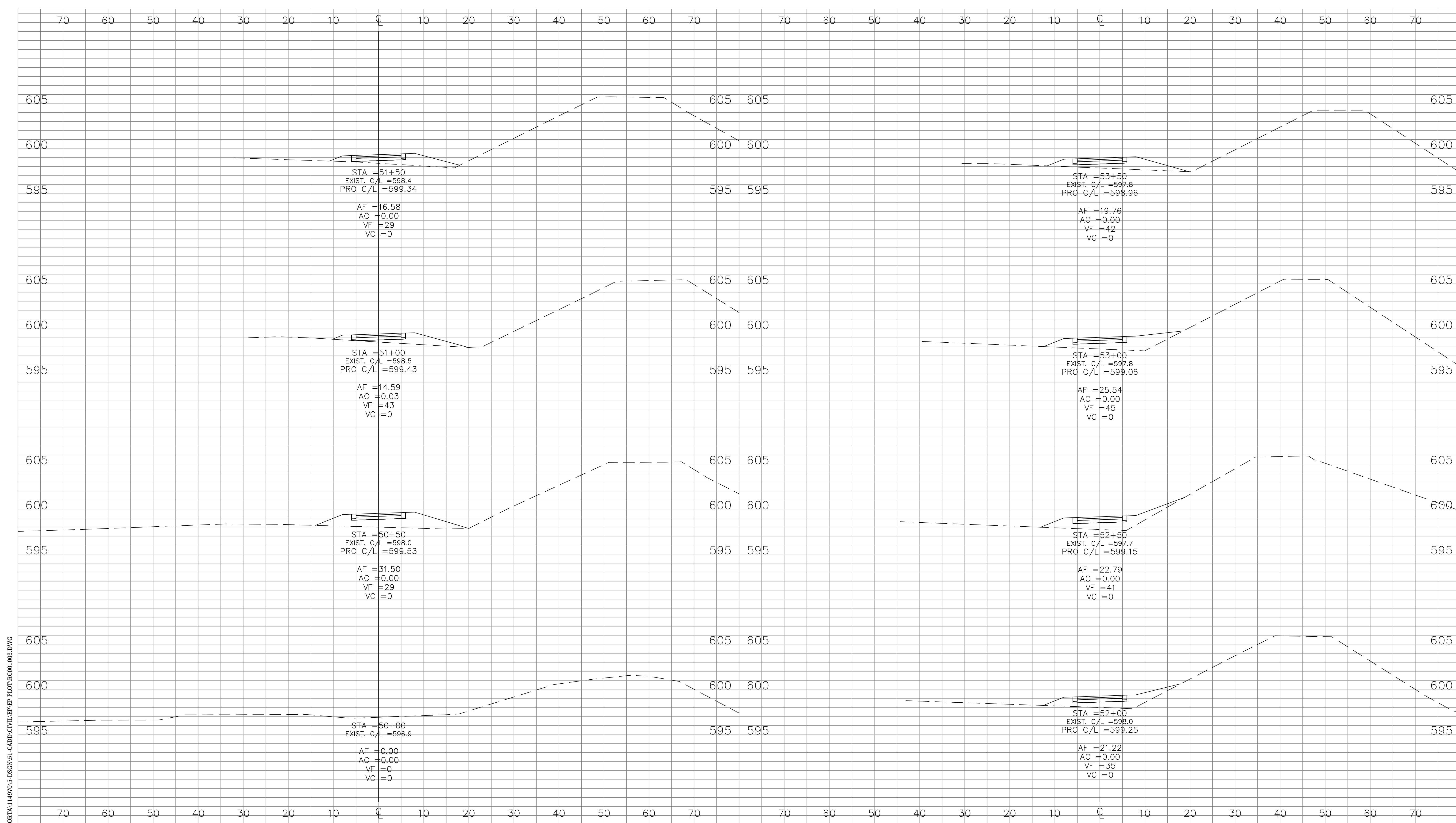


RECOMMENDED FOR APPROVAL	<i>Michael Ford</i>	DESIGN ENGINEER	05/22/2012	DATE
DESIGNED:	NM	DRAWN:	JS	
CHECKED:	MF	CHECKED:	CH	

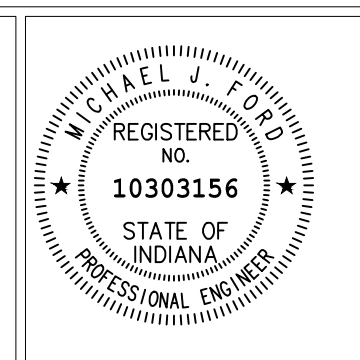
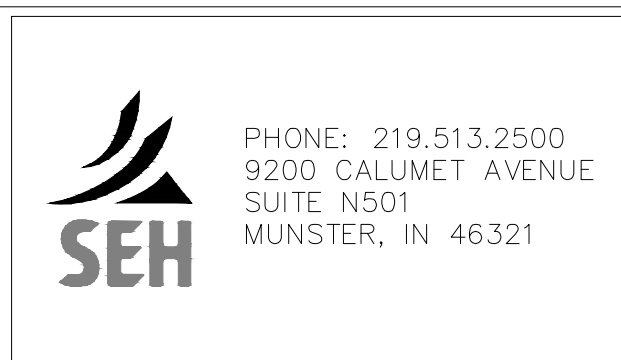
**INDIANA DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS**  
**LINE "C" STA. 100+00 to 105+13**

HORIZONTAL SCALE	1" = 10'	BRIDGE FILE	
VERTICAL SCALE	1" = 5'	DESIGNATION	1006017
SURVEY BOOK		SHEETS	39 of 41
CONTRACT	R-35164	PROJECT	



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RECOMMENDED FOR APPROVAL	<i>Michael J. Dod</i>	DESIGN ENGINEER	05/22/2012	DATE
DESIGNED:	NM	DRAWN:	JS	
CHECKED:	MF	CHECKED:	CH	

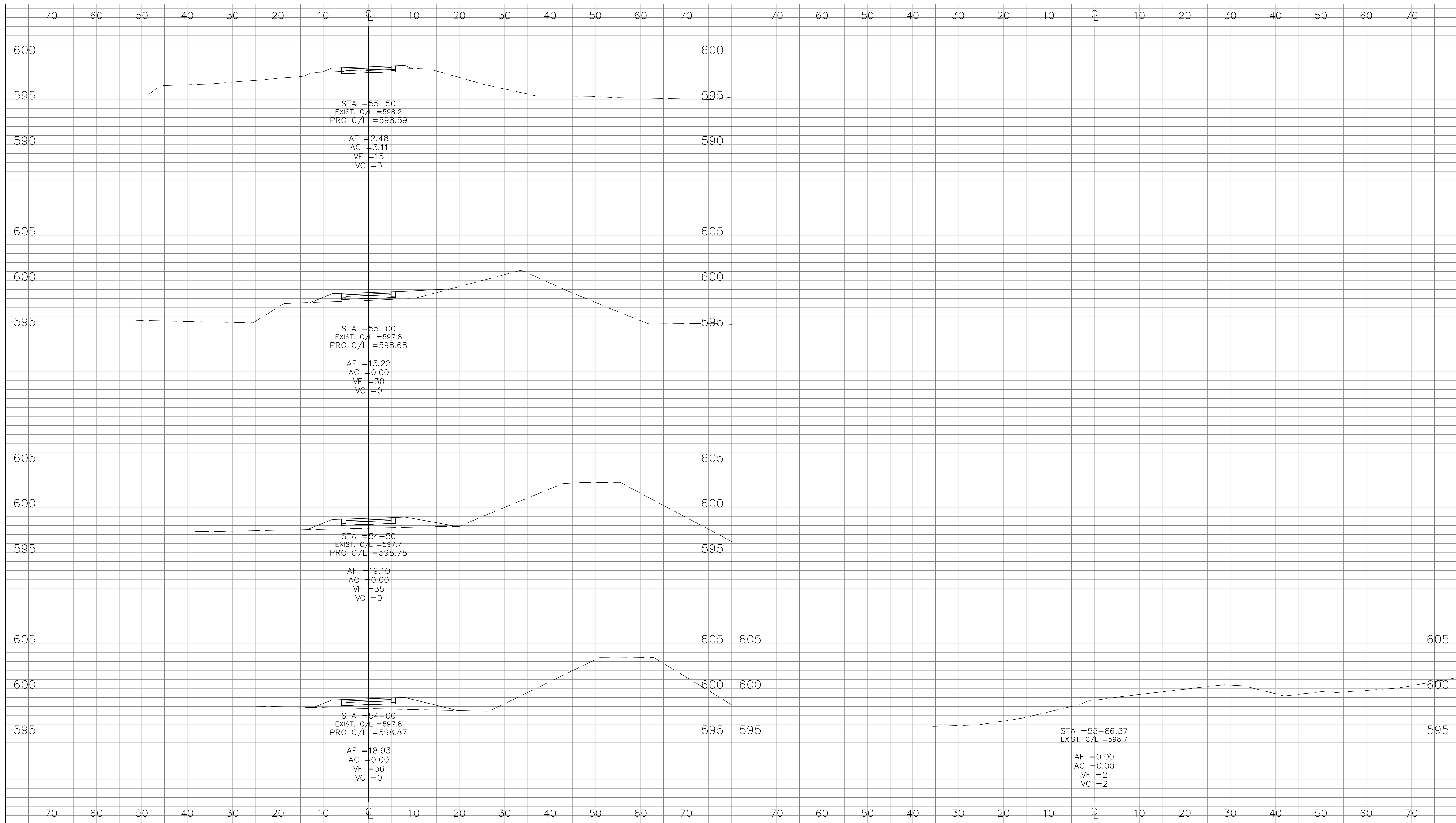

**INDIANA DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS**  
**LINE "D" STA. 50+00 to 53+50**

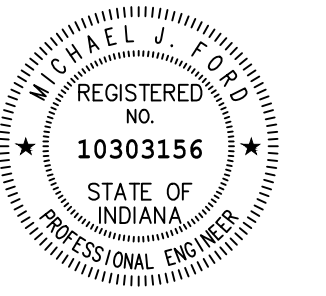
HORIZONTAL SCALE	1" = 10'	BRIDGE FILE
VERTICAL SCALE	1" = 5'	DESIGNATION
SURVEY BOOK	CONTRACT R-35164	1006017
		SHEETS
		40 of 41
		PROJECT



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 SUITE N501  
 MUNSTER, IN 46321



REGISTERED  
 NO. 10303156  
 STATE OF INDIANA  
 PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL	<i>Michael J. Dood</i>	DESIGN ENGINEER	05/22/2012
DESIGNED:	NM	DRAWN:	JS
CHECKED:	MF	CHECKED:	CH

**INDIANA DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 LINE "D" STA. 54+00 to 55+86**

HORIZONTAL SCALE 1" = 10'	BRIDGE FILE
VERTICAL SCALE 1" = 5'	DESIGNATION 1006017
SURVEY BOOK	SHEETS 41 of 41
CONTRACT R-35164	PROJECT