CONSTRUCTION PLANS FOR PROPOSED

29th STREET NORTH
RIDGE ROAD TO HOOVER

PAVING IMPROVEMENTS

FOR

THE CITY OF WICHITA,
SEDGWICK COUNTY, KANSAS

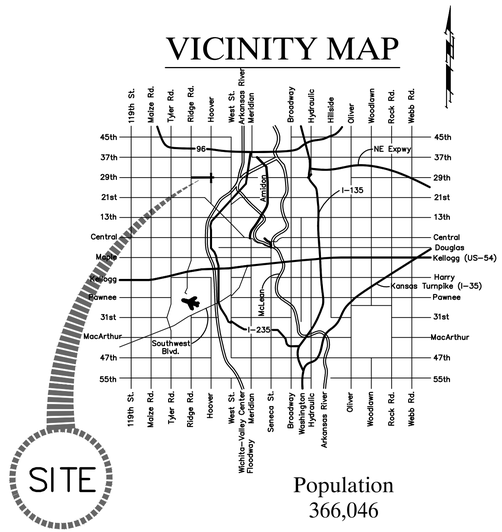
Gary Janzen, P.E., City Engineer

NOVEMBER, 2013

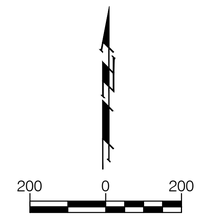
Paving Project	Water Project
472-84691	448-90545
O.C.A. No. 706989	O.C.A. No. 635703

FINAL PLANS

VICINITY MAP



Population
366,046



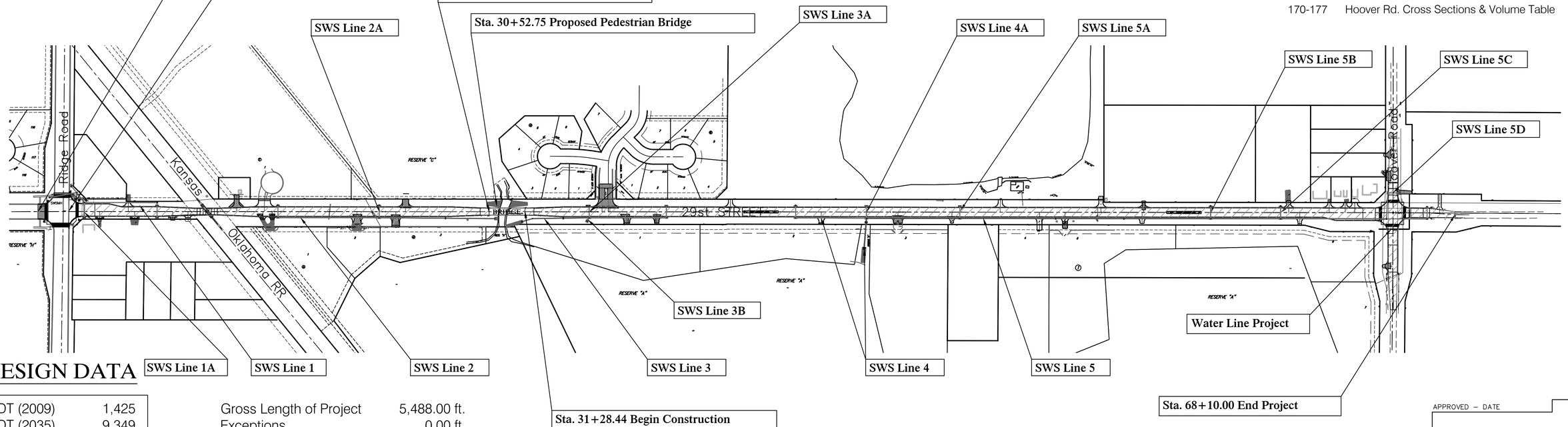
SCALE: 1" = 200'

Water Plans

1	Water Details
2	Meter Adjustment & Relocation
3-4	Water Plan/Profile

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170-177	Hoover Rd. Cross Sections & Volume Table



DESIGN DATA

AADT (2009)	1,425
AADT (2035)	9,349
DHV	8%
T	3%
V	40 mph
C of A	N/A
Clear Zone	6'

Gross Length of Project	5,488.00 ft.
Exceptions	0.00 ft.
Additions	0.00 ft.
Net Length of Project	5,488.00 ft.
Net Length of Bridges	142.27 ft.
Net Length of Road	5,345.73 ft.

Stormwater Compliance

Water Quality requirements will be addressed with the use multiple water quality units. Hydroworks HG8, HG6 & HG5 Water Quality units will be located in the Right-of-Way of 29th St. North, between Ridge Road and Hoover Road. The structures have been designed for Water quality requirements for this phase of construction only. The Project Disturbed Area = 12 ac. This is all in accord with Chapter 16.32 of the City Code.



APPROVED – DATE

GARY JANZEN, P.E., CITY ENGINEER
CITY OF WICHITA, KANSAS

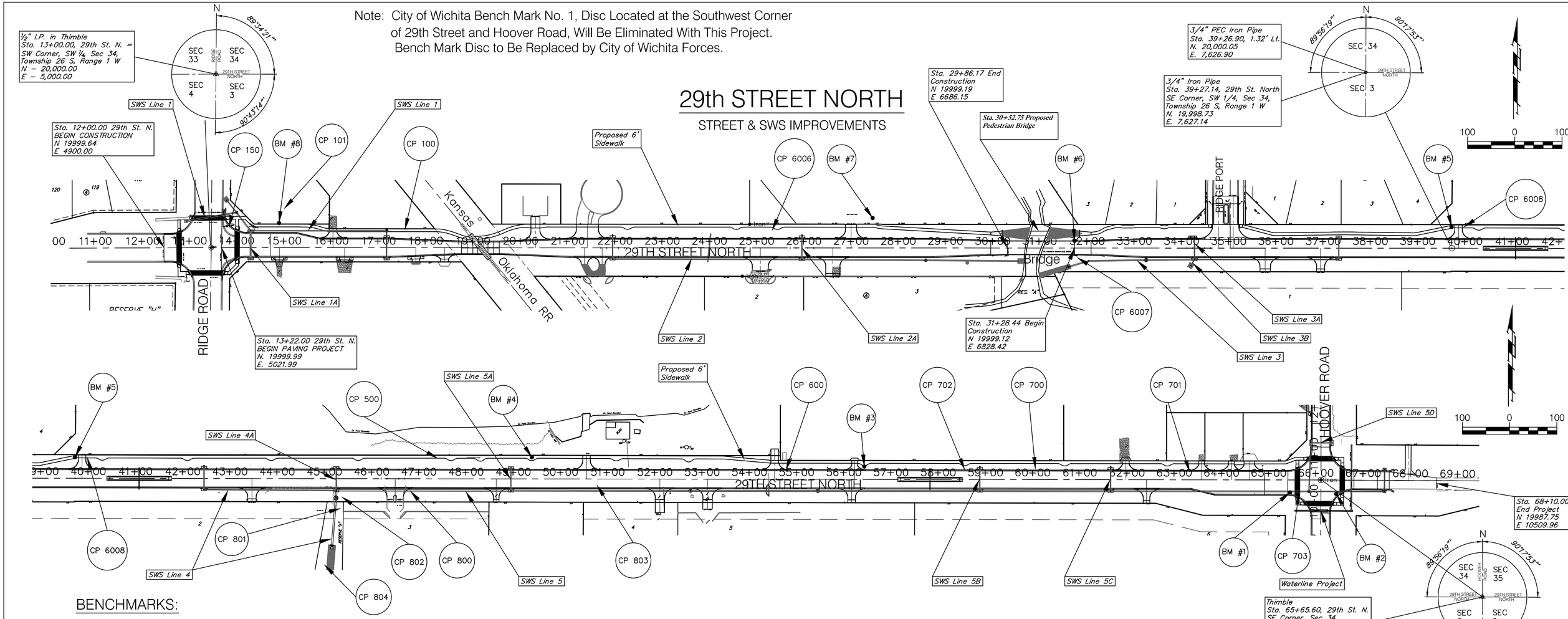
Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Cover &Key Sheet NOVEMBER, 2013

Baughman Company, P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
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Note: City of Wichita Bench Mark No. 1, Disc Located at the Southwest Corner of 29th Street and Hoover Road, Will Be Eliminated With This Project. Bench Mark Disc to Be Replaced by City of Wichita Forces.

29th STREET NORTH

STREET & SWS IMPROVEMENTS



BENCHMARKS:

BM #1 – C.O.W. BM Disc at SW Corner 29th St. & Hoover Road Intersection.
Sta. 65+18.6, 26.5' Rt.
Elev. = 1330.62 '88 NAVD

BM #2 – RR Spike in HLP at SE Corner 29th St. & Hoover Road Intersection, 29' S & 32' E CL/CL
Sta. 65+98, 29' Rt.
Elev. = 1331.55 '88 NAVD

BM #3 – RR Spike in 9th HLP E. of ¼ Sec. Corner on CL 29th St.
Sta. 55+98.4, 27.1' Lt.
Elev. = 1332.71 '88 NAVD

BM #4 – RR Spike in 5th HLP E. of ¼ Sec. Corner on CL 29th St.
Sta. 48+94.4, 46' Lt.
Elev. = 1329.26 '88 NAVD

BM #5 – C.O.W. Disc 45' N of ¾" Iron Pipe at ¼ Sec. Corner on CL of 29th St.
Sta. 39+26.8, 45' Lt.
Elev. = 1328.95 '88 NAVD

BM #6 – C.O.W. Disc N.E. Corner Handrail of Bridge.
Sta. 31+28.3, 15' Lt.
Elev. = 1330.34 '88 NAVD

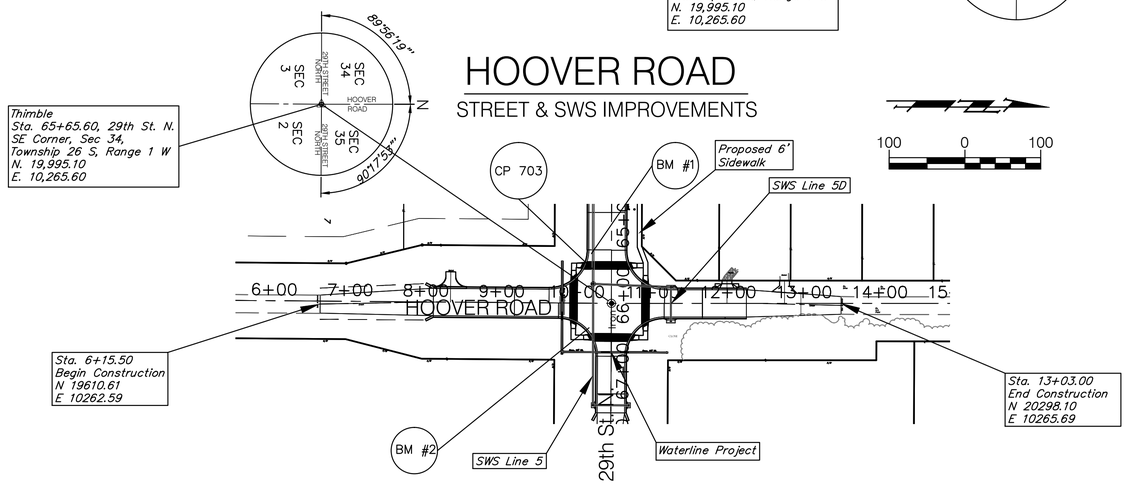
BM #7 – "□" Cut Easternmost Corner Boat Ramp Backing Lane on North Side 29th St. East of RR.
Sta. 27+00.5, 63.4' Lt.
Elev. = 1324.73 88 NAVD

BM #8 – RR Spike in 2nd HLP East of Ridge Road on North Side 29th St.
Sta. 14+48.8, 51' Lt.
Elev. = 1328.57 88 NAVD

CONTROL POINTS							
Point #	Northing	Easting	Description	Elevation	Roadway	Station	Offset
150	20042.6190	5037.2379	60d Nail	1327.527	29th St N.	13+37.22	42.6' Lt.
101	20082.2695	5154.2237	#4 Rebar	1329.201	29th St N.	14+54.18	82.3' Lt.
100	20037.5200	5410.0100	#4 Rebar	1326.900	29th St N.	17+09.99	37.7' Lt.
6006	20036.5500	6187.8500	#4 Rebar	1326.690	29th St N.	24+87.83	37.1' Lt.
6007	19978.9800	6834.0900	#4 Rebar	1327.450	29th St N.	31+34.10	20.1' Rt.
6008	20043.2700	7652.7400	#4 Rebar	1328.940	29th St N.	39+52.68	44.6' Lt.
804	19815.5501	8153.3997	60d Nail	1319.662	29th St N.	44+53.65	182.5' Rt.
801	19934.9999	8189.3727	60d Nail	1329.244	29th St N.	44+89.46	63' Rt.
802	19958.7318	8191.6812	60d Nail	1329.038	29th St N.	44+91.74	39.2' Rt.
800	19972.2153	8336.5800	60d Nail	1328.993	29th St N.	46+36.62	25.5' Rt.
500	20040.9200	8394.8900	#4 Rebar	1329.010	29th St N.	46+94.83	43.2' Lt.
803	19984.3541	8731.9613	60d Nail	1328.804	29th St N.	50+31.98	12.9' Rt.
600	20015.0150	9132.4200	#4 Rebar	1330.930	29th St N.	54+32.39	18.4' Lt.
702	20016.4141	9511.2875	#4 Rebar	1327.978	29th St N.	58+11.26	20.3' Lt.
700	20018.4900	9660.7850	#4 Rebar	1327.520	29th St N.	59+60.76	22.5' Lt.
701	20011.8990	9987.4645	#4 Rebar	1327.735	29th St N.	62+87.44	16.4' Lt.
703	19969.5039	10219.4195	#4 Rebar	1330.598	29th St N.	65+19.46	25.6' Rt.

HOOVER ROAD

STREET & SWS IMPROVEMENTS



Drawing File: F:\\37th Pave\37th Land\dwg\37th Base.dwg (Keysheet) NOVEMBER, 2013

Design: KEK
Drawn: JDM
Approved: MWS
Scale: 1" = 100'

Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT

KEYSHEET

29th Street - RIDGE to HOOVER

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SHEET 2 OF 177

GENERAL NOTES

1. Utility service lines, poles, valve boxes, gas meters, etcetera are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.

2. The Contractor shall give all property owners and/or tenants of developed property abutting the project limits a minimum of ten (10) days advance notice prior to start of construction.

3. Contractor will be required to provide a minimum advance notice of forty-eight (48) hours to utility companies prior to excavation or working adjacent to utilities. Kansas One-Call @ 687-2470

4. A saw cut of at least one-half the depth of existing surface courses or one-fourth the depth of the existing total pavement thickness shall be provided at locations where proposed construction abuts an existing surface course or pavement for which partial removal of that surface or pavement is required. Sawed joint to facilitate removal within three (3) feet of existing joints will not be permitted and for such instances the limits of removal shall extend to the existing joint. Such saw cuts will not be paid for directly and this cost shall be considered SUBSIDIARY to the removal of the surface or pavement.

5. All project waste including any trees, milled asphalt, rubble from miscellaneous structures, abandoned pipes, excess excavation, etc. shall be disposed of on sites to be provided by the Contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations that, in the opinion of the Engineer, will leave an unsightly appearance will not be approved. All disposal sites must be approved by the Kansas Department of Health and Environment. Material either stockpiled or disposed of in a flood plain would require a Kansas State Board of Agriculture permit. Any material dumped in waters of the United States or wetlands is subject to U.S. Corps. of Engineers permitting regulations. Any material buried or stockpiled beyond approved construction limits would require additional archaeological investigations unless buried in a previously approved borrow location.

6. The Contractor shall be responsible for replacing shown property irons that are damaged or removed during construction. The Contractor shall procure a licensed Land Surveyor to locate and re-install the property iron.

7. Prior to bidding the project, each bidder shall visit the site and satisfy himself of surface & subsurface conditions. Each bidder shall also fully inform himself as to the extent of the scope of work to be performed.

8. Contractor shall be aware that some gas & telephone lines within the project corridor may have been abandoned in place as new lines are installed. The Contractor shall be responsible for contacting the appropriate owners to determine the status of said lines.

9. The Water Department shall field locate water valves one time during construction when requested by the Contractor. It shall be the Contractor's responsibility to preserve such field locations during the construction process. Water valves, water valve boxes or fire hydrants damaged during construction shall be repaired by the Contractor at his own expense.

10. The Contractor shall be made aware that he will be working in close proximity of existing utilities. Any conflicts with such utilities shall be reported to the Engineer. The Contractor shall coordinate the construction of this project with relocation of any existing utilities by the utility companies.

11. The Contractor shall remove and deliver to the Central Maintenance Facility, 1801 S. McLean, all regulatory signs, street name signs, information signs, etc. that conflict with the proposed construction. Cost of removal and delivery shall be SUBSIDIARY to the bid item "Transportation of Salvage Material"

12. Trees and Shrubs in public right-of-way which are in direct conflict with proposed new construction shall be removed and disposed of by the Contractor with the Engineer's approval. Trees and shrubs which are not in direct conflict with proposed new construction shall be saved and protected from damage. Several trees in the corridor may be spaded and removed by others prior construction. See the Landscaping Plan for locations and more detail.

13. Contractor shall be responsible for implementing erosion control methods during construction to prevent unnecessary silt/sediment discharge through downstream properties and/or storm sewer systems. Contractor shall install and maintain erosion controls as directed by the Engineer These controls may include, but not limited to: hay bales; silt fences, temporary mulching or other controls necessary to inhibit sediment runoff during construction.

14. All sign post, light pole and traffic signal removal shall include removal of footings as SUBSIDIARY to such removal.

15. The Contractor shall not start work on the Project until the Project Inspector is assigned and is present on site. Any work done without inspection will be required to be uncovered for inspection.

16. New Sidewalk shall have a maximum side slope of not more than two percent (2%) (1:50) and a maximum longitudinal slope of five percent (5%) (1:20) unless otherwise approved by the Engineer. The sidewalk location shown on the plan is tentative The Contractor shall be aware that the final sidewalk alignment may be subject to field changes based on the new location of power poles, utility pedestals, and trees. However, the Contractor shall make every effort to adhere to the sidewalk plan with respect to slope and drainage conditions.

17. Trees that require trimming for Project construction shall not be done with a back hoe, but only by approved methods concurrent with standard tree trimming methods. All Tree Trimming Operations shall be considered as SUBSIDIARY to "Site Clearing". Trees that require removal are marked in the Plan.

18. Existing Tree Stumps within the Limits of Constructions shall either be completely removed or ground down to a minimum of 6" below the proposed grade. Cost to be SUBSIDIARY to the Bid Item "Tree Removal".

19. Areas over-excavated in surface or pavement removal shall be filled to sub grade elevation and compacted to 95% Std. Density. Cost shall be SUBSIDIARY to the Project.

20. When Beginning or Ending Full Height Curb, the Height of the Curb shall Transition between 1.5" to 6" in a minimum of 5.00'.

21. The Contractor shall comply with all applicable safety regulations.

22. Existing and Proposed Power Poles may require bracing during certain phases of the Project. The Contractor shall be responsible for coordinating the pole bracing with Westar Energy at 261-6828.

23. Valve Boxes and Water Meters within the Project Limits shall be adjusted to Match Final Grade.

24. The Contractor shall notify the Maize School District USD 266 prior to beginning construction so that school bus routes can be adjusted as necessary. USD 266 Transportation Department: 722-0582

25. The Engineer in Charge of Construction Shall be Responsible for Preservation and Perpetuation of all Corner Monuments.

25. Proposed SWS and Water Lines under pavement shall be backfilled with sand, flushed and vibrated, from 6" below all pipes to within 2' below the bottom of the rock base or finished grade. Cost to be included in the Lump Sum Bid Item "Fill, Sand (Flushed & Vibrated)".

26. Mail delivery shall not be interrupted during construction of this project. The Bid Item "Mailboxes Removed and Reset" shall consist of saving and protecting mailboxes to be relocated, installing mailboxes at a temporary location to maintain mail service during construction and permanently re-installing mailboxes to approved locations following construction. The Contractor shall notify the Delano Post Office at 721-2065 prior to any planned roadway shutdowns that would affect mail delivery during construction.

27. Properties abutting this Project may have irrigation systems, both within and abutting the right-of-way, that conflict with construction. Location of irrigated properties and lawns are indicated on the plan sheets. However, the Contractor should be aware that there might be irrigation systems other than those shown on the plans. The Contractor will be required to remove and replace to existing working condition all sprinkler systems that conflict with the proposed construction. Portions of underground sprinkler systems not in conflict with the proposed construction shall be protected from damage and shall remain in place. The Contractor shall contact the property owner for location and condition prior to removal. All work connected with underground sprinkler systems shall be INCIDENTAL to "Site Clearing" and "Site Restoration".

28. Contractor shall provide, erect, and maintain traffic control devices in accordance with the Manual on Uniform Traffic Control Devices (M.U.T.C.D) as shown on the Traffic Control plans and subject to the Engineer's approval. Access to Residences & Businesses shall be maintained at all times. See Traffic Control Phasing and Plans.

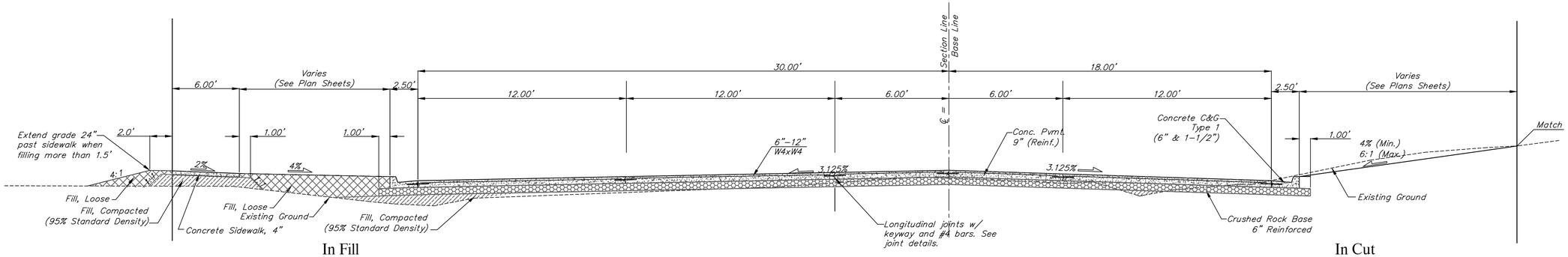
29. Areas Disturbed by Construction Shall be Restored by Seeding and Sodding in Accordance with the City of Wichita Specifications and in Accordance with the Latest Version of Administrative Regulation Number 6.5 as Shown on the Seeding and Sodding Plan Sheet. All Costs to be Included in the Lump Sum Bid Items "Sodding" and "Seeding".

30. All Fill, Compacted, under Concrete Sidewalk (4", 6" Reinf., 8" Reinf.) is subsidiary to Price of Concrete Sidewalk.

LIST OF UTILITY COMPANIES

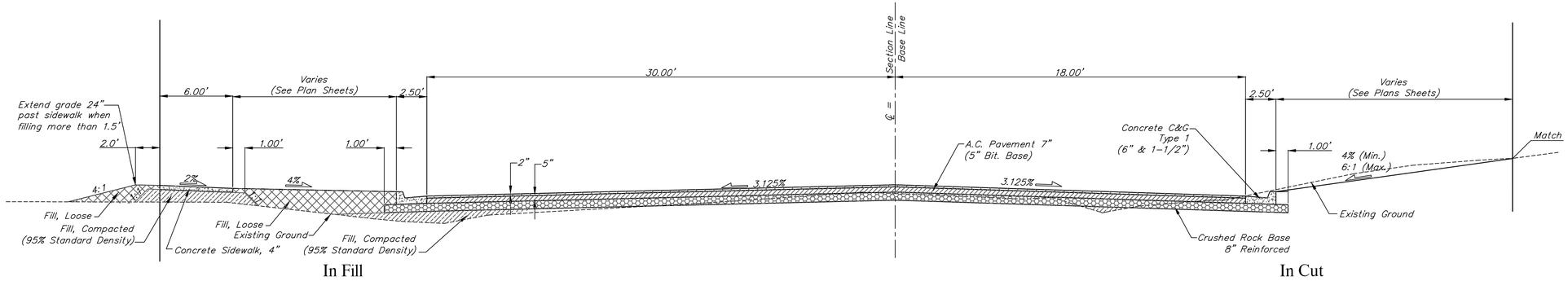
Contractor shall be required to provide notice to Kansas One Call at 687-2470 a minimum of two (2) working days prior to any excavation or work adjacent to utilities.

TYPE	OWNER	CONTACT	TELEPHONE	(ALT.)
Locator Service	Kansas One-Call		687-2470	800-344-7233
TV	Cox Communications (Cable)	Forrest Hair	761-3622	
Electric	Westar Energy	Miles Capps	261-6512	
Gas	Black Hills Energy	Kelly Kraus	941-1628	250-3628
Gas	Kansas Gas Service	Jim Coe	832-3126	
Telephone	ATT	John Fagan	268-2102	800-286-8313
Water	Wichita Water Department	Greg Lolley	268-4555	268-4908
60" Water Locators		Dan Olmstead	540-3574	
		Robert Bigsley	269-4767	
Fiber Optic	Kansas Fiber Network	Greg Lolley	172-6030	
Storm Water Sewer	Wichita SWS Maintenance	Scott Lindeback	268-4095	
Sanitary Sewer	Wichita Sewer Maintenance	Bill Perkins	268-4024	262-6000



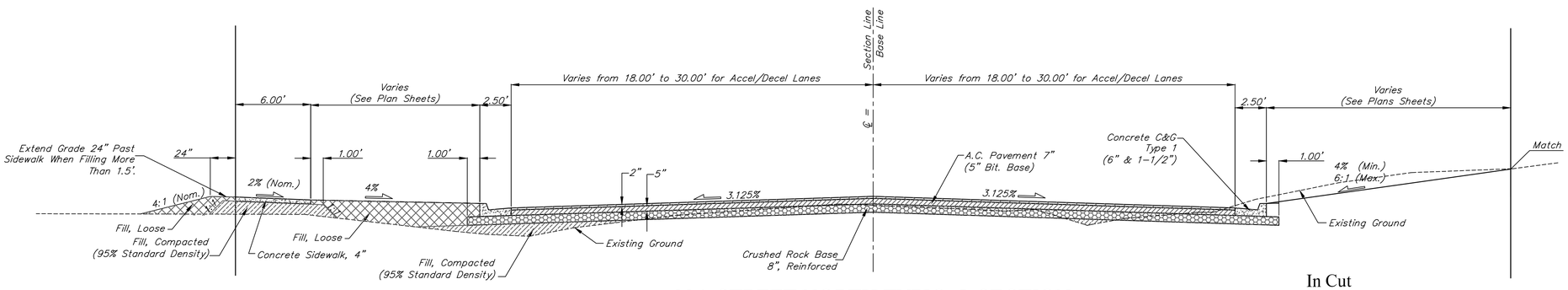
29th STREET NORTH TYPICAL SECTION

Sta. 13+74.82 to Sta. 14+25.00



29th STREET NORTH TYPICAL SECTION

Sta. 14+25.00 to Sta. 14+80.00



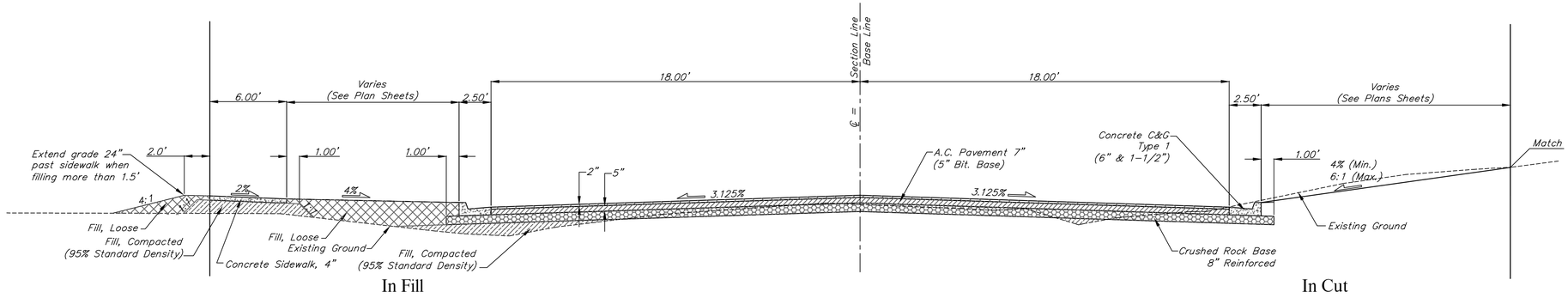
29th STREET NORTH TYPICAL SECTION

Sta. 14+80.00 to Sta. 15+30.00 Taper Lt.
Sta. 62+90.00 to Sta. 63+40.00 Taper Rt.

Drawing File: E:\Projects\29th Ridge to Hoover\Details\SH-04-07- TypSec-Curb Details.dwg

November, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: NONE	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT TYPICAL SECTIONS 29TH STREET NORTH - RIDGE ROAD TO HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 TPVING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE	SHEET 04 OF 177

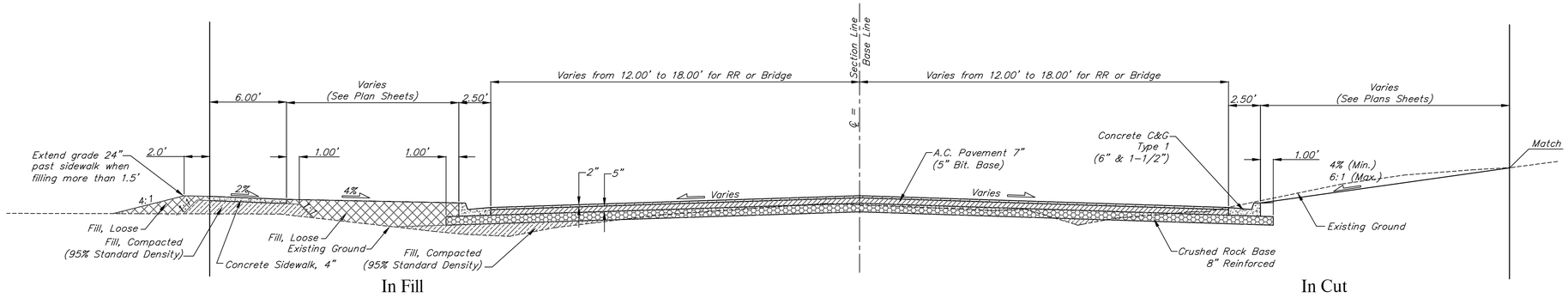


29th STREET NORTH TYPICAL SECTION

Sta. 15+30.00 to Sta. 16+80.00
Sta. 20+60.00 to Sta. 28+30.00
Sta. 32+80.00 to Sta. 40+00.00
Sta. 41+31.00 to Sta. 56+69.00
Sta. 58+06.00 to Sta. 62+90.00

HOOVER ROAD TYPICAL SECTION

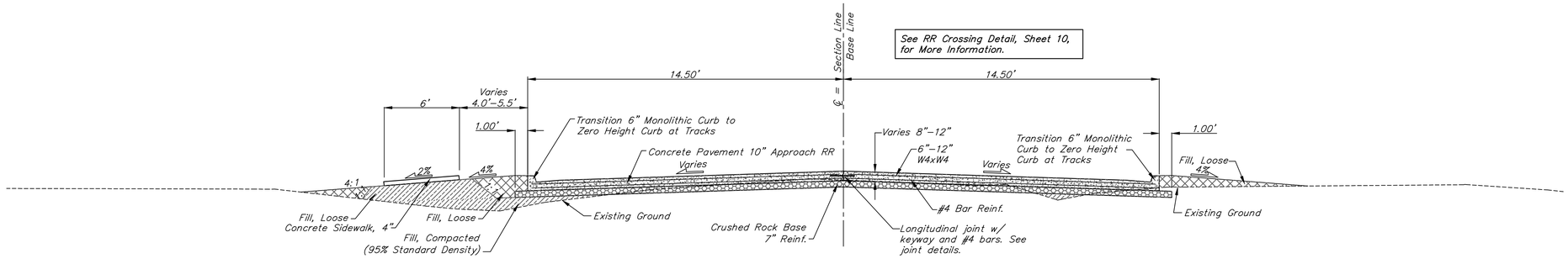
Sta. 7+65.00 to Sta. 8+72.00
Sta. 11+20.00 to Sta. 11+78.00



29th STREET NORTH TYPICAL SECTION

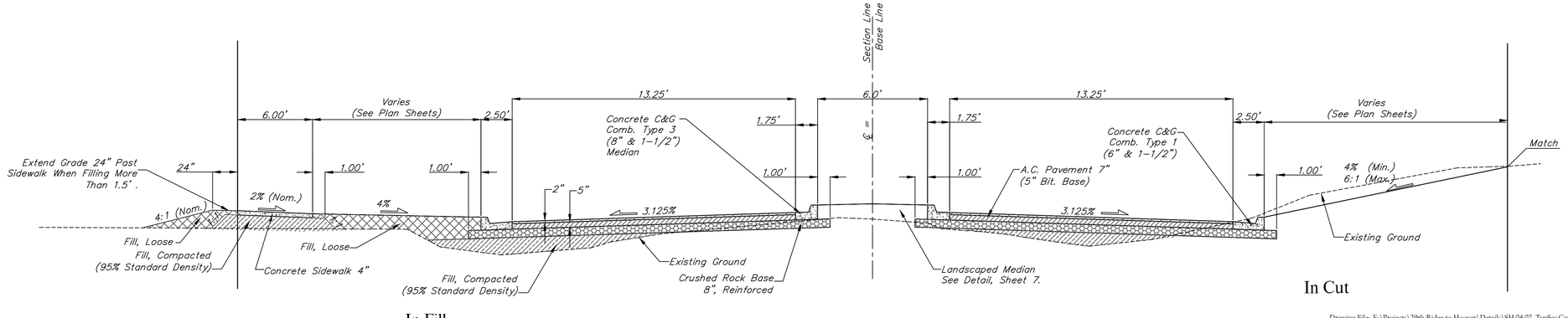
Sta. 16+80.00 to Sta. 18+30.00
Sta. 19+10.00 to Sta. 20+60.00
Sta. 28+30.00 to Sta. 29+51.00 *
* Sta. 31+63.50 to Sta. 32+80.00

* See plan sheet & bridge approach slab detail for concrete portion of taper.
Approach Slab - Bridge - Approach Slab = Sta. 29+51.00 to Sta. 31+63.50



29th STREET NORTH TYPICAL SECTION

Sta. 18+30.00 to Sta. 19+10.00



29th STREET NORTH TYPICAL SECTION

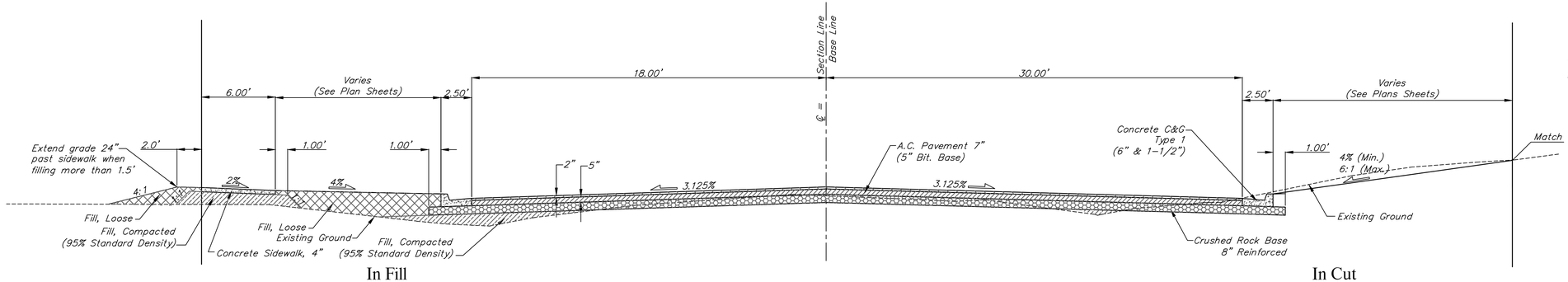
Sta. 40+00.00 to Sta. 41+31.00
Sta. 56+69.00 to Sta. 58+06.00

Drawing File: E:\Projects\29th Ridge to Hoover\Details\SH-04-07- TypSec-Curb Details.dwg

November, 2013

Design: KEK	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT
Drawn: JDM	TYPICAL SECTIONS
Approved: MWS	29TH STREET NORTH - RIDGE ROAD TO HOOVER ROAD
Scale: NONE	

Baughman Company , P.A.
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TPVING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

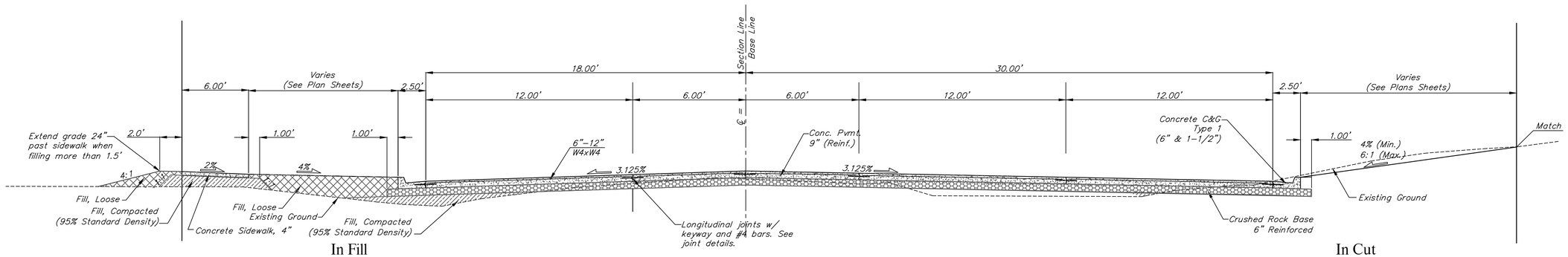


In Fill

In Cut

29th STREET NORTH TYPICAL SECTION

Sta. 63+40.00 to Sta. 64+45.80



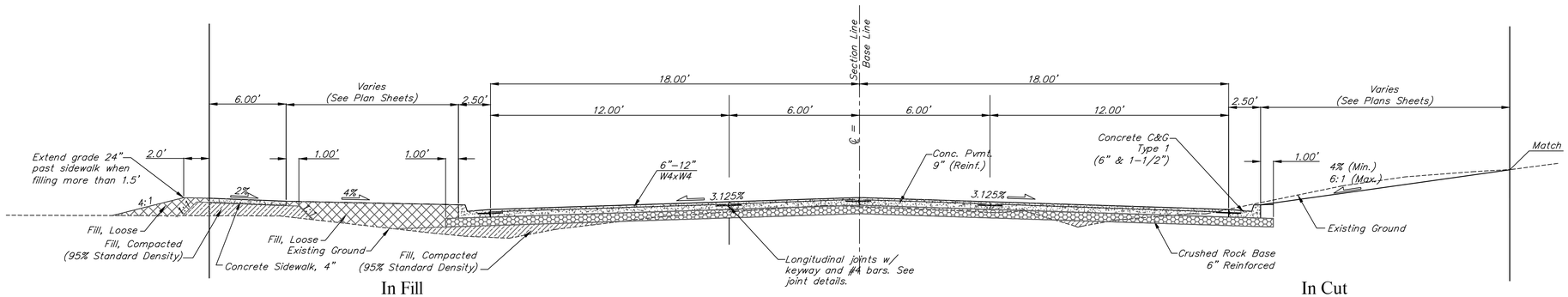
In Fill

In Cut

29th STREET NORTH TYPICAL SECTION

Sta. 64+45.80 to Sta. 64+95.60 *

* 29th St. North and Hoover Intersection. 29th St. North Stationing through intersection = Sta. 64+95.60 to Sta. 66+35.24



In Fill

In Cut

29th STREET NORTH TYPICAL SECTION

* Sta. 66+35.24 to Sta. 67+10.00

* 29th St. North and Hoover Intersection. 29th St. North Stationing through intersection = Sta. 64+95.60 to Sta. 66+35.24

HOOVER ROAD TYPICAL SECTION

Sta. 8+72.00 to Sta. 9+17.55 *

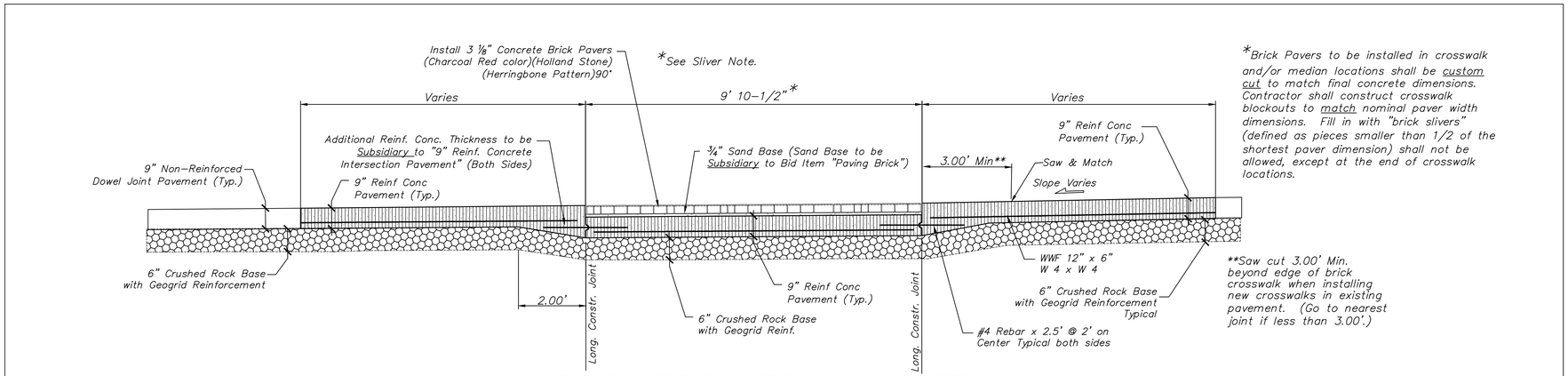
* Sta. 10+70.07 to Sta. 11+20.00

* 29th St. North and Hoover Intersection. Hoover Stationing through intersection = Sta. 9+17.55 to Sta. 10+70.07

Drawing File: E:\Projects\29th Ridge to Hoover\Details\SH-04-07- TypSec-Curb Details.dwg

November, 2013

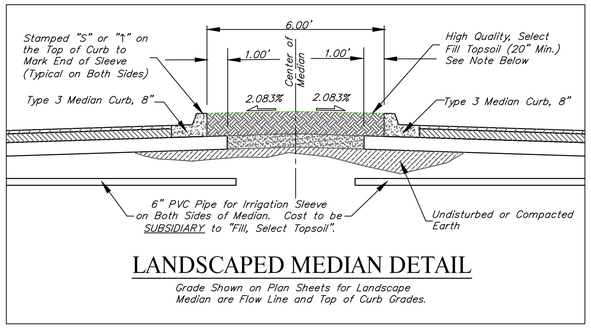
Design: KEK Drawn: JDM Approved: MWS Scale: NONE	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT TYPICAL SECTIONS 29TH STREET NORTH - RIDGE ROAD TO HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 TPVING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE	SHEET 06 OF 177



*Brick Pavers to be installed in crosswalk and/or median locations shall be custom cut to match final concrete dimensions. Contractor shall construct crosswalk blockouts to match nominal paver width dimensions. Fill in with "brick slivers" (defined as pieces smaller than 1/2 of the shortest paver dimension) shall not be allowed, except at the end of crosswalk locations.

**Saw cut 3.00' Min. beyond edge of brick crosswalk when installing new crosswalks in existing pavement. (Go to nearest joint if less than 3.00'.)

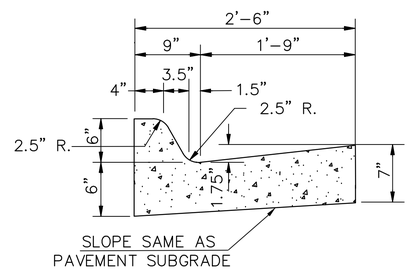
PAVING BRICK CROSSWALK DETAIL



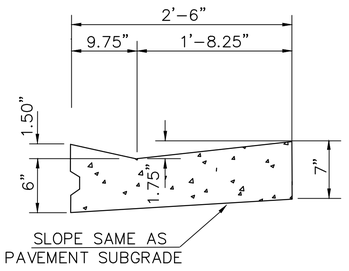
LANDSCAPED MEDIAN DETAIL

Grade Shown on Plan Sheets for Landscape Median are Flow Line and Top of Curb Grades.

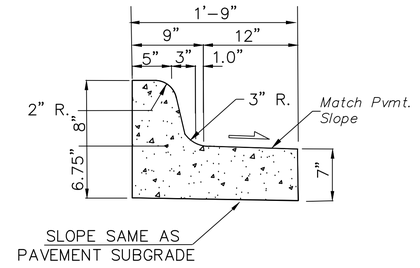
Topsoil in the Landscaped Medians shall be friable, dark, and loamy in nature, and free of gravel and/or rock material. New soil shall also be free of organic material, and shall be capable of sustaining plant growth. Contractor shall be responsible for evaluating existing soil conditions prior to bidding, as onsite soils may not be suitable for required Top Soil applications. New soil shall be inspected and approved by the Engineer or his designated representative prior to installation. Cost to be SUBISIDIARY to the Lump Sum Bid Item "Fill, Select Topsoil".



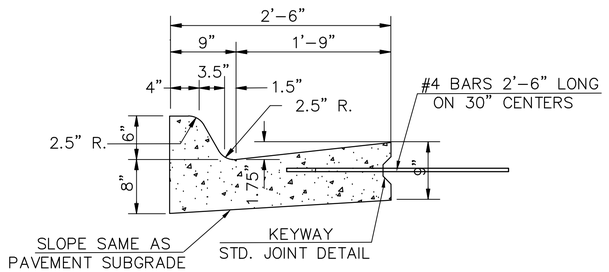
COMBINED CURB & GUTTER TYPE I (6") (2.5' WIDTH) (W/ A.C. PAVEMENT)



COMBINED CURB & GUTTER TYPE I (1 1/2") (2.5' WIDTH)



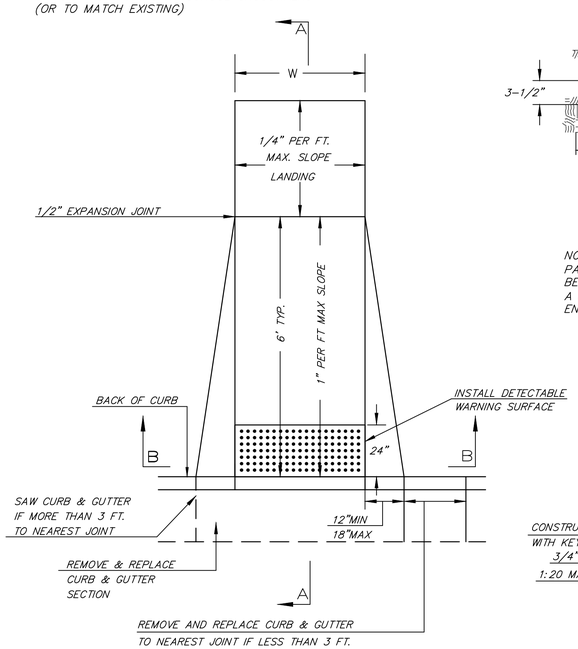
COMBINED CURB & GUTTER TYPE 3 (8") (1.75' WIDTH)

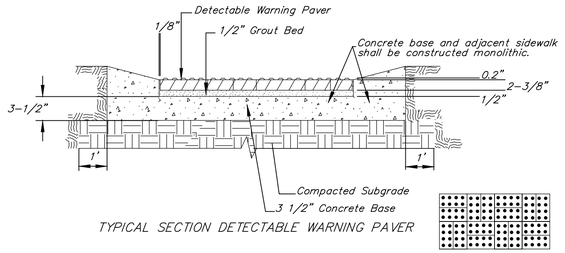


COMBINED CURB & GUTTER TYPE I (6") (2.5' WIDTH) (W/ CONCRETE PAVEMENT)

(TYPE A)
STANDARD WHEELCHAIR RAMP WITH DETECTABLE WARNING CONSTRUCTION DETAIL FOR STREETS WITH COMBINED CURB & GUTTER

W= 4'0" FOR STANDARD RAMP
W= 5'0" FOR RAMPS AT SCHOOL CROSSWALKS
(OR TO MATCH EXISTING)

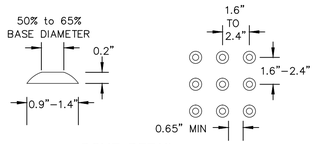




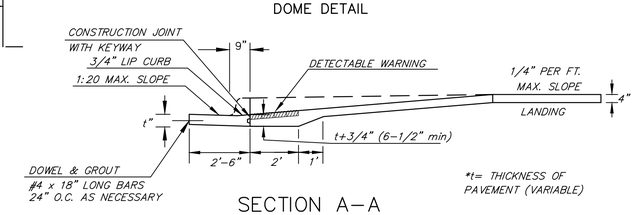
TYPICAL SECTION DETECTABLE WARNING PAVER

NOTE: RAMPS TO COMPLY WITH LATEST ADAAG GUIDELINES. PAVESTONE DETECTABLE WARNING PAVERS (OR AN APPROVED EQUAL) SHALL BE USED IN ALL WHEELCHAIR RAMPS. THE RED PAVER SHALL BE INSTALLED USING A BASKET WEAVE/PARQUET PATTERN. OTHER PATTERNS MAY BE USED WITH APPROVAL OF ENGINEER. SAND FILL JOINTS. ALIGN DOMES IN THE DIRECTION OF PEDESTRIAN TRAVEL.

SECTION B–B



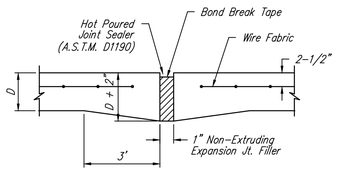
DOME DETAIL



SECTION A–A

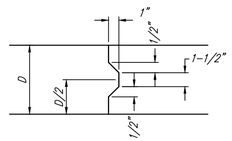
*t= THICKNESS OF PAVEMENT (VARIABLE)

AUGUST 4, 2003

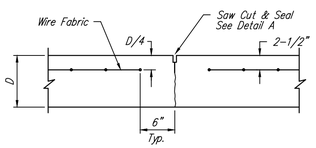


EXPANSION JOINT

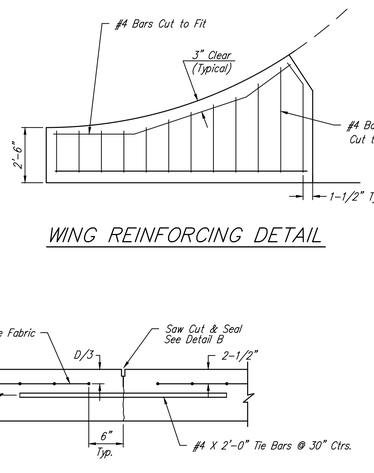
NOTE: Extra Thickness to be Subsidiary to Price of Square Yards Pavement



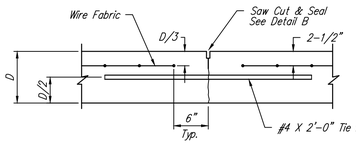
KEYWAY DETAIL



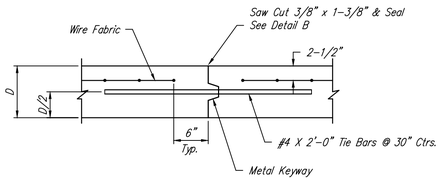
CONTRACTION JOINT DETAIL (C.J.)



WING REINFORCING DETAIL

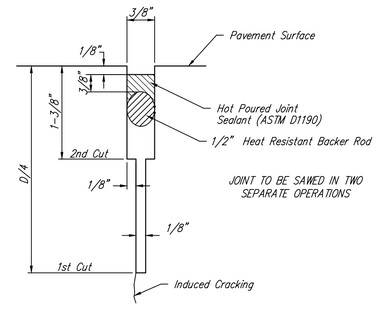


LONGITUDINAL JOINT DETAIL (L.J.)

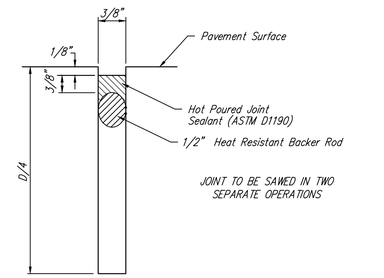


OPTIONAL LONGITUDINAL JOINT DETAIL (L.J.)
(CONSTRUCTION JOINT)

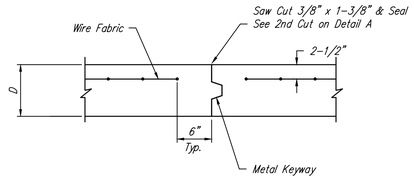
NOTE: 6" X 12" W4XW4 Wire Fabric Reinforcing Shall Be Placed So That The Wires With The 6" Spacing Will Run Parallel With The Longitudinal Joints.



SAW JOINT DETAIL "A"



SAW JOINT DETAIL "B"

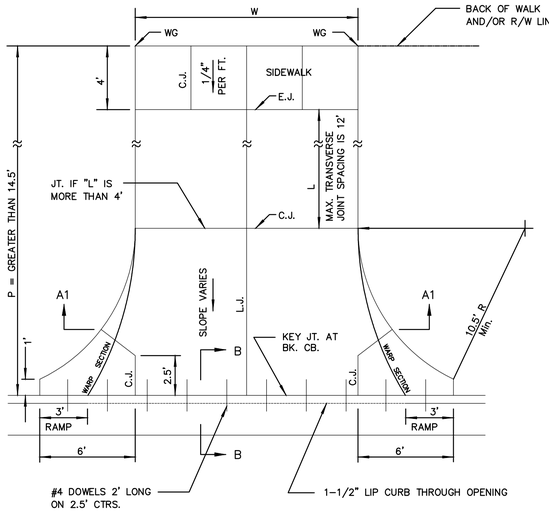


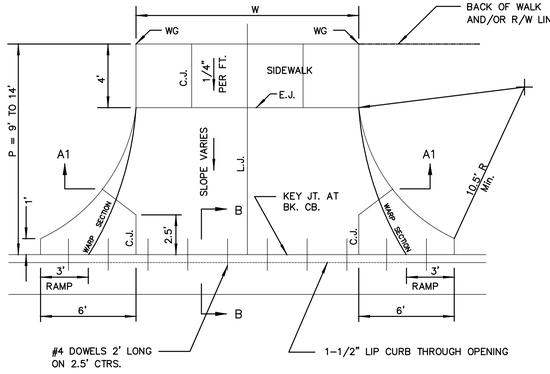
OPTIONAL CONTRACTION JOINT
(CONSTRUCTION JOINT)

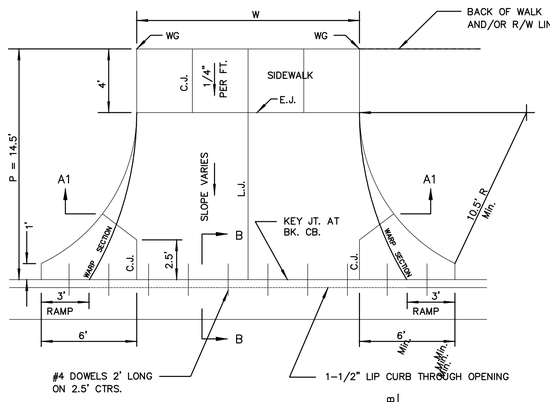
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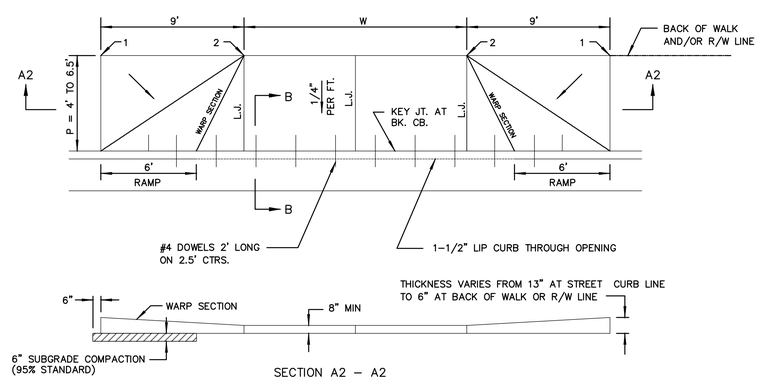
November, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: NOTED	Project No. 09-09-E382 CAPITOL IMPROVEMENT PROJECT WHEELCHAIR RAMP & PAVEMENT DETAILS 29th Street Ridge to Hoover	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

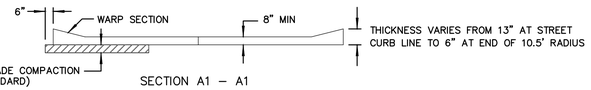








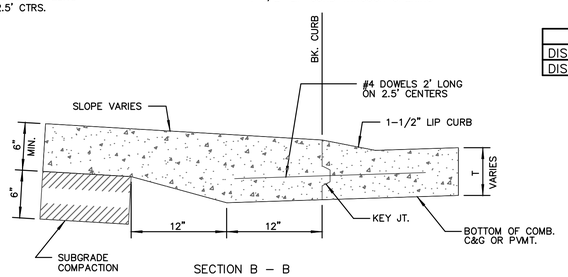
SECTION A2 – A2



SECTION A1 – A1

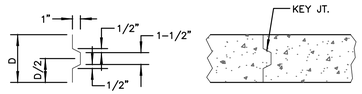
PARKING WIDTH "P"	4'	4.5'	5'	5.5'	6'	6.5'
DIST. OF PT. "1" ABOVE TOP OF FULL CURB	–.08'	0.02'	0.18'	0.22'	0.18'	0.22'
DIST. OF PT. "2" BELOW TOP OF FULL CURB	–.08'	0.02'	0.18'	0.22'	0.18'	0.22'

FULL RAMP DRIVE (P = 4.0' TO 6.5')



SECTION B – B

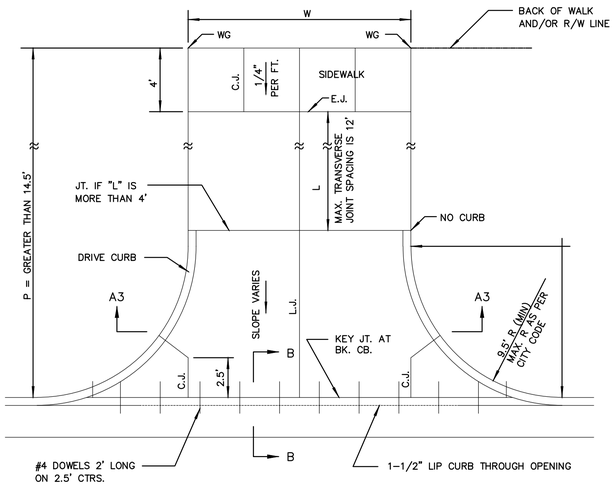
BACK OF CURB DETAIL

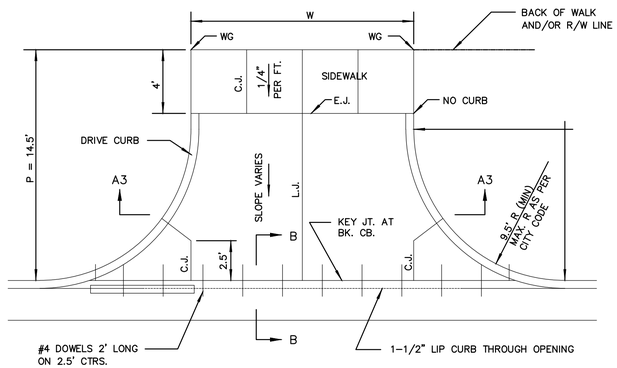


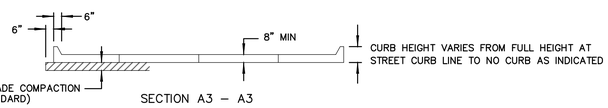
ALT. LONGITUDINAL CONSTRUCTION JOINT

PARKING WIDTH "P"	9'	10'	11'	12'	13'	14.5'	20'	25'	30'	35'	40'	45'	50'
ABSOLUTE MAX. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	0.27'	0.27'	0.32'	0.37'	0.52'	0.80'	1.35'	1.85'	2.35'	2.85'	3.35'	3.85'	4.35'
OPTIMUM MAX. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	0.27'	0.27'	0.32'	0.37'	0.52'	0.62'	0.96'	1.22'	1.48'	1.74'	2.00'	2.26'	2.52'
OPTIMUM MIN. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	0.19'	0.21'	0.23'	0.25'	0.30'	0.30'	0.42'	0.52'	0.62'	0.72'	0.82'	0.92'	1.02'
ABSOLUTE MIN. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	–.19'	–.16'	–.13'	–.10'	–.06'	0.00'	0.00'	0.15'	0.25'	0.35'	0.45'	0.55'	0.65'

RADIUS RAMP DRIVES (P = 9.0' & GREATER)



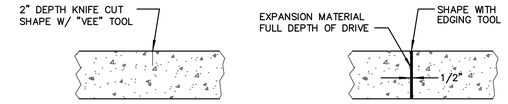




SECTION A3 – A3

PARKING WIDTH "P"	14.5'	20'	25'	30'	35'	40'	45'	50'
ABSOLUTE MAX. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	0.72'	1.27'	1.77'	2.27'	2.77'	3.27'	3.77'	4.27'
OPTIMUM MAX. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	0.70'	1.04'	1.30'	1.56'	1.82'	2.08'	2.34'	2.60'
OPTIMUM MIN. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	0.30'	0.42'	0.52'	0.62'	0.72'	0.82'	0.92'	1.02'
ABSOLUTE MIN. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	0.00'	0.00'	0.15'	0.25'	0.35'	0.45'	0.55'	0.65'

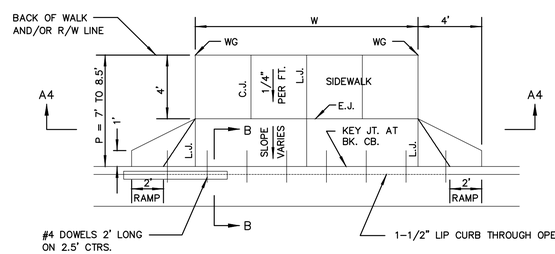
FULL RADIUS DRIVES (P = 14.5' & GREATER)

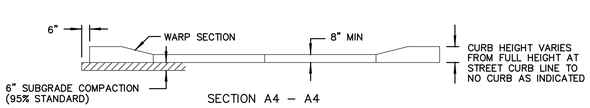


CONTRACTION JOINT (C.J.)
OR LONGITUDINAL JOINT (L.J.)

NO SAWN JOINTS WILL BE ALLOWED

EXPANSION JOINT (E.J.)





SECTION A4 – A4

PARKING WIDTH "P"	7'	7.5'	8'	8.5'
ABSOLUTE MAX. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	–.08'	0.02'	0.18'	0.22'
OPTIMUM MAX. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	–.08'	0.02'	0.18'	0.22'
OPTIMUM MIN. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	–.15'	–.16'	–.17'	–.17'
ABSOLUTE MIN. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	–.25'	–.20'	–.20'	–.20'

FULL RAMP DRIVE (P = 7.0' TO 8.5')

GENERAL NOTES

1. DRIVEWAY CONSTRUCTION DETAILED ON THIS SHEET IS FOR USE WITH FULL HEIGHT STREET CURBS AND IN AREAS WITHOUT FULL WALK CONSTRUCTION IN THE PARKING. SEE OTHER DETAIL SHEETS FOR DRIVEWAY CONSTRUCTION WITH ROLL CURB AND/OR FULL WALK.
2. ONE LONGITUDINAL JOINT SHALL BE CONSTRUCTED ALONG THE CENTERLINE OF DRIVES HAVING A "W" DIMENSION OF 24' OR LESS. TWO LONGITUDINAL JOINTS SHALL BE CONSTRUCTED WITH EQUAL SPACINGS NOT TO EXCEED 10' FOR DRIVES WITH A "W" DIMENSION GREATER THAN 24'.
3. DRIVEWAY WIDTH DENOTED AS "W" ON THE DETAIL DRAWINGS SHALL BE A MINIMUM OF 10' AND A MAXIMUM OF 30'. THE MAXIMUM OPENING FOR RADIUS TYPE DRIVES WITH CURBS THROUGH THE RADIUS SHALL NOT EXCEED 52' AT THE STREET CURB LINE.
4. CONTRACTION JOINT SPACING IN THE DRIVEWAY WALK SECTION SHALL BE A MINIMUM OF 3' AND A MAXIMUM OF 6' AND ARE TO BE EQUALLY SPACED WITHIN THIS RANGE. WALK SECTION SHALL BE CONSTRUCTED TO THE SAME THICKNESS AS THE DRIVEWAY.
5. DOWEL BARS SHALL BE OMITTED FROM THE KEYED CONSTRUCTION JOINT ALONG THE BACK OF THE STREET CURB LINE WHEN DRIVEWAYS ARE CONSTRUCTED IN CONJUNCTION WITH NEW CONCRETE PAVEMENT CONSTRUCTION.
6. ADDITIONAL THICKNESS OF DRIVE AS INDICATED IN THE DRAWINGS WILL NOT BE PAID FOR DIRECTLY AND THIS COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE DRIVEWAY CONSTRUCTION.
7. ONE HALF INCH EXPANSION JOINTS SHALL BE INSTALLED WHEREVER DRIVE CONSTRUCTION ABUTS SIDEWALK. ONE HALF INCH EXPANSION JOINTS SHALL ALSO BE INSTALLED ALONG THE PROPERTY LINE AND/OR BACK OF WALK LINE WHEN DRIVE CONSTRUCTION ALONG THIS LINE ABUTS CONCRETE PARKING LOTS OR CONCRETE DRIVE EXTENSION.
8. ALL DRIVEWAYS SHALL BE A MINIMUM OF 8" IN THICKNESS AND SHALL BE REINFORCED.
9. OPTIMUM DRIVEWAY ELEVATIONS SHOWN IN THE TABLES ARE TO BE USED WHEREVER POSSIBLE. ABSOLUTE MAXIMUM AND MINIMUM ELEVATIONS ARE TO BE USED ONLY WHEN THESE VALUES WILL PERMIT NEW CONSTRUCTION TO MATCH EXISTING DRIVES OR PARKING LOTS. VALUES SHOWN IN THE TABLES ARE BASED ON A FULL CURB HEIGHT ELEVATION OF 0.55' ABOVE THE GUTTER FLOW LINE AND MUST BE ADJUSTED ACCORDINGLY FOR OTHER CURB HEIGHTS. VALUES SHOWN IN THE TABLES WITH MINUS SIGNS INDICATE ELEVATIONS BELOW TOP OF FULL HEIGHT CURB.

CITY OF WICHITA PUBLIC WORKS ENGINEERING

STANDARD DRIVE ENTRANCES FULL HEIGHT CURB

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
472-84691	706989	01-2012

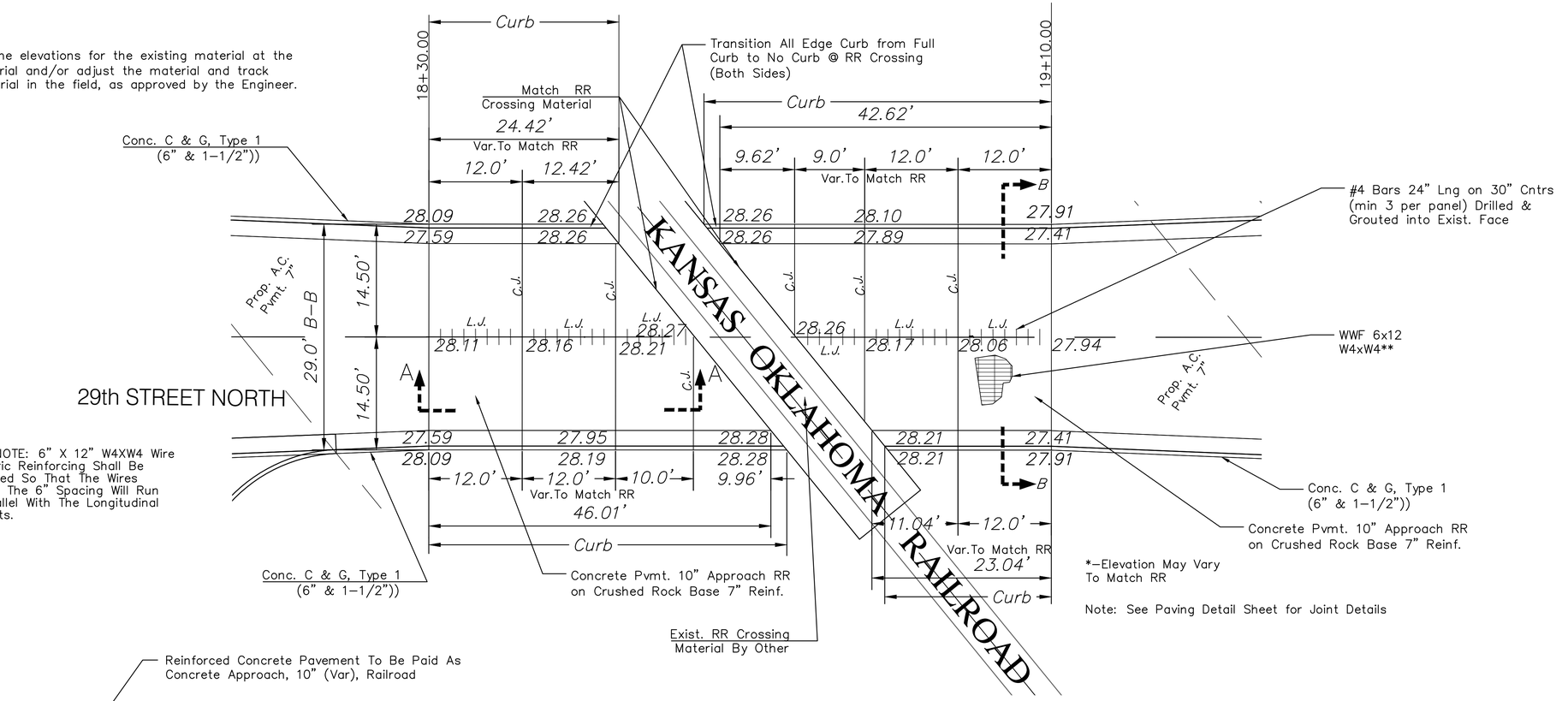
DESIGN | DRAWN

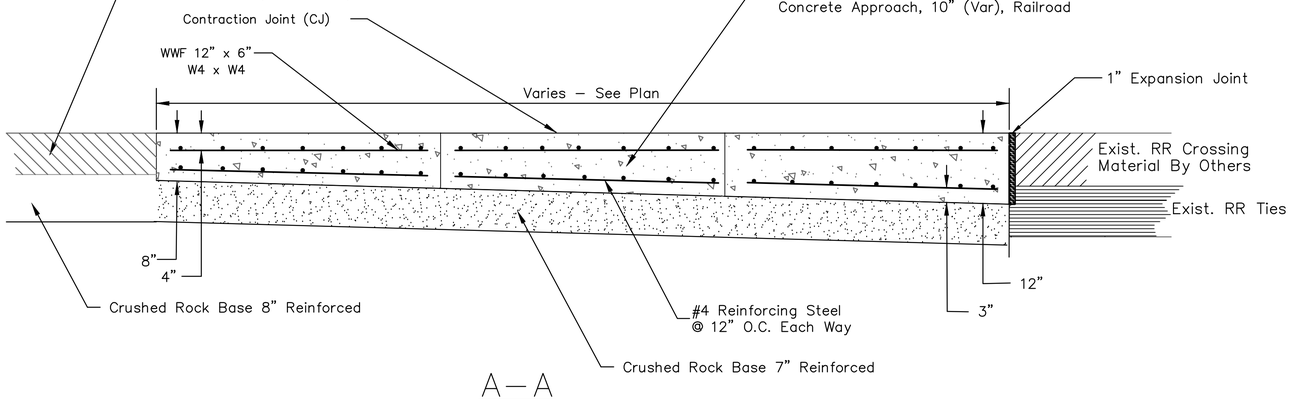
CITY ENGINEER'S OFFICE
CITY HALL – SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501
(316) 268-4114 FAX

SHEET

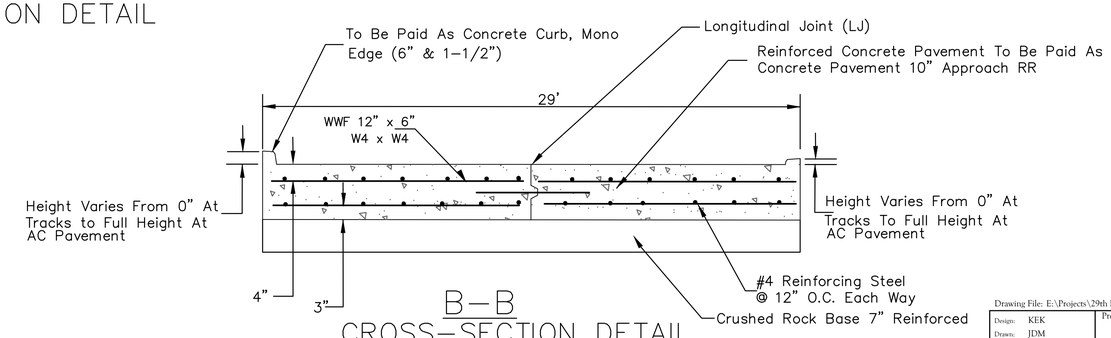
SPECIAL NOTES

Elevations shown for the existing edge of railroad crossing material is for the elevations for the existing material at the time of the design. The railroad company may decide to replace the material and/or adjust the material and track elevations. Contractor shall adjust pavement elevations to match the material in the field, as approved by the Engineer.





A-A
LONGITUDINAL-SECTION DETAIL



B-B
CROSS-SECTION DETAIL

Drawing File: E:\Projects\29th Ridge to Hoover\Details\RR Xing.dwg
November, 2013

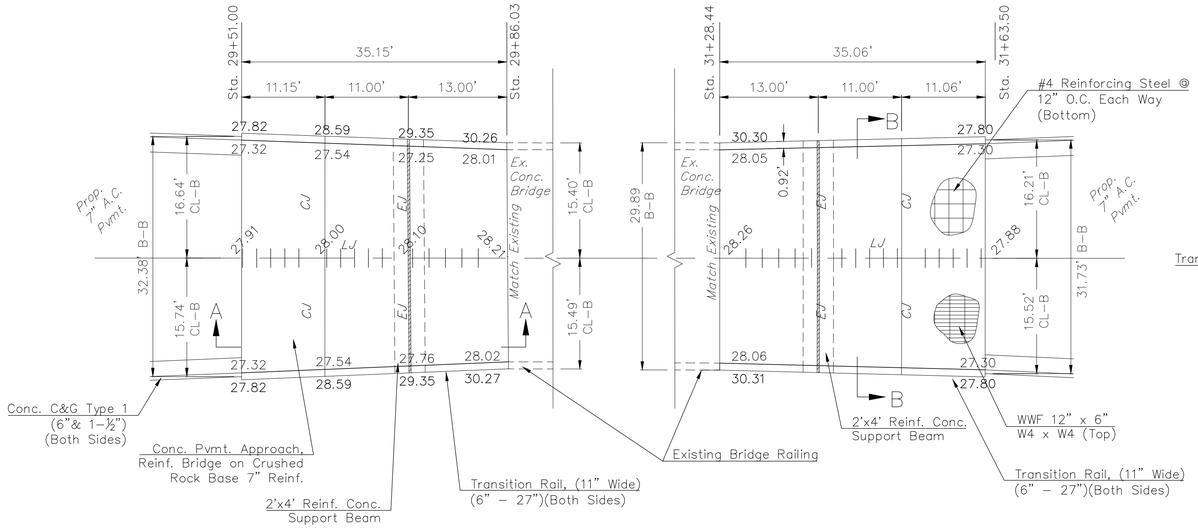
Design: KEK
Drawn: JDM
Approved: MWS
Scale: NONE

Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT

RAILROAD APPROACH DETAILS

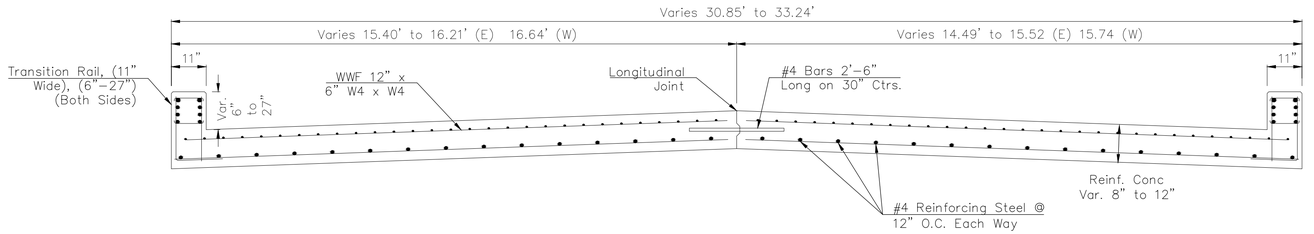
29TH STREET NORTH RIDGE ROAD TO HOOVER

Baughman Company, P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE



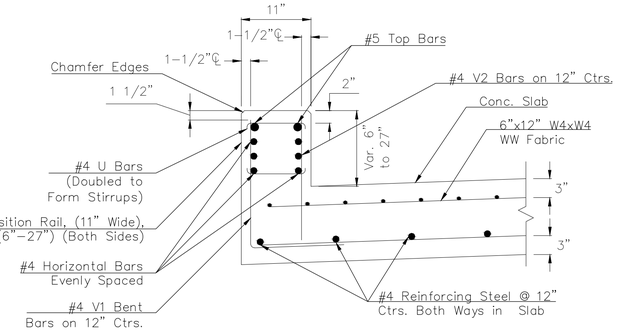
PLAN

1"=10'



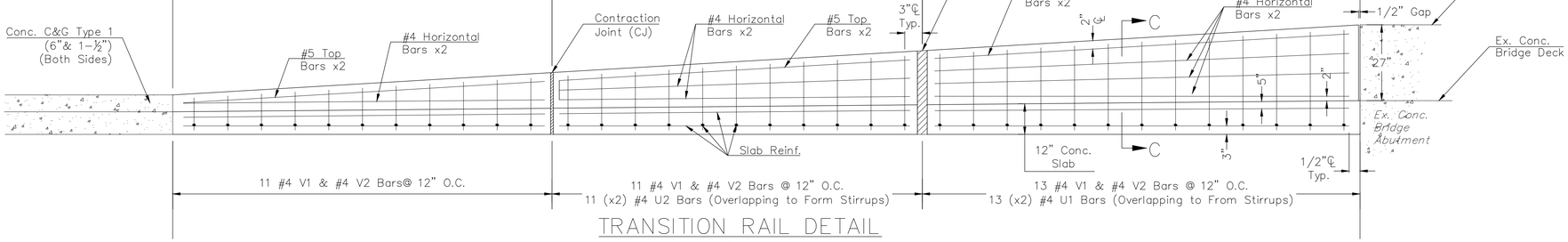
SECTION B-B

Not to Scale



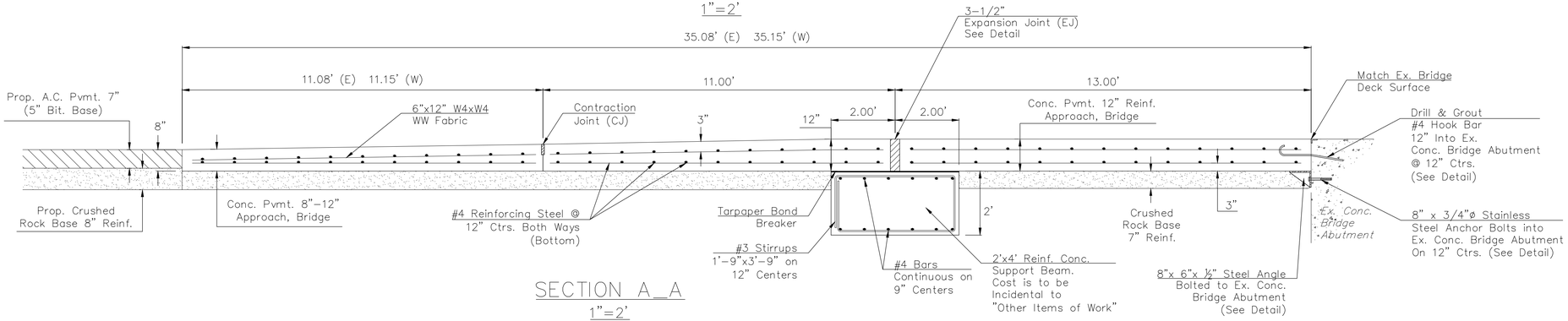
SECTION C-C

Not to Scale



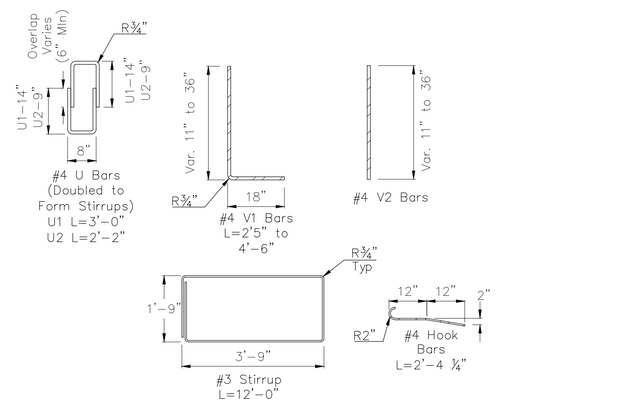
TRANSITION RAIL DETAIL

1"=2'



SECTION A_A

1"=2'



Reinf. Bar Diagrams

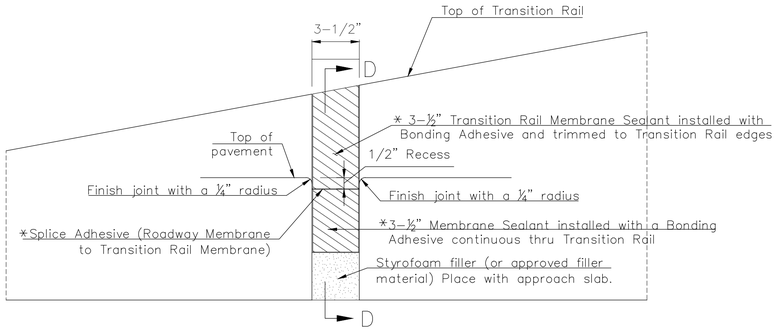
Not to Scale

NOTE: Use Grade 60 Reinforcing Bars and Grade 4.0 (AE) Concrete. Construct a ¾" Chamfer on all Exposed Edges. All Work and Materials to Construct Slab, Transition Rail, Support Beam and Support Fittings to be Included in the Unit Price Bid for Items "Concrete Approach, 10" (Var.), Bridge" and "Transition Rail (11" Wide)(6" to 27")."

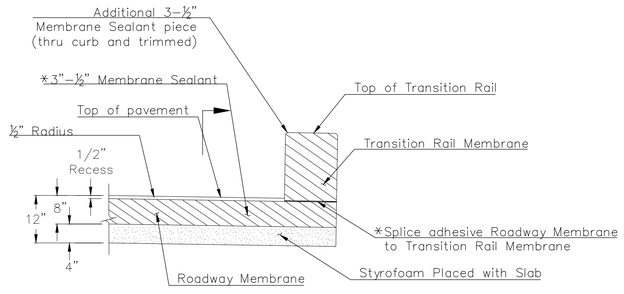
Drawing File: E:\Projects\29th Ridge to Hoover\Details\Bridge Approach Details.dwg

NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: NONE	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT BRIDGE APPROACH DETAILS 29TH STREET NORTH RIDGE ROAD TO HOOVER	Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE	SHEET 11 OF 172



CROSS SECTION



SECTION D-D

TRANSITION RAIL EXPANSION JOINT DETAIL

EXPANSION JOINTS

The joint opening shall be formed prior to placement of the pavement approach. The material used to form the joint opening shall be removed after the pavement approach has been in place for a minimum of six days.

Cleaning and installation of membrane into the joint shall not begin until the concrete in the approach slab has cured a minimum of 7 days.

The joint shall be thoroughly cleaned by sandblasting and by high pressure air blast to remove all laitance and contaminants from the joint. When any part of the joint is shaped by saw cutting in lieu of forming, a water blast shall preceed sandblasting and air cleaning. Sandblasting shall be accomplished in two passes to clean each face of the joint (one pass for each face). The nozzle shall be held at an angle to the joint face and within 1 to 2 inches of the face.

Any contaminants such as oil, curing compound, etc. shall be removed by sandblasting to the satisfaction of the Engineer. Solvents, wire brushing, or grinding shall not be permitted.

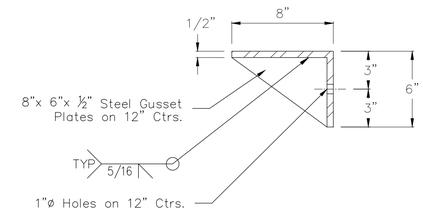
The joint shall be air blasted just prior to installation of Membrane Sealant. The air compressor used for joint cleaning shall be equipped with trap devices capable of providing moisture-free and oil-free air at a recommended pressure of 90 psi. The joint shall be spot checked to ensure residual dust or dirt has been removed. It is required that the Engineer inspect the joint immediately prior to installation of the joint material.

* See KDOT Standard Specifications for Membrane Sealant, Bonding Adhesive and Splice Adhesive.

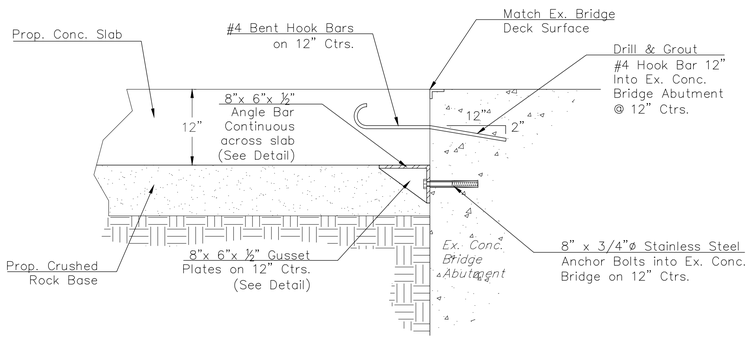
Traffic shall not be allowed on the joint for a minimum of 3 hours unless otherwise directed by the Engineer.

Splices will use materials & methods recommended by the Manufacturer.

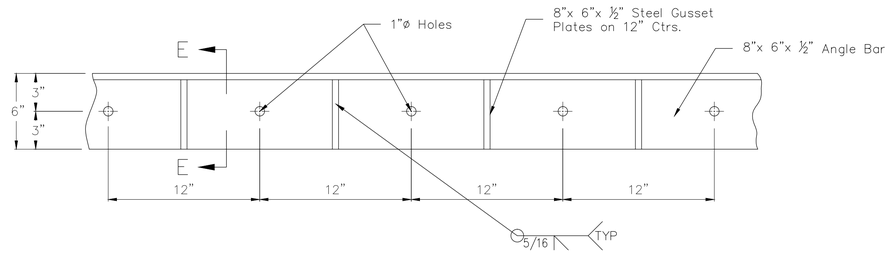
All work and materials necessary for the preparation, construction, and installation of the joint will be subsidiary to the concrete approach pavement.



SECTION E-E



CROSS SECTION



STEEL ANGLE BAR DETAIL

Not to Scale

APPROACH SLAB TO BRIDGE ABUTMENT DETAIL

1"=1'

Drawing File: E:\Projects\29th Ridge to Hoover\Details\Bridge Approach Details.dwg

NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: NONE	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT BRIDGE APPROACH DETAILS 29TH STREET NORTH RIDGE ROAD TO HOOVER	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 12 OF 172

BENCHMARK
Benchmark #8–R Spike in 2nd HLP East of Ridge Road on North Side of 29th St.
Sta. 14=48.8, 51.0' Lt
Elev.= 1328.57 '88 NAVD

SCALE: 1" = 20'
0 10 20

Construct WCR's W/Detectable Warnings (See Detail Sheet)

SWS Line 1

RIDGE ROAD

Construct Concrete Pavement (9")(Reinf.) on Crushed Rock Base 6" (Reinf.) (See Intersection Detail)

Construct WCR's W/Detectable Warnings (6' Wide) (See Detail Sheet)

Abandon Ex. WVB. See New Fire Hydrant Plan

Match FL

Sta. 13+40.75 100.0' Lt

Adjust WVB Ex. Elev.=1327.60 New Elev.=1327.05

Rem. Fire Hydrant & Install New Fire Hydrant Assy. (E) (See Details)

FOREST LAKES ADD

117 118 119

20' UTILITY ESMT.

5' WALL ESMT

Construct Concrete Sidewalk, 4" (5' Wide)

Construct Concrete Pavement (9")(Reinf.) on Crushed Rock Base 6" (Reinf.) (See Intersection Detail)

Sta. 13+22.00 BEGIN Construction

Construct Brick Pavers (3–⅛")(Crosswalk) on 9" Conc. Pvmt. (Reinf.) (See Crosswalk Detail)

Construct Brick Pavers (3–⅛")(Crosswalk) on 9" Conc. Pvmt. (Reinf.) (See Crosswalk Detail)

29th Street North

11+00 12+00 13+00 4+00 15+00 16+00

Ex. A.C. Pvmt.

Ex. Conc. Pvmt.

Construct Concrete C & G, Type 1 (6" & 1–1/2"). Both Sides

Construct Concrete Pavement (9")(Reinf.) on Crushed Rock Base 6" (Reinf.) (See Intersection Detail)

SWS Line 1A

Construct WCR's W/Detectable Warnings (See Detail Sheet)

Construct Concrete Sidewalk, 4" (6' Wide)

Fill Area Between Sidewalks with Conc. Apron 6" Reinforced. (All Corners) (See Detail)

Construct WCR's W/Detectable Warnings (6' Wide) (See Detail Sheet)

Match FL

Construct Brick Pavers (3–⅛")(Crosswalk) on 9" Conc. Pvmt. (See Crosswalk Detail)

Sta. 13+39.30 65.0' Rt

Sta. 13+73.23 Radius

222.72'

Adjust WVB Ex. Elev.=1326.65 New Elev.=1326.26

P.V.I. 50' V.C. Tc=1325.69

+0.495%

P.V.I. 50' V.C. Tc=1325.32

Sta. 13+74.82 Radius

+0.495%

P.V.I. No V.C. Tc=1325.84

+1.186%

P.V.I. No V.C. Tc=1326.46

+0.495%

CAUTION
SWS Pipe at Bottom of Rock

Construct Concrete Sidewalk 4" (6' Wide)

Construct AC Pavement 7" (5" Bit Base) on Crushed Rock Base 8" Reinf.

Sta. 13+90.46 50.0' Lt

Sta. 13+99.82 P.V.I.

Sta. 14+25.00 END Concrete Pavement (9")(Reinf.) BEGIN AC Pavement 7" (5" Bit Base)

Sta. 14+80.00 BEGIN Taper Left

Sta. 15+30.00 END Taper Left

Construct Concrete Driveway (8")(Reinforced) (16.0' Wide)

Sta. 15+49.84 50.0' Lt

Sta. 15+49.80 40.0' Lt

Sta. 16+00.00 Match Line

SWS Line 1

7080
D-1079-1UP
Conway Bank N A
121 E Kellogg
WICHITA, KS 67202

25' KGE EASEMENT (80' x 25') (Film 1687, Page 2481)

25' KGE EASEMENT (Film 1937, Page 0018)

BM #8

15" C.O.W. PVC WATER

Grade to Match

BL. Sta. 14+25.00 END Concrete Pavement (9")(Reinf.) on Crushed Rock Base 6" Reinf. BEGIN AC Pavement 7" (5" Bit Base) on Cushed Rock Base 8" Reinf.

Construct Concrete C & G, Type 1 (6" & 1–1/2"). Both Sides

Construct Concrete Ramp Driveway (8")(Reinforced) (18.0' Wide)

2920 N Ridge Rd
D-1099-UP
Terry Alan Richards
9216 Thurman
WICHITA, KS 67212

Construct Concrete Ramp Driveway (8")(Reinforced) (15.0' Wide)

CAUTION
SWS Pipe at Bottom of Rock

Construct Concrete Sidewalk 4" (6' Wide)

Sta. 13+74.63 30.0' Rt

Sta. 14+25.00 END Concrete Pavement (9")(Reinf.) BEGIN AC Pavement 7" (5" Bit Base)

Sta. 16+00.00 Match Line

NOTE: See Earthwork Sheet for Grading Limits, Finish Grades, Tree Removal, Existing Irrigation Systems.

Note:
Pavement, Sidewalks, and Etc. To Be Removed Are Indicated By:

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg
NOVEMBER, 2013

Design: KEK	Project No. 09-09-E382
Drawn: JDM	CAPITAL IMPROVEMENT PROJECT
Approved: MWS	29TH STREET NORTH PAVING
Scale: Noted	Sta. 10+50.00 to Sta. 16+00.00
	29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company, P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 13 OF 177

BENCHMARK
Benchmark #8–R Spike in 2nd HLP East of Ridge Road on North Side of 29th St.
Sta. 14=48.8, 51.0' Lt
Elev.= 1328.57 '88 NAVD

+0.495% | +0.586% | Warp Crown | Warp Crown | −1.086% | −0.956% | +0.387%

P.V.I. No V.C. Tc=1327.21
P.V.I. No V.C. Tc=1328.07
P.V.I. No V.C. Tc=1327.92
P.V.I. No V.C. Tc=1326.28
P.V.I. 50' V.C. Tc=1325.42

Sta. 16+00.00 Match Line
Construct Concrete Sidewalk 4" (6' Wide)
Sta. 16+80.00 BEGIN Taper Left
Sta. 18+47.08, 21.0' Lt. End Concrete Sidewalk 8" (6' Wide). Match Ex. RR Crossing Material (See Detail This Sheet)
Sta. 18+60.03, 21.0' Lt. Begin Concrete Sidewalk 8" (6' Wide). Match Ex. RR Crossing Material (See Detail This Sheet)
Sta. 18+30.00 END Taper Left
END Conc. Approach RR
BEGIN Conc. Approach A.C. Pvmt.
Sta. 18+52.37 END Conc. Approach RR Rt. (No Curb)
Sta. 18+65.24 BEGIN Conc. Approach RR Rt. (No Curb)
Sta. 18+94.19 50.0' Lt
Sta. 19+10.00 BEGIN Taper Left
END Conc. Approach RR
BEGIN Conc. Pvmt.
Sta. 18+77.17 BEGIN Conc. Approach 10" RR Match Existing RR Track Crossing Material
BL. Sta. 19+10.00 END Conc. Approach 10" Railroad On Crushed Rock Base 7" Reinf. BEGIN AC Pavement 7" (5" Bit Base) on Crushed Rock Base 8" Reinf.
Adjust Air Release Ex. Elev. =1326.94 New Elev.=1328.44 See Detail
Construct Concrete Driveway (8")(Reinforced) (19.0' Wide)
Adjust Water Meter Ex. Elev. =1326.90 New Elev.=1327.39 See Detail
Sta. 20+60.00 END Taper Left
Sta. 20+96.49 Future Driveway
Construct AC Pavement 7" (5" Bit Base) on Crushed Rock Base 8" Reinf.
Sta. 21+50.00 Match Line
Construct Concrete Sidewalk 4" (6' Wide)

Adjust WVB Ex. Elev. =1326.95 New Elev.=1327.20

D-1079-UP
TATT LLC
1830 W Harry
WICHITA, KS 67213

Construct AC Pavement 7" (5" Bit Base) on Crushed Rock Base 8" Reinf.

Concrete Sidewalk to be 8" Thick & Reinforced Here

Sta. 17+73.34 40.0' Lt
Sta. 17+81.49 30.0' Lt

25' KGE EASEMENT (Film 1937, Page 0018)
10' UTILITY EASEMENT

RIDGE PORT ADD

Black Hills 4" Plastic

16" C.O.W. PVC WATER (30" STEEL CASING)

KANSAS-OKLAHOMA RAILROAD

29th Street North

SCALE: 1" = 20'
0 10 20

SWS Line 2

2920 N Ridge Rd
D-1099-UP
Terry Alan Richards
9216 Thurman
WICHITA, KS 67212

SWS Line 1

CAUTION
SWS Pipe at Bottom of Rock

Grade to Match

Construct Concrete Driveway (8")(Reinforced) (16.0' Wide)

Construct Concrete Driveway (8")(Reinforced) (17.0' Wide)

Sta. 18+64.20 END Conc. Approach 10" RR Match Existing RR Track Crossing Material

BL. Sta. 18+30.00 END AC Pavement 7" (5" Bit Base) on Crushed Rock Base 8" Reinf. BEGIN Conc. Approach 10" Railroad On Crushed Rock Base 7" Reinf.

Construct Conc. Approach 10" Railroad (See Detail) On Crushed Rock Base 7" Reinf. W/Conc. Curb, Mono Edge (6" & 1–1/2").

Construct Conc. Approach 10" Railroad (See Detail) On Crushed Rock Base 7" Reinf. W/Conc. Curb, Mono Edge (6" & 1–1/2").

Construct Concrete C & G, Type 1 (6" & 1–1/2"). Both Sides

Construct Concrete C & G, Type 1 (6" & 1–1/2"). Both Sides

Sta. 21+15.14 Construct Special Concrete Driveway (8")(Reinforced) (Width Varies)

NOTE: Existing Brick to be Removed by "Others" Prior to Construction. Bricks to be replaced on "Special Driveway" Depression by "Others".

Save & Protect Ex. Decorative Mailbox

Sta. 16+00.00 Match Line
Sta. 16+80.00 BEGIN Taper Right
Sta. 18+30.00 END Taper Right
END A.C. Pvmt.
BEGIN Conc. Approach RR
Sta. 18+76.01 END Conc. Approach RR Rt. (No Curb)
Sta. 18+89.00 BEGIN Conc. Approach RR Rt. (No Curb)
Sta. 19+10.00 BEGIN Taper Right
END Conc. Approach RR
BEGIN A.C. Pvmt.
Sta. 19+83.84 60.0' Rt
Sta. 20+60.00 END Taper Right
Sta. 21+25.00 P.V.C.
Sta. 21+50.00 Match Line

+0.495% | +0.586% | Warp Crown | Warp Crown | −1.086% | −0.956% | +0.387%

P.V.I. No V.C. Tc=1327.21
P.V.I. No V.C. Tc=1328.08
P.V.I. No V.C. Tc=1327.91
P.V.I. No V.C. Tc=1326.28
P.V.I. 50' V.C. Tc=1325.42

Wooden Power Pole
Wrap Pole With ½" Flexible Expansion Material
RW
PP
6'
Var.
6'
Prop. Conc. Sidewalk , 4"
Var. 12' Min.
SIDEWALK DETAILS AT POWER POLES

Prop. CC&G
39.5' Special Drive
RW
Brick Surface on Depression by "Others"
14.5'
25.0'
Prop. A.C. Pvmt.
Prop. 6" Rock Base
8"
* Ex. Brick Surface
12"
6"
SPECIAL DRIVEWAY DETAIL (Sta. 21+15.14)

*–NOTE: Contractor to Determine Depth of Step in Concrete to Allow for Existing Brick Thickness W/½" Sand Cushion

NOTE: All Driveway Concrete Shall be Paid by the Measured Bid Item " Concrete Driveway, (8")(Reinf.). Extra Work for Depression and Extra Thickness Shall be Paid for Directly.

WWF 6"x 6" W 6 x 6
1" Expansion Joint
8"
12"
Ex. RR Crossing Material
Ex. RR Ties
24"
12"
SIDEWALK/RR CROSSING DETAIL

NOTE: Cost of Extra Thickness to be SUBSIDIARY to the Project

NOTE: See Earthwork Sheet for Grading Limits, Finish Grades, Tree Removal, Existing Irrigation Systems.

Note:
Pavement, Sidewalks, and Etc. To Be Removed Are Indicated By:

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg
NOVEMBER, 2013

Design: KEK
Drawn: JDM
Approved: MWS
Scale: Noted

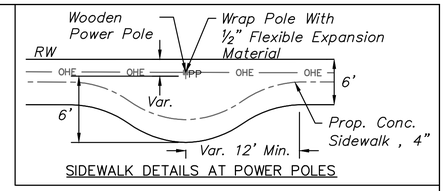
Project No. 09-09-E382
CAPITAL IMPROVEMENT PROJECT
29TH STREET NORTH PAVING
Sta. 16+00.00 to Sta. 21+50.00
29TH STREET NORTH · RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 14 OF 177

BENCHMARK
Benchmark #7– "□" Cut Eastmost Corner
Boat Ramp Backing Lane on North Side 29th
St. East of RR
Sta. 27+00.50, 63.4' Lt
Elev.= 1324.73 '88 NAVD

NOTE:
Contractor to Remove Existing Wood
Picket Fence in Right–of Way



SIDEWALK DETAILS AT POWER POLES

P.V.I.
50' V.C.
Tc=1325.42

P.V.I.
No V.C.
Tc=1326.00

P.V.I.
50' V.C.
Tc=1324.27

−0.956%

+0.387%

−0.690%

+0.856%

Sta. 21+50.00
Match Line

Sta. 21+75.00
P.V.C.

Sta. 23+00.00

Sta. 25+50.00

Sta. 25+25.00
P.V.C.

Sta. 25+75.00
P.V.T.

Sta. 27+00.00
Match Line

RIDGE PORT ADD

RESERVE "C"

RIDGE PORT ADD

BOAT RAMP AREA

ca. 20' UTILITY EASEMENT

10' UTILITY EASEMENT

10' UTILITY ESMT

20' UTILITY ESMT.

20' UTILITY EASEMENT

25' BLDG. SETBACK

20' BLDG. SETBACK

SCALE: 1" = 20'
0 10 20

Construct
AC Pavement 7"
(5" Bit Base) on
Crushed Rock
Base 8" Reinf.

Construct
Concrete
Sidewalk 4"
(6' Wide)

Construct Concrete C & G,
Type 1 (6" & 1–1/2").
Both Sides

Construct
AC Pavement 7"
(5" Bit Base)

Construct
Concrete
Sidewalk 4"
(6' Wide)

Construct
Concrete Driveway
(8")(Reinforced)
(24.0' Wide)

SWS Line 2A

SWS Line 2

Adjust Water Meter
and Service Line
Ex. Elev. =1327.07
New Elev.=1326.70
See Detail

Construct
Concrete Driveway
(8")(Reinforced)
(34.0' Wide)

Save & Protect
Ex. Decorative
Mailbox.

Grade Around Tree
to Save.

Adjust Water Service
Line
See Detail

Construct
Concrete Driveway
(8")(Reinforced)
(30.0' Wide)

10" C.O.W. PVC SS

16" C.O.W. PVC WATER

ANMW–400 PAIR

Block Infills 4" Plastic

Ex. Well

Match @ Joint

Ex. Stone MB

Ex. DRIVE TO BOAT RAMP AND PARKING LOT

EX. ELEC. METER

Ex. Wall

Stone MB

Brick MB

AMBox

TSign

WM

CATV Ped

6951

6737

1

2

3

BAREFOOT BAY ESTATES

29th Street North

NOTE: See Earthwork Sheet for Grading Limits, Finish Grades, Tree Removal, Existing Irrigation Systems.

Note:
Pavement, Sidewalks, and Etc. To Be Removed Are Indicated By:

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg

NOVEMBER, 2013

Design: KEK
Drawn: JDM
Approved: MWS
Scale: Noted

Project No. 09-09-E382

CAPITAL IMPROVEMENT PROJECT
29TH STREET NORTH PAVING
Sta. 21+50.00 to Sta. 27+00.00
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 15 OF 177

BENCHMARK
Benchmark #7– "□" Cut Eastmost Corner
Boat Ramp Backing Lane on North Side 29th
St. East of RR
Sta. 27+00.50, 63.4' Lt
Elev.= 1324.73 '88 NAVD

+0.856% | +0.959% | +1.969% Warp Crown | −2.137% Warp Crown | −1.238%

P.V.I. No V.C. Tc=1326.66
P.V.I. No V.C. Tc=1327.82
P.V.I. No V.C. Tc=1327.80

Sta. 27+00.00 Match Line
Sta. 28+30.00 BEGIN Taper Left
Sta. 29+51.00 END A.C. Pvmt. BEGIN Conc. Approach
Sta. 29+86.15 END Taper Left END Conc. Approach
Sta. 29+86.03 END Conc. Approach 10" Bridge
Sta. 30+57.25, 30.75' Lt. Construct 162.00 L.F. Prefabricated Pedestrian Bridge (See Details)
Sta. 31+28.44 BEGIN Conc. Approach 10" Bridge
Sta. 31+28.44 BEGIN Conc. Approach
Sta. 31+63.50 END Conc. Approach BEGIN A.C. Pvmt.
Sta. 32+50.00 Match Line

Construct Concrete C & G, Type 1 (6" & 1–1/2"). Both Sides
Construct Concrete Sidewalk 4" (6' Wide)
Construct AC Pavement 7" (5" Bit Base) on Crushed Rock Base 8" Reinf.
RIDGE PORT ADD
Sta. 29+74.90, 30.75' Lt. END Conc. Walk 6" (See Detail This Sheet)
RESERVE "C"
RIDGE PORT ADD
Adjust Fire Hydrant Ex. Bury Elev.= 1324.32 New Bury Elev.= 1326.50
Valve Box Adjustment Ex. Top Elev.=1324.32 New Top Elev.= 1326.25
Remove Metal Guard Rail (4 Locations)
Construct Reinforced Concrete Sidewalk 6". Widen Sidewalk from 6' to 10' to Bridge in 25'.
Sta. 30+39.60, 30.75' Lt. BEGIN Conc. Walk 6" (See Detail This Sheet)
Sta. 31+35.62 50.0' Lt
Construct Reinforced Concrete Sidewalk 6". Narrow Sidewalk from 10' to 6' at Bridge in 25'.
Construct Concrete Sidewalk 4" (6' Wide)
Construct AC Pavement 7" (5" Bit Base) on Crushed Rock Base 8" Reinf.

SCALE: 1" = 20'
0 10 20

29th Street North

Sta. 29+51.00 END AC Pavement 7" (5" Bit Base) on Crushed Rock Base 8" Reinf. BEGIN Conc. Bridge Approach, 10" on Crushed Rock Base 7" Reinf.

Sta. 31+63.50 END Conc. Bridge Approach, 10" on Crushed Rock Base 7" Reinf. BEGIN AC Pavement 7" (5" Bit Base) on Crushed Rock Base 8" Reinf.

Construct Concrete Approach 10" Bridge W/Transition Rail (11" Wide) (6"–27") (Both Sides) on Crushed Rock Base 7" Reinf. (See Bridge Approach Details)

Construct Concrete Approach 10" Bridge W/Transition Rail (11" Wide) (6"–27") (Both Sides) on Crushed Rock Base 7" Reinf. (See Bridge Approach Details)

EX. CONCRETE HAUNCH SLAB BRIDGE

SWS Line 2
SWS Line 3

3009 Ridge Port Ct
Ⓐ

RES. "A"
RES. "A"

Sta. 30+83.78 50.0' Rt
Sta. 30+88.59 60.0' Rt

Expansion Joint
Conc. Sidewalk (Width Varies in 25')
8"
6"
Prop. Bridge Deck
Prop. Bridge Abutment
12"
12"
Thicken Walk in 2ft. Cost of Thickened Walk to be Subsidiary to the Project

SIDEWALK ABUTMENT DETAIL

NOTE: See Earthwork Sheet for Grading Limits, Finish Grades, Tree Removal, Existing Irrigation Systems.

Note:
Pavement, Sidewalks, and Etc. To Be Removed Are Indicated By:

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg
NOVEMBER, 2013

Design: KEK
Drawn: JDM
Approved: MWS
Scale: Noted

Project No. 09-09-E382
CAPITAL IMPROVEMENT PROJECT
29TH STREET NORTH PAVING
Sta. 27+00.00 to Sta. 32+50.00
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company, P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 16 OF 177

BENCHMARK
Benchmark #6–C.O.W. Disc N.E. Corner
Handrail of Bridge.
Sta. 31+28.30, 15.0' Lt
Elev.= 1330.34 '88 NAVD

Construct AC Pavement 7" (5" Bit Base) on Crushed Rock Base 8" Reinf.

NOTE:
See Ridge Port Valley Gutter Detail Sheet for full information.

Construct Concrete C & G, Type 3 (8" & 1–1/2").

Construct Wheelchair Ramps W/Detectable Warnings (6' Wide)

End Walk Match @ Nearest Joint

Construct Concrete Sidewalk 4" (6' Wide)

Const. Conc. Sidewalk 4" (4" Wide)

Construct Concrete C & G, Type 1 (6" & 1–1/2"). Both Sides

Const. Conc. Sidewalk Protection Curb

Adjust WVB Ex. Elev.=1327.43 New Elev.=1326.32

Adjust WVB Ex. Elev.=1327.21 New Elev.=1326.40

Remove 81 L.F. Culvert Pipe

Begin Protection Curb. See Detail

Construct AC Pavement 7" (5" Bit Base) on Crushed Rock Base 8" Reinf.

Construct Concrete Sidewalk 4" (6' Wide)

Construct Conc. Pvmt. (V.G.) 8"(Reinf.) on Crushed Rock Base 7" Reinf. W/Conc. Curb, Mono Edge (6" & 1–1/2") (See Ridgeport V. G. Detail)

Construct Concrete Driveway (8")(Reinforced) (22.0' Wide)

Construct Concrete Driveway (8")(Reinforced) (17.0' Wide)

SWS Line 3A

SWS Line 3B

SWS Line 3

P.V.I. No V.C. Tc=1326.37

P.V.I. 50.0' V.C. Tc=1325.15

P.V.I. No V.C. Tc=1326.20

Sta. 32+50.00 Match Line

Sta. 32+80.00 END Taper Left

Sta. 33+66.22 P.V.C.

Sta. 33+71.19 50.0' Lt

Sta. 33+91.22 Radius

Sta. 34+16.22 P.V.T.

Sta. 34+90.10 119.91' Lt

Sta. 35+05.30 Radius

Sta. 35+60.00 50.0' Lt

Sta. 38+00.00 Match Line

−1.238%

−1.107%

+0.948%

+0.406%

3001 Ridge Port Ct

3005 Ridge Port Ct

3006 Ridge Port Ct

3010 Ridge Port Ct

3014 Ridge Port Ct

RIDGE PORT ADD

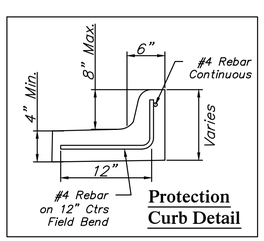
BAREFOOT BAY 2ND ADD

29th STREET NORTH

RIDGE PORT

6461

SCALE: 1" = 20'
0 10 20



Protection Curb Detail

NOTE: See Earthwork Sheet for Grading Limits, Finish Grades, Tree Removal, Existing Irrigation Systems.

Note:
Pavement, Sidewalks, and Etc. To Be Removed Are Indicated By:

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NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

Project No. 09-09-E382

CAPITAL IMPROVEMENT PROJECT

29TH STREET NORTH PAVING

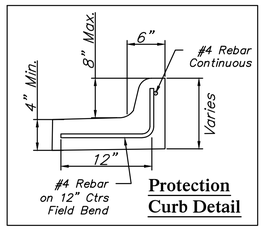
Sta. 32+50.00 to Sta. 38+00.00

29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

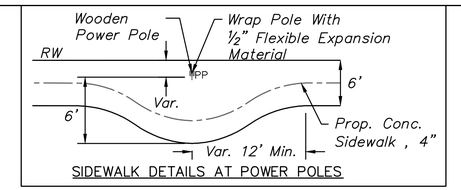
Baughman Company , P.A.
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SHEET 17 OF 177

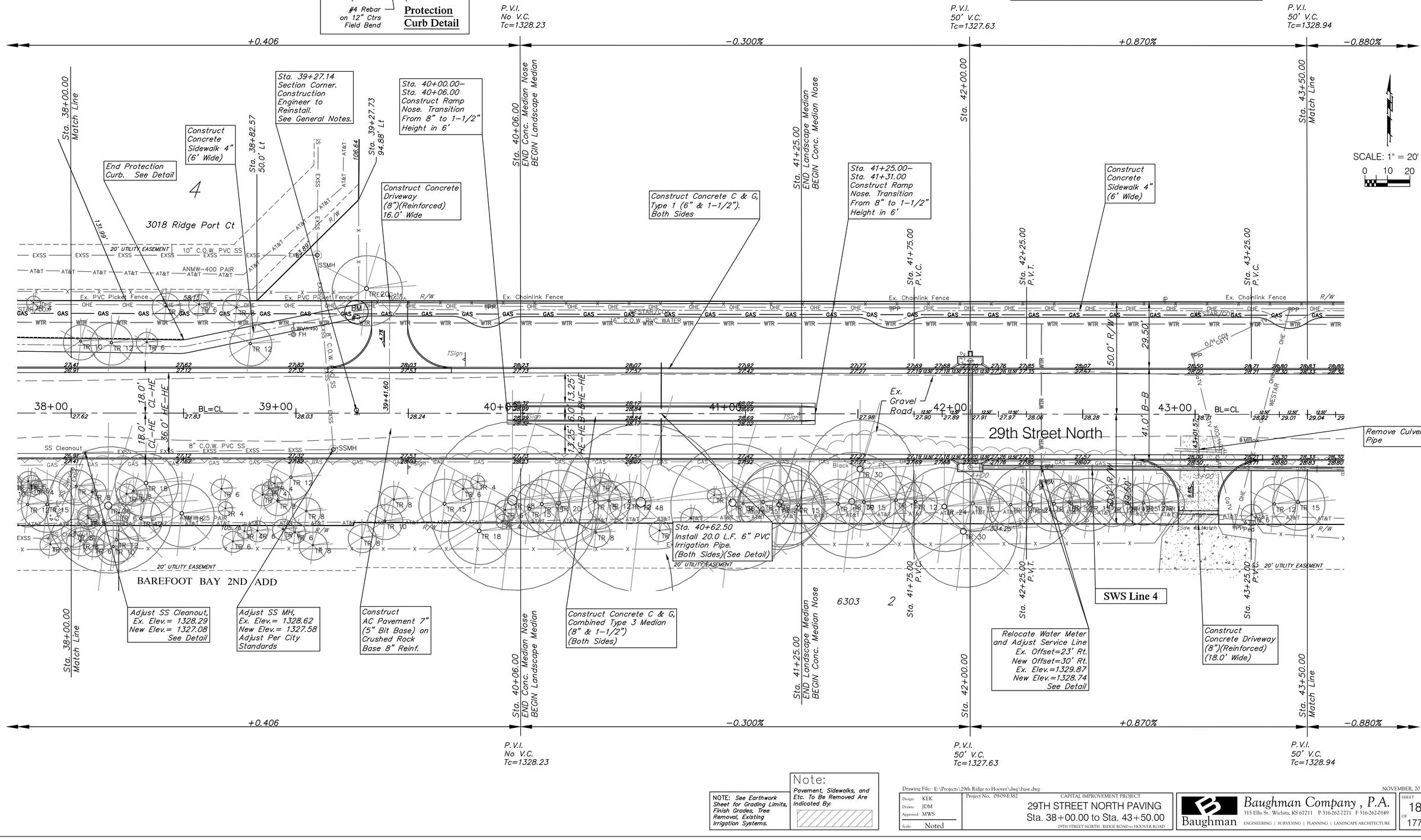
BENCHMARK
Benchmark #5–C.O.W. Disc 45' N of ¾" Iron Pipe at ¼ Sec. Corner on ℄ 29th St.
Sta. 39+26.80, 45.0' Lt
Elev.= 1328.95 '88 NAVD



Protection Curb Detail



SIDEWALK DETAILS AT POWER POLES



NOTE: See Earthwork Sheet for Grading Limits, Finish Grades, Tree Removal, Existing Irrigation Systems.

Note: Pavement, Sidewalks, and Etc. To Be Removed Are Indicated By:

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NOVEMBER, 2013

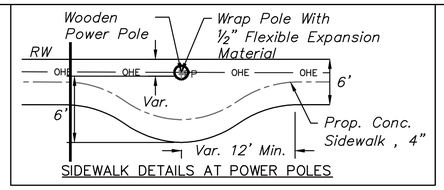
Design: KEK
Drawn: JDM
Approved: MWS
Scale: Noted

Project No. 09-09-E382
CAPITAL IMPROVEMENT PROJECT
29TH STREET NORTH PAVING
Sta. 38+00.00 to Sta. 43+50.00
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
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SHEET 18 OF 177

BENCHMARK
Benchmark #4–RR Spike in 5th HLP E. of ¼ Sec. Corner on ℄ 29th St.
Sta. 48+94.40, 46.0' Lt
Elev.= 1329.26 '88 NAVD



SIDEWALK DETAILS AT POWER POLES

P.V.I. No V.C. Tc=1328.94 — +0.870% — Sta. 43+50.00 Match Line
−0.880%
P.V.I. 50' V.C. Tc=1327.79 — Sta. 44+80.00
+0.680%
P.V.I. 50' V.C. Tc=1328.61 — Sta. 46+00.00
−0.610%
P.V.I. No V.C. Tc=1327.06 — Sta. 48+50.00
+0.349%
Sta. 49+00.00 Match Line

Construct Concrete Sidewalk 4" (6' Wide)
Construct Concrete C & G, Type 1 (6" & 1–1/2"). Both Sides
Install New Valve Box over Existing Water Valve. Top Elev.= 1328.31 (Paid 'Valve Box Adjusted'
Construct AC Pavement 7" (5" Bit Base) on Crushed Rock Base 8" Reinf.
Construct Concrete Sidewalk 4" (6' Wide)

Sta. 43+25.00 P.V.C.
Sta. 43+75.00 P.V.T.
Sta. 44+55.00 P.V.C.
Sta. 45+05.00 P.V.T.
Sta. 45+75.00 P.V.C.
Sta. 46+25.00 P.V.T.

SWS Line 4A
SWS Line 5A
5950
PK-258-1
BM #4 1479.95'
Chainlink Fence
Ex. Chainlink Fence
R/W
WESTAR/COX
WATER
Ex. 16" S.W. PVC WATER
U/G COX .500P3
30"x30" Box
Ex. Gravel Road

29th Street North

44+00 45+00 46+00 47+00 48+00 BL=CL 49+00

18.0' CL–HE
36.0' HE–HE
41.0' B–B
50.0' R/W
29.50'
45+04.80
48+18.78
48+03.70 29.12' Rt
48+03.60 49.12' Rt
480.00'

MBox
Black Hills 2" PE
ANMW–25 PAIR
Key Pad
Saw & Match
Landscape Boulders
Ex. Conc.
308.79'
Ex. Brick Wall
Gate
Ped
ATT Ped
Ex. Ped
20' UTILITY EASEMENT
35' BLDG. SETBACK
20' UTILITY ESMT.

6303 2
6111 3
6111 3
6029 D-1098-UP
Mary Oakman
5620 W 29th St N
WICHITA, KS 67205
5 W

"RESERVE "A"

SWS Line 4
SWS Line 5

Save and Protect Existing Key Pad, Landscape Rock and Tree in Driveway Median.
Save and Protect Existing Decorative Mailbox
Construct Concrete Driveway (8")(Reinforced) (34.0' Wide)
Construct Concrete Driveway (8")(Reinforced) (12.0' Wide)

SCALE: 1" = 20'
0 10 20

NOTE: See Earthwork Sheet for Grading Limits, Finish Grades, Tree Removal, Existing Irrigation Systems.

Note:
Pavement, Sidewalks, and Etc. To Be Removed Are Indicated By:

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NOVEMBER, 2013

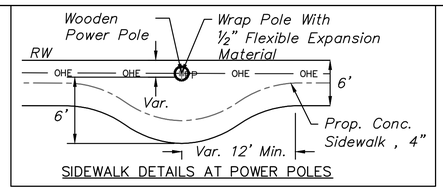
Design: KEK
Drawn: JDM
Approved: MWS
Scale: Noted

Project No. 09-09-E382
CAPITAL IMPROVEMENT PROJECT
29TH STREET NORTH PAVING
Sta. 43+50.00 to Sta. 49+00.00
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 19 OF 177

BENCHMARK
Benchmark #4–RR Spike in 5th HLP E. of ¼ Sec. Corner on ℄ 29th St.
Sta. 48+94.40, 46.0' Lt
Elev.= 1329.26 '88 NAVD



SIDEWALK DETAILS AT POWER POLES

SCALE: 1" = 20'
0 10 20

P.V.I.
50' V.C.
Tc=1328.98

+0.349%

−0.823%

Construct Concrete Sidewalk 4" (6' Wide)

Ex. Pond Shoreline

Construct AC Pavement 7" (5" Bit Base) on Crushed Rock Base 8" Reinf.

Sta. 49+00.00 Match Line

16" STEEL PIPE

BLDG.

SH

Well

EM

Construct Concrete Driveway (8") (Reinforced) 16.0' Wide

Construct Concrete C & G, Type 1 (6" & 1-1/2"). Both Sides

YH

Construct Concrete Sidewalk 4" (6' Wide)

Construct Concrete Driveway (8")(Reinforced) (16.0' Wide)

Grade to Match

Sta. 54+50.00

Sta. 53+75.00 P.V.C.

Sta. 54+20.55 40.0' Lt

Sta. 54+20.54 50.0' Lt

Sta. 54+25.00 P.V.T.

Sta. 54+50.00 Match Line

1479.95' R/W

Ex. Chainlink Fence

Ex. PVC Fence

Match Ex. Gate

R/W

Ex. PVC Fence

Ex. PVC Fence

R/W

50.0' R/W

29.50'

41.0' B-B

36.0' HE-HE

18.0' CL-HE

16.0' CL-HE

51+10.00

49+00 50+00 51+00 52+00 53+00 54+00

BL=CL

29th STREET NORTH

Black Hills 2" PE

16" C.O.W. PVC WATER

WESTAR/COX

ANAW-50 PAIR

ANMW-25 PAIR

MBox

Landscape Boulders

TR 36

TR 18

TR 30

TR 15

TR 2

TR 3

TR 4

TR 8

TR 6

TR 10

TR 12

TR 24

TR 27

TR 33

TR 39

TR 42

TR 48

TR 54

TR 60

TR 66

TR 72

TR 78

TR 84

TR 90

TR 96

TR 102

TR 108

TR 114

TR 120

TR 126

TR 132

TR 138

TR 144

TR 150

TR 156

TR

BENCHMARK
Benchmark #3–RR Spike in 9th HLP E. of ¼ Sec. Corner on ℄ 29th St.
Sta. 55+98.40, 27.1' Lt
Elev.= 1332.71 '88 NAVD

P.V.I.
No V.C.
Tc=1326.48

−0.823%

−0.320%

Sta. 54+50.00
Match Line

Relocate Water Meter and Adjust Service Line
Ex. Offset=20' Lt.
New Offset=25' Lt.
Ex. Elev.=1329.70
New Elev.=1328.62
See Detail

Construct AC Pavement 7" (5" Bit Base) on Crushed Rock Base 8" Reinf.

Construct Concrete Driveway (8")(Reinforced) (12.0' Wide)

Construct Concrete Sidewalk 4" (6' Wide)

Grade to Match

5.0'

Sta. 56+69.00–
Sta. 57+75.00
Construct Ramp Nose. Transition From 8" to 1–1/2" Height in 6'

Sta. 56+75.00
END 6' Conc. Ramp Nose
BEGIN Landscape Median

BL. Sta. 57+00.00

600.00

6008
D-1184-UP
Verna Cornwell
1229 W 48th St S
WICHITA, KS 67217

Sta. 58+00.00
END Landscape Median
BEGIN 6' Conc. Ramp Nose

Sta. 58+00.00–
Sta. 58+06.00
Construct Ramp Nose. Transition From 8" to 1–1/2" Height in 6'

Sta. 60+00.00
Match Line

395.00' IP

SCALE: 1" = 20'
0 10 20

Ex. Gravel Road

55+00 56+00 57+00 58+00 59+00 60+00

BL=CL

29th Street North

40.0' B–B

41.0' B–B

50.0' B–B

18.0' CL–HE

36.0' HE–HE

13.25' HE–HE

6.0' B–HE

55+71.60

WESTAR/COX

ANAW–50 FAIR

Black Hills 2" Coated Welded Steel

4' Chain Link Fence

16" C.O.W. PVC WATER

Ex. Gate

DEBRIS PILE

20' UTILITY EASEMENT

35' BLDG. SETBACK

501.51'

510.00'

SWS Line 5

SWS Line 5B

BAREFOOT BAY 2ND ADD

GRIZZELLE BROOKE B
REV 11

Construct Concrete C & G, Type 1 (6" & 1–1/2"). Both Sides

Construct Concrete Driveway (8")(Reinforced) (16.0' Wide)

Adjust Water Valve Box
Top Elev.= 1328.83

Sta. 57+38.00
Install 20.0 L.F. 6" PVC Irrigation Pipe.
(Both Sides)(See Detail)

Construct Concrete C & G, Combined Type 3 Median (8" & 1–1/2") (Both Sides)

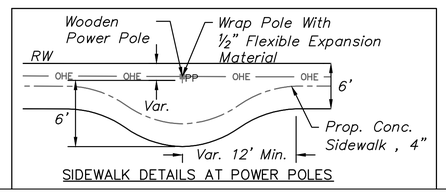
Construct Concrete Sidewalk 4" (6' Wide)

Sta. 57+00.00
BEGIN Landscape Median
END 6' Conc. Ramp Nose

−0.836%

−0.320%

P.V.I.
No V.C.
Tc=1326.48



SIDEWALK DETAILS AT POWER POLES

NOTE: See Earthwork Sheet for Grading Limits, Finish Grades, Tree Removal, Existing Irrigation Systems.

Note:
Pavement, Sidewalks, and Etc. To Be Removed Are Indicated By:

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg
NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

Project No. 09-09-E382

CAPITAL IMPROVEMENT PROJECT
29TH STREET NORTH PAVING
Sta. 54+50.00 to Sta. 60+00.00
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 21 OF 177

BENCHMARK
Benchmark #1–C.O.W. Disc at SW Corner 29th St. & Hoover Road Intersection
Sta. 65+18.60, 26.5' Rt
Elev.= 1330.62 '88 NAVD
(To be Removed)

NOTE: Remove Existing Fence From Right–of–Way

SCALE: 1" = 20'
0 10 20

−0.320% | +1.928% | +1.280%

P.V.I. 100' V.C. Tc=1325.03 — Sta. 61+50.00

P.V.I. No V.C. Tc=1327.73 — Sta. 62+90.00

Sta. 60+00.00 Match Line

Sta. 64+45.80 END A.C. Pvmt. BEGIN Conc. Pvmt.

Sta. 64+95.60 Radius

Construct Concrete Sidewalk 4" (6' Wide)

Construct Concrete Driveway (8")(Reinforced) (14.0' Wide)

Adjust Water Meter and Service Line Ex. Elev. =1325.50 New Elev.=1326.50 See Detail

Construct Concrete C & G, Type 1 (6" & 1–1/2"). Both Sides

Construct AC Pavement 7" (5" Bit Base) on Crushed Rock Base 8" Reinf.

Construct Concrete Driveway (8")(Reinforced) (12.0' Wide)

Relocate Water Meter and Adjust Service Line Ex. Offset=20' Lt. New Offset=30' Lt. Ex. Elev.=1327.42 New Elev.=1328.55 See Detail

Construct Concrete Driveway (8")(Reinforced) (13.0' Wide)

Construct Concrete Sidewalk 4" (8' Wide)

Construct Concrete Pavement (9")(Reinforced) on Crushed Rock Base 6" Reinforced (See Intersection Detail)

Construct Concrete Driveway (8")(Reinforced) (30.0' Wide)

Relocate Water Meter and Adjust Service Line Ex. Offset=19' Lt. New Offset=30' Lt. Ex. Elev.=1330.41 New Elev.=1330.50 See Detail

Grade to Match

5706
D-1185-UP
Jolynn Oakman
5620 W 29th St N
WICHITA, KS 67205

5620
D-1188-UP
Mary S. Oakman
5620 W 29th St N
WICHITA, KS 67205

5618
D-1187-UP
Jenola A Harrell & Shirley Vincent
1037 Road 240
EMPORIA, KS 66801

3025 N Hoover Road
D-1186-UP
Wanda J & Lawrence W Zimmerman
3025 N Hoover Road
WICHITA, KS 67205

SWS Line 5D

SWS Line 5C

SWS Line 5

29th STREET NORTH

HOOVER

BAREFOOT BAY 2ND ADD

BOWMAN GREGORY ANGELINA M

20' UTILITY EASEMENT

35' BLDG. SETBACK

Ex. Gravel Road

4' Chain Link Fence

16" C.O.W. PVC WATER

24" C.O.W. DUCTILE IRON WATER

Black Hills 2" Coated Welded Steel

Sta. 61+00.00 P.V.C.

Sta. 62+00.00 P.V.T.

Sta. 62+15.12 49.83' Rt

Sta. 63+15.11 74.88' Rt

Sta. 63+40.00 END Taper Right

Sta. 62+90.00 BEGIN Taper Right

Sta. 64+50.00 Match Line

Sta. 64+90.10 74.96' Rt

Sta. 64+90.54 40.00' Lt

Sta. 65+35.49 85.00' Lt

Sta. 64+45.80
END AC Pavement 7" (5" Bit Base) on Crushed Rock Base 8" Reinf.
BEGIN Concrete Pavement (9")(Reinforced) on Crushed Rock Base 6" Reinforced

Construct Brick Pavers (3–1/8") (Crosswalk) on 9" Concrete Pvmt. (See Crosswalk Details.)

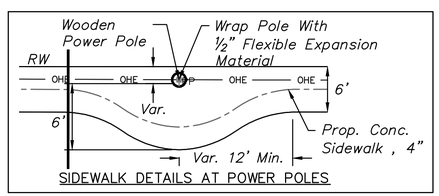
P.V.I. 100' V.C. Tc=1325.03

Construct Concrete Driveway (8")(Reinforced) (14.0' Wide)

P.V.I. No V.C. Tc=1327.73

P.V.I. No V.C. Tc=1328.03

NOTE: Remove Existing Fence from Right–of–Way



SIDEWALK DETAILS AT POWER POLES

NOTE: *See Earthwork Sheet for Grading Limits, Finish Grades, Tree Removal, Existing Irrigation Systems.*

Note:
Pavement, Sidewalks, and Etc. To Be Removed Are Indicated By:

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NOVEMBER, 2013

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Approved:	MWS
Scale:	Noted

Project No. 09-09-E382

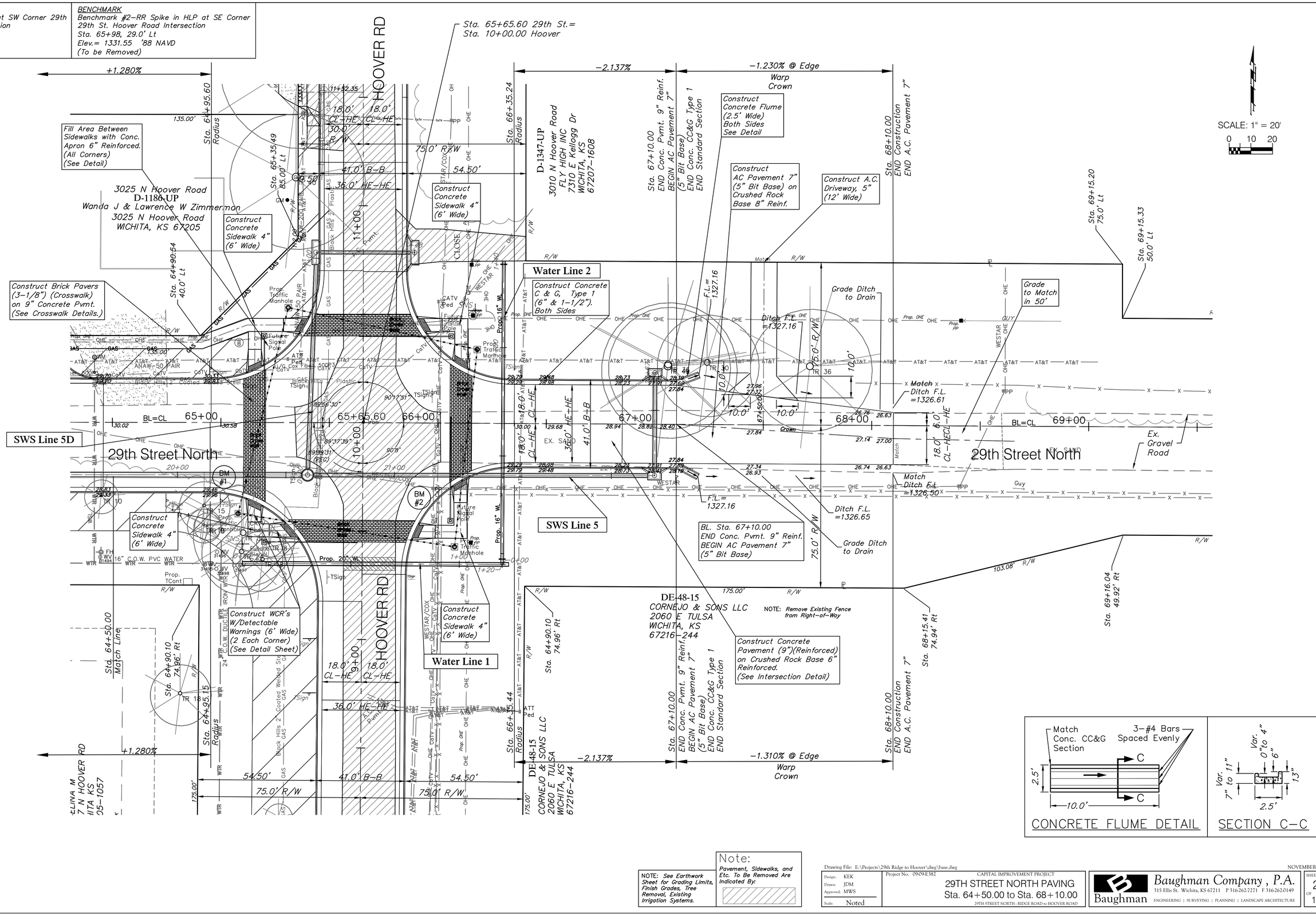
CAPITAL IMPROVEMENT PROJECT

29TH STREET NORTH PAVING
Sta. 60+00.00 to Sta. 64+50.00
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

BENCHMARK
Benchmark #1–C.O.W. Disc at SW Corner 29th St. & Hoover Road Intersection
Sta. 65+18.60, 26.5' Rt
Elev.= 1330.62 '88 NAVD
(To be Removed)

BENCHMARK
Benchmark #2–RR Spike in HLP at SE Corner 29th St. Hoover Road Intersection
Sta. 65+98, 29.0' Lt
Elev.= 1331.55 '88 NAVD
(To be Removed)



NOTE: *See Earthwork Sheet for Grading Limits, Finish Grades, Tree Removal, Existing Irrigation Systems.*

Note: *Pavement, Sidewalks, and Etc. To Be Removed Are Indicated By:*

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg
NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

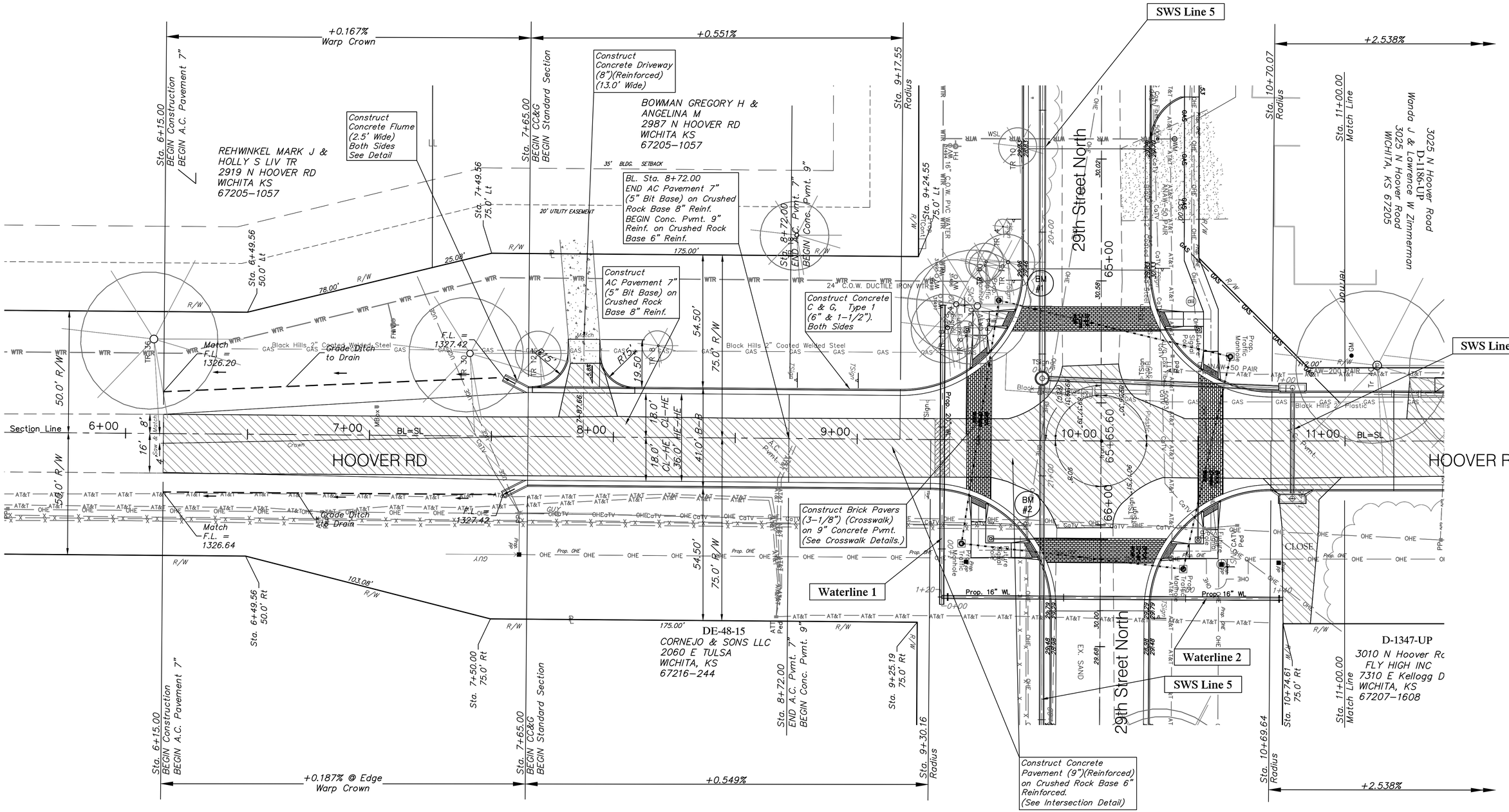
Project No. 09-09-E382
CAPITAL IMPROVEMENT PROJECT
29TH STREET NORTH PAVING
Sta. 64+50.00 to Sta. 68+10.00
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 23 OF 177

BENCHMARK	BENCHMARK
Benchmark #1–C.O.W. Disc at SW Corner 29th St. & Hoover Road Intersection Sta. 65+18.60, 26.5' Rt Elev.= 1330.62 '88 NAVD (To be Removed)	Benchmark #2–RR Spike in HLP at SE Corner 29th St. Hoover Road Intersection Sta. 65+98, 29.0' Lt Elev.= 1331.55 '88 NAVD (To be Removed)

SCALE: 1" = 20'
0 10 20



NOTE: *See Earthwork Sheet for Grading Limits, Finish Grades, Tree Removal, Existing Irrigation Systems.*

Note:
Pavement, Sidewalks, and Etc. To Be Removed Are Indicated By:

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg
NOVEMBER, 2013

Design: KEK
Drawn: JDM
Approved: MWS
Scale: Noted

Project No. 09-09-E382
CAPITAL IMPROVEMENT PROJECT
HOOVER ROAD NORTH PAVING
Sta. 6+15.00 to Sta. 11+00.00
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

BENCHMARK
Benchmark #1–C.O.W. Disc at SW Corner 29th St. & Hoover Road Intersection
Sta. 65+18.60, 26.5' Rt
Elev.= 1330.62 '88 NAVD
(To be Removed)

BENCHMARK
Benchmark #2–RR Spike in HLP at SE Corner 29th St. Hoover Road Intersection
Sta. 65+98, 29.0' Lt
Elev.= 1331.55 '88 NAVD
(To be Removed)

SCALE: 1" = 20'
0 10 20

SWS Line 5

WaterLine 1

29th Street North

+0.549%

Sta. 9+17.22
Radius

Sta. 10+70.07
Radius

+2.538%

Construct Concrete C & G, Type 1 (6" & 1–1/2"). Both Sides

Sta. 11+78.00
END CC&G
END Standard Section

+0.216%
Warp
Crown Grade

Sta. 13+03.00
END Construction
END A.C. Pavement 7"

Transition from Full Height Curb to 0" Height Curb in 5'. Cost to be Subsidiary to Project.

Sta. 11+20.00
END Concrete Pavement (9")(Reinforced) on Crushed Rock Base 6" Reinforced
BEGIN AC Pavement 7" (5" Bit Base) on Crushed Rock Base 8" Reinf.

Construct A.C. Driveway, 5" (13.0' Wide) (See Detail This Sheet)

Construct Concrete Ramp Driveway (8")(Reinforced) (13.0' Wide)

Sta. 11+00.00
Match Line

Sta. 11+20.00
END Conc. Pvmt. 9"
BEGIN A.C. Pvmt. 7"

D-1190-UP
RANNEY JOHN D
3035 N HOOVER RD
WICHITA KS
67205–1109

Wanda I & Lawrence W Zimmerman
3025 N Hoover Road
WICHITA, KS 67205

D-1189-UP
Richard D Kulp
3045 N Hoover Rd
WICHITA, KS 67205

D-1191-UP
Michiel D & Gwendolyn F Vance
3055 N Hoover Rd
WICHITA, KS 67205

HOOVER RD

SWS Line 5D

WaterLine 2

SWS Line 5

Construct Concrete Pavement (9")(Reinforced) on Crushed Rock Base 7" Reinforced. (See Intersection Details)

Construct Brick Pavers (3–1/8") (Crosswalk) on 9" Concrete Pvmt. (See Crosswalk Details.)

Construct AC Pavement 7" (5" Bit Base) on Crushed Rock Base 8" Reinf.

BL. Sta. 13+03.00
END Construction
END A.C. Pvmt. 7"

DE-48-15
'EJO & SONS LLC
E TULSA
TA, KS
5–244

D-1347-UP
3010 N Hoover Road
FLY HIGH INC
7310 E Kellogg Dr
WICHITA, KS
67207–1608

Match
Grade to Match
6.0'
8.14%
8.0'
33.39
1334.72
1328.33
10.0'
10.0'
33.63

NOTE: See Earthwork Sheet for Grading Limits, Finish Grades, Tree Removal, Existing Irrigation Systems.

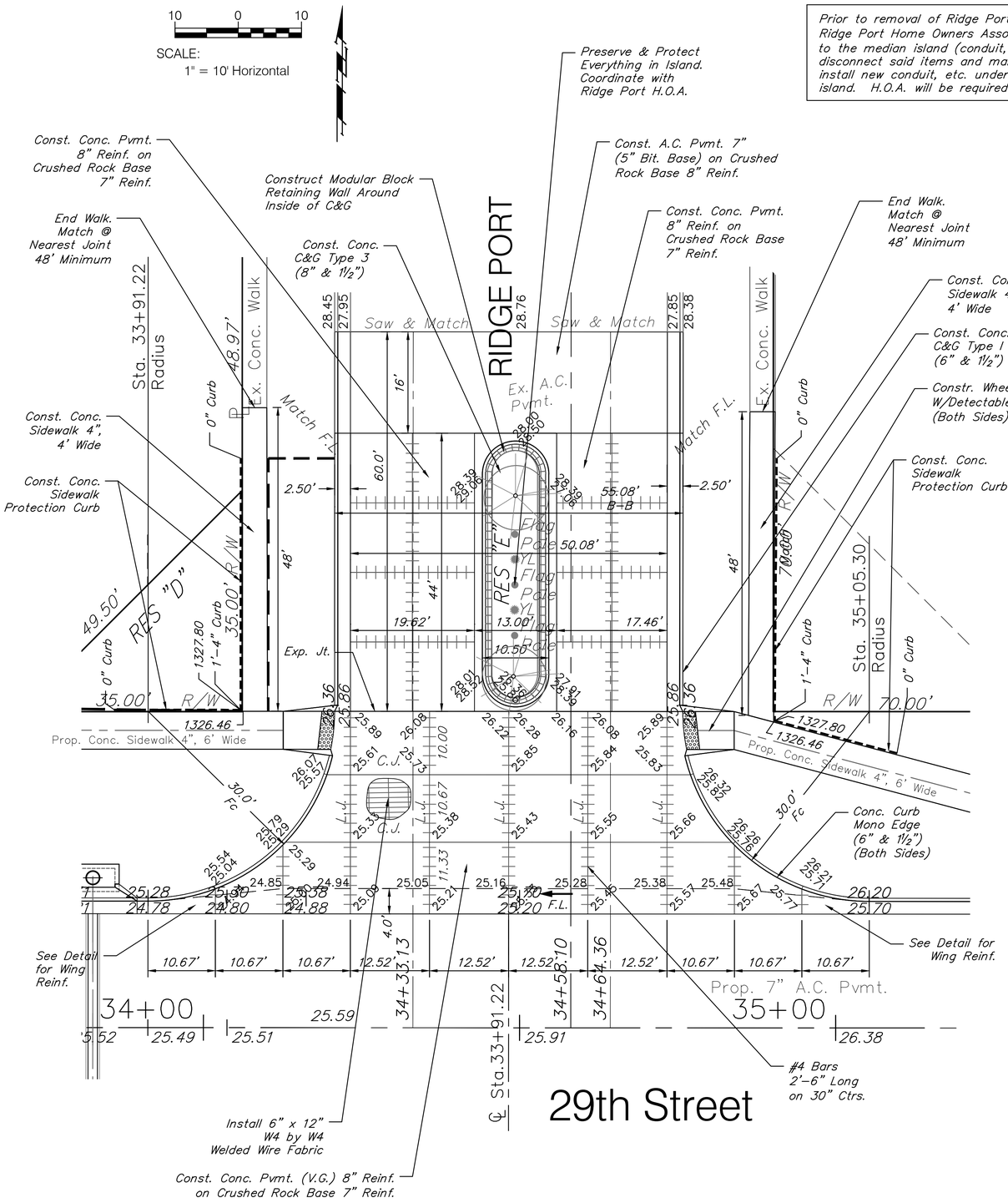
Note:
Pavement, Sidewalks, and Etc. To Be Removed Are Indicated By:

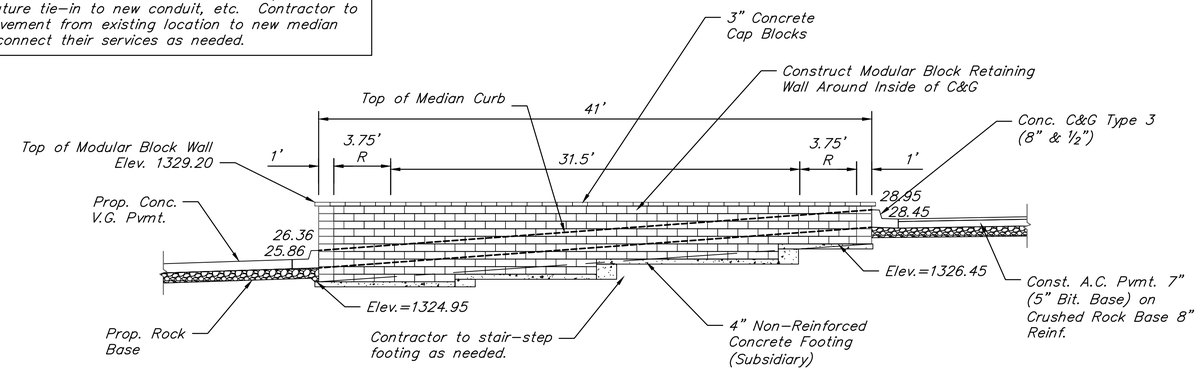
Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg
NOVEMBER, 2013

Design: KEK	Project No. 09-09-E382
Drawn: JDM	CAPITAL IMPROVEMENT PROJECT
Approved: MWS	HOOVER ROAD NORTH PAVING
Scale: Noted	Sta. 11+00.00 to Sta. 13+03.00
	29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company, P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

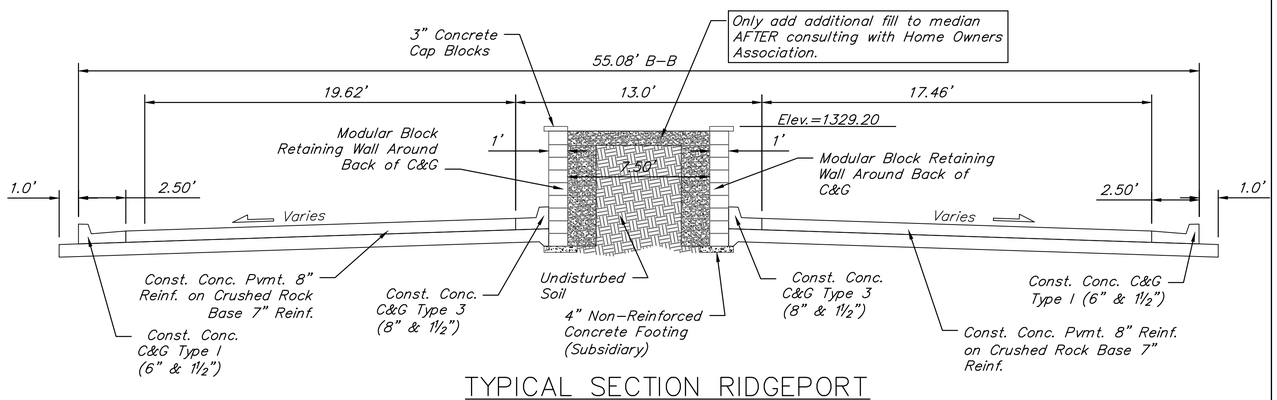
SHEET 25 OF 177



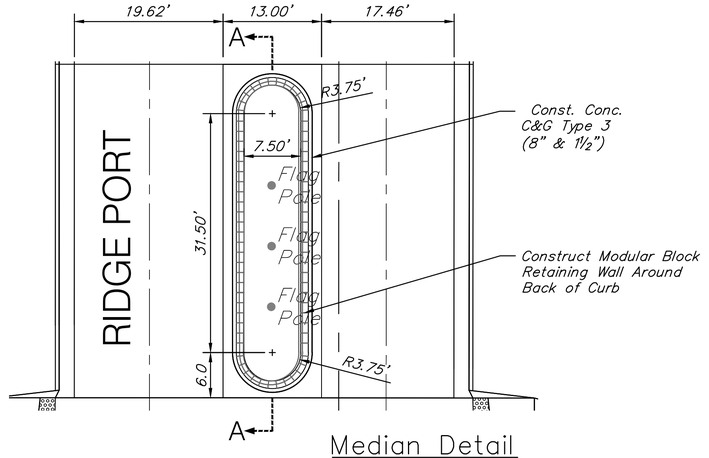


SECTION A-A
1"=5'

Construct Modular Block Retaining Wall Around Inside of C&G (See Modular Block Wall Details)



TYPICAL SECTION RIDGEPORT
(No Scale)

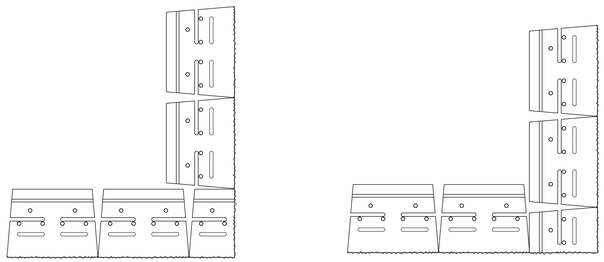


Median Detail
(No Scale)

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg

NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT RIDGEPORT VALLEY GUTTER DETAIL 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

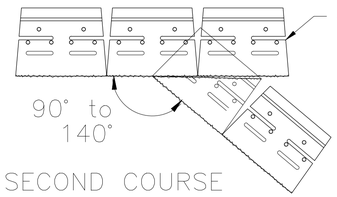


FIRST COURSE

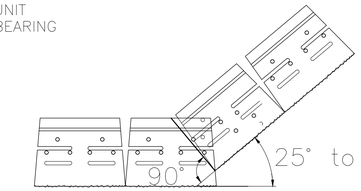
SECOND COURSE

CORNER DETAIL A

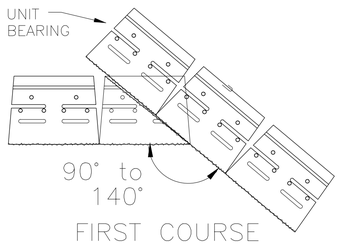
90 DEGREE OUTSIDE CORNER
SCALE: NONE



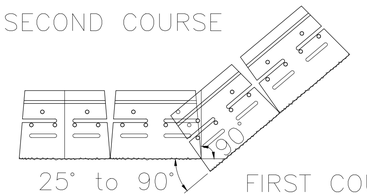
SECOND COURSE



SECOND COURSE



FIRST COURSE
INSIDE CORNER

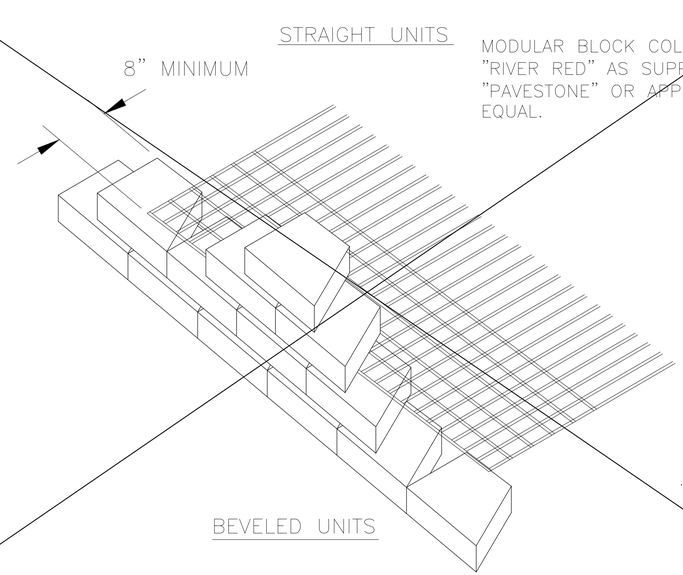


FIRST COURSE

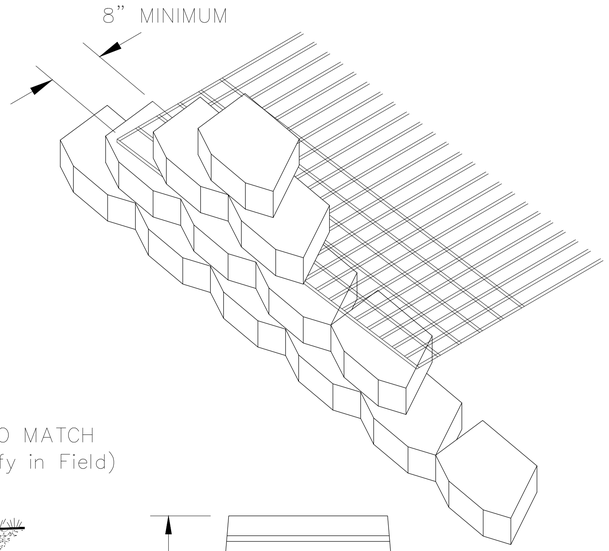
OUTSIDE CORNER

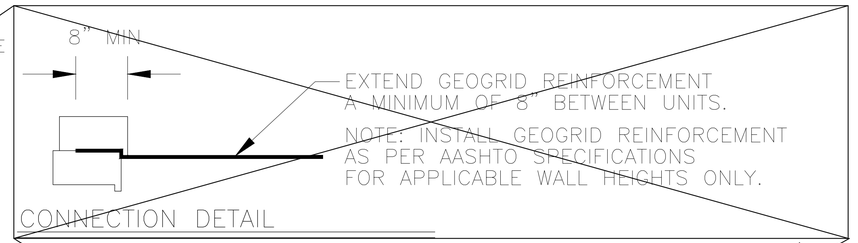
STRAIGHT UNITS

MODULAR BLOCK COLOR TO BE "RIVER RED" AS SUPPLIED BY "PAVESTONE" OR APPROVED EQUAL.



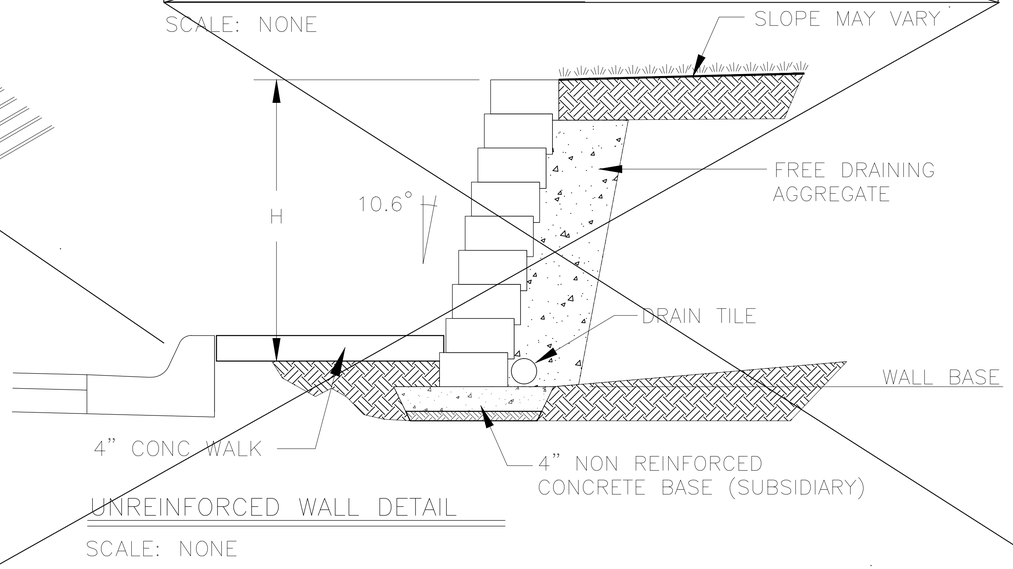
BEVELED UNITS





CONNECTION DETAIL

SCALE: NONE

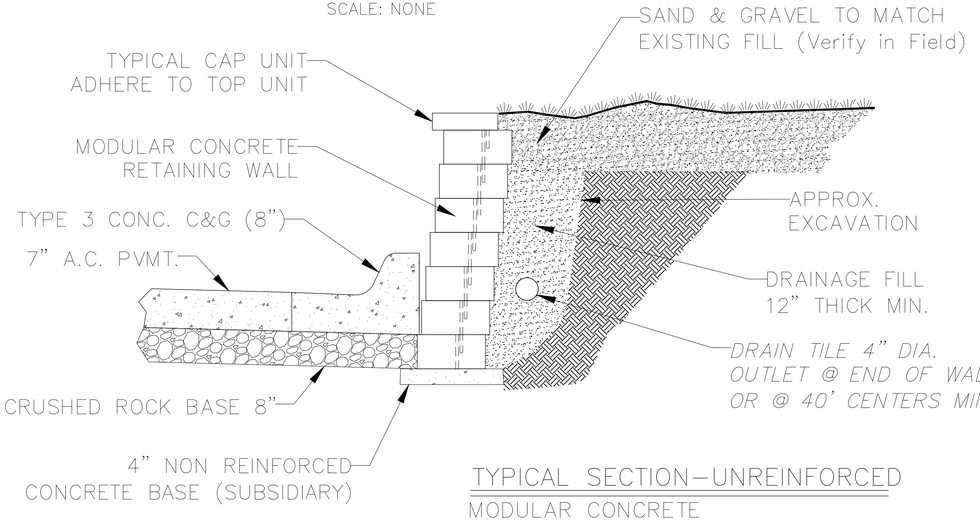


UNREINFORCED WALL DETAIL

SCALE: NONE

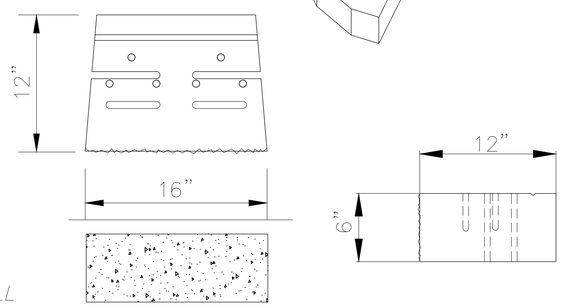
CORNER DETAIL B

OBLIQUE ANGLE CORNERS
SCALE: NONE



TYPICAL SECTION—UNREINFORCED

MODULAR CONCRETE RETAINING WALL
SCALE: NONE



TYPICAL UNIT

UNIT DIMENSIONS
SCALE: NONE

GENERAL NOTES

1. STRIP ALL VEGETATION AND ORGANIC SOIL FROM THE WALL AND GRID ALIGNMENT.
2. BENCH CUT ALL EXCAVATED SLOPES.
3. DO NOT OVER EXCAVATE UNLESS DIRECTED BY SITE SOIL ENGINEER TO REMOVE UNSUITABLE SOIL.
4. SITE SOIL ENGINEER SHALL VERIFY FOUNDATION SOILS AS BEING COMPETENT PER THE DESIGN STANDARDS AND PARAMETERS.
5. BASE SHALL CONSIST OF NON-REINFORCED CONCRETE MINIMUM 4" THICK
6. CAPSTONE AND TOPCOURSE SHALL BE GLUED USING WEATHER PROOF CONSTRUCTION ADHESIVE, LIQUID NAILS OR APPROVED OTHER.
7. MINIMUM EMBEDMENT OF WALL BELOW FINISH GRADE SHALL BE 12" FOR WALL HEIGHTS FROM 4' AND UP, 6" BELOW 4' UNLESS SHOWN DIFFERENTLY.
8. FOLLOW APPLICABLE PROVISIONS OF THE MANUFACTURERS INSTALLATION INSTRUCTIONS AND AASHTO SPECIFICATIONS.
9. DRAINAGE FILL 12" THICK SHALL BE INSTALLED BEHIND THE WALL TO WITHIN 12" OF THE TOP OF THE WALL.
10. WHERE DRAIN TILE IS USED PROVIDE OUTLETS @ MIN. 40' CC.
11. BACKFILL AND COMPACT IN FRONT OF THE WALL AS WALL IS INSTALLED.
12. COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. THE MINIMUM NUMBER OF TESTS SHALL BE DETERMINED BY THE SITE SOILS ENGINEER.
13. COMPACTION SHALL BE TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY.
14. SEE ELEVATION FOR GEOGRID TYPE, LENGTH AND LOCATION IF REQUIRED.
15. GEOGRID SHALL BE THE TYPE AND LENGTH AS SHOWN. PULL GEOGRID TIGHT PRIOR TO BACKFILLING.
16. PROVIDE LATERAL DRAINAGE SWALES TO DIRECT FLOWS AROUND THE ENDS OF THE WALL.
17. ESTABLISH TURF AS SOON AS THE WALL IS COMPLETED.
18. FINAL WALL ALIGNMENT SHALL BE LOCATED IN THE FIELD.

IF DIFFERENT CONDITIONS EXIST, THE CONTRACTOR MUST CONTACT THE FIELD ENGINEER PRIOR TO CONSTRUCTION OF THE RETAINING WALL.

Drawing File: E:\29th Ridge to Hoover\Details\Modular Block Retaining Wall Details.dwg — NOVEMBER, 2013

Design:	City of Wichita
Drawn:	STAFF
Approved:	MWS
Scale:	NONE

Project No. 09-59-E382 CAPITAL IMPROVEMENT PROJECT

MODULAR BLOCK RETAINING WALL DETAILS

29TH STREET NORTH-RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

RIDGE ROAD

29th Street

12+00

13+00

14+00

Thimble

BEGIN CONCRETE
Sta. 12+00.00

Sta. 13+74.82
Radius

Sta. 13+73.23
Radius

END CONCRETE
Sta. 14+25.00

SCALE:
1" = 10' Horizontal

Construct
Conc. C&G Type I
(6" & 1½")

Const. Conc. Pvmt. 9" Reinf. on
Crushed Rock Base 6" Reinf.

#4 Bars 2'-6" Long
on 30" Ctrs.

Install 6" x 12"
W4 by W4
Welded Wire Fabric

Widen Gutter Section.
Slope to Match
Subsidiary to
Conc. C&G Type I
(6" & 1½")

Const. Conc. Walk 4"
(6' Wide)(Typical)
(Each Corner)

Brick Paver
Crosswalk

Brick
Cross
Walk

Saw & Match

Match

R/W

SWSMH

TMH

Prop.
Ped
Pole

TSign

50.0'
Fc

16.00'

16.93'

17.07'

Ex.
Conc.
Pvmt.

Ex.
A.C.
Pvmt.

Prop. 7"
A.C.
Pvmt.

Constr. Wheelchair Ramp
W/~~Detectable Warnings~~ (Typical All
Corners)

Const. Conc.
C&G Type I
(6" & 1½")
(Both Sides)

Fill Area Between
Sidewalks with Conc.
Apron, 6" (All Corners)
(See Detail)

TCont

Construct
Conc. C&G Type I
(6" & 1½")

Const. Conc. Pvmt. 9" Reinf. on
Crushed Rock Base 6" Reinf.

Install 6" x 12"
W4 by W4
Welded Wire Fabric

#4 Bars 2'-6" Long
on 30" Ctrs.

Widen Gutter Section.
Slope to Match
Subsidiary to
Conc. C&G Type I
(6" & 1½")

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

Project No. 09-09-E382

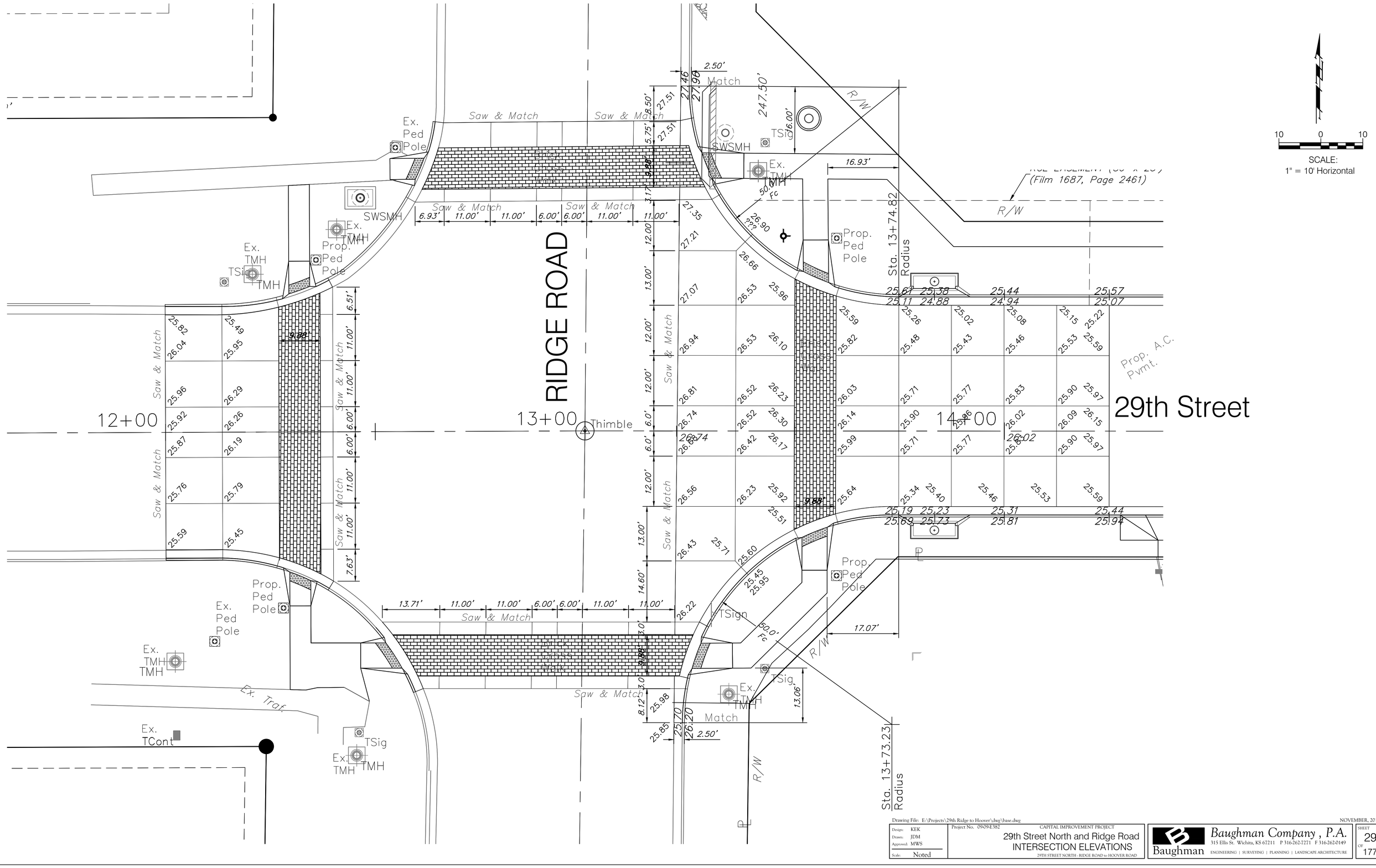
CAPITAL IMPROVEMENT PROJECT

29th Street North and Ridge Road
Intersection Joint Plan

29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 28 OF 177



Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

CAPITAL IMPROVEMENT PROJECT
Project No. 09-09-E382

29th Street North and Ridge Road
INTERSECTION ELEVATIONS
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
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SHEET 29 OF 177

Sta. 64+45.80

Sta. 64+95.60
Radius

Sta. 10+70.07
Radius
Match
Point

Sta. 10+69.64
Radius

Sta. 66+35.24
Radius

Sta. 67+10.00

R/W

17.10'

22.02'

Prop.
Traffic
Manhole

21.65'

21.70'

135.00'

Future
Signal
Pole

Brick
Cross
Walk

Const. Conc. Walk 4"
(6' Wide)(Typical)
(Each Corner)

Const. Conc. Pvmt. 9" Reinf. on
Crushed Rock Base 6" Reinf.

Const. Conc. C&G Type I
(6" & 1½")(Both Sides)

29th Street

65+00

66+00

67+00

10+00

HOOVER Rd.

SWS MH

Const. Conc.
C&G Type I
(6" & 1½")
(Both Sides)

Install 6" x 12"
W4 by W4
Welded Wire Fabric

Const. Wheelchair Ramp
W/Detectable Warnings (Typical
All Corners)

17.40'

29.71'

Sta. 64+95.15
Radius

Sta. 9+17.55
Radius

Sta. 9+30.16
Radius

Sta. 66+35.44
Radius

21.85'

16.62'

Fill Area Between
Sidewalks with Conc.
Apron, 6" (All Corners)
(See Detail)

Sta. 8+72.00

Prop A.C. Pvmt.

10 0 10

SCALE:
1" = 10' Horizontal

HOOVER Rd.

Prop A.C.
Pvmt.

Sta. 11+20.00

Const. Conc. Pvmt. 9"
Reinf. on Crushed Rock
Base 6" Reinf.

Install 6" x 12"
W4 by W4
Welded Wire Fabric

Const. Conc. C&G Type I
(6" & 1½")
(Both Sides)

11+00

Sta. 10+70.07
Radius
Match Point

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

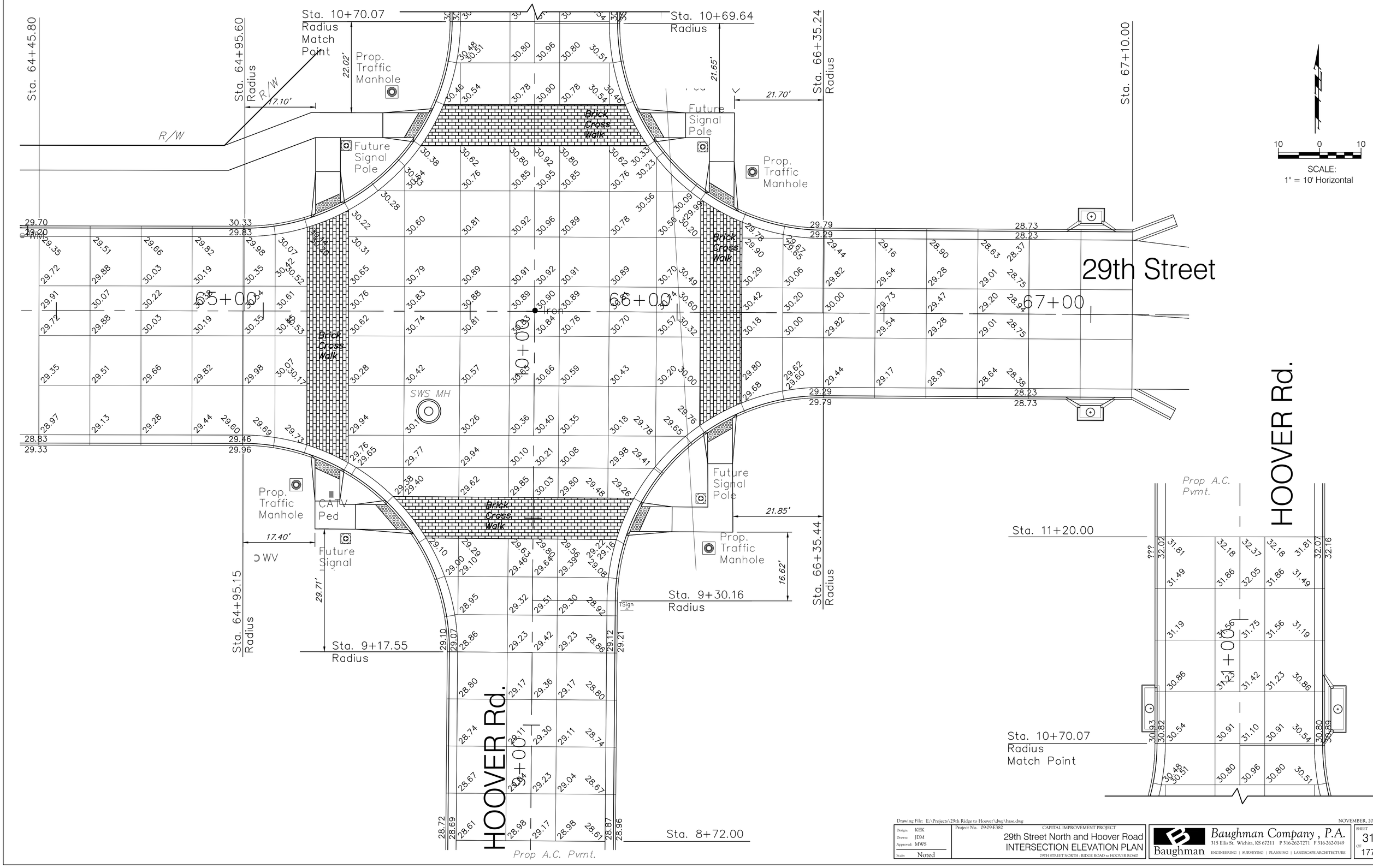
Project No. 09-09-E382

CAPITAL IMPROVEMENT PROJECT

29th Street North and Hoover Road
INTERSECTION JOINT PLAN

29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE



Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

CAPITAL IMPROVEMENT PROJECT

Project No. 09-09-E382

29th Street North and Hoover Road

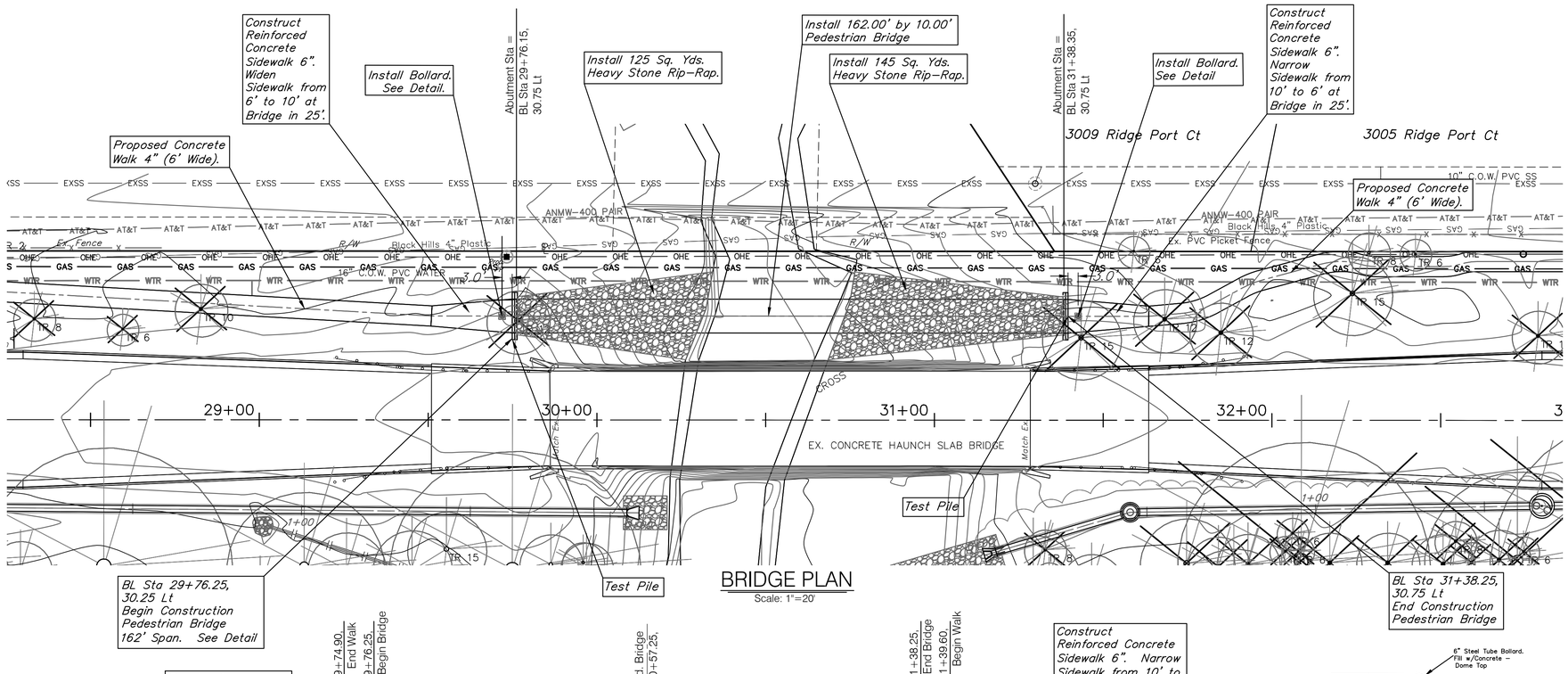
INTERSECTION ELEVATION PLAN

29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.

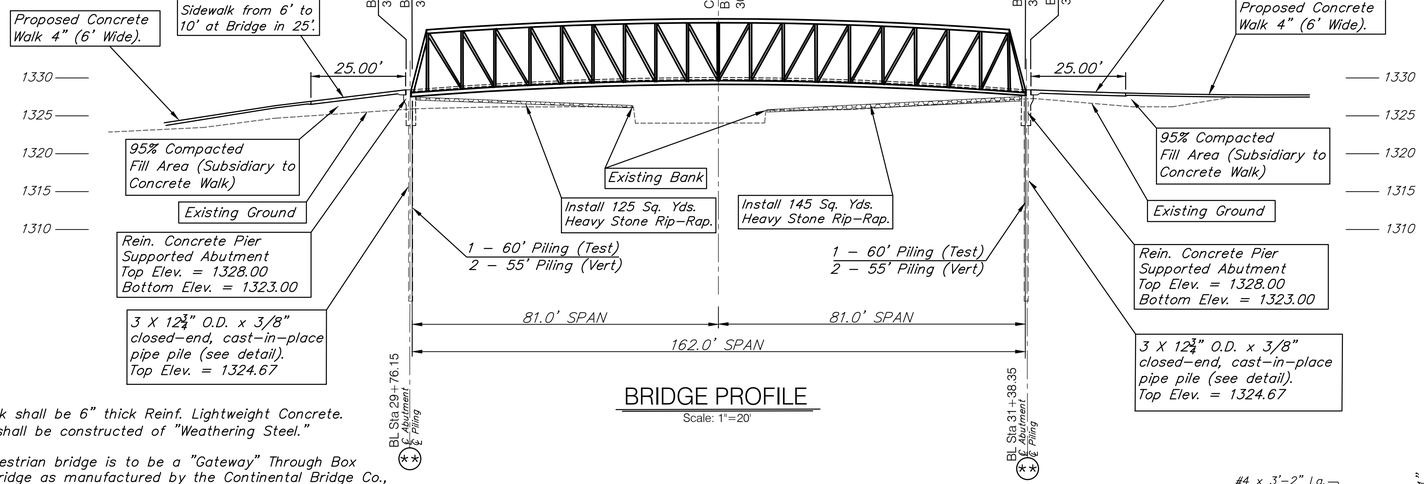
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149

Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE



BRIDGE PLAN

Scale: 1"=20'



BRIDGE PROFILE

Scale: 1"=20'

NOTE:

The Deck shall be 6" thick Reinf. Lightweight Concrete. Bridge shall be constructed of "Weathering Steel."

The pedestrian bridge is to be a "Gateway" Through Box Truss bridge as manufactured by the Continental Bridge Co., which is available from Contech Engineering Solutions of Westchester, Ohio, phone 1-800-338-1122, or approved equal.

Drive test piling at the locations shown on the plans or as directed by the Engineer. The test piling shall remain in place as permanent piling.

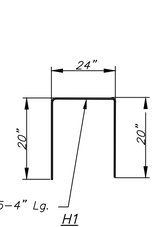
All reinforcing steel dimensions are to the centerline of bars unless otherwise noted. All reinforcing steel Shall be epoxy Coated Grade 60. Concrete shall be Grade 4.0 (AE). When Securing Epoxy Coated Reinforcment, use tie wires or metal clips that are Epoxy or Plastic Coated. See standard pile detail sheet for pile steel and concrete specifications.

Lump Sum Bid Price for "Bridge Furnished and Installed" shall include all costs for abutment construction and bridge installation.

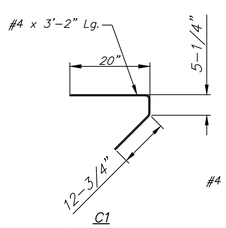
No Geotechnical Information Is Available for Design. Drive all abutment piling to a minimum elevation determined with Test Pile. Driving shall stop when in the opinion of the Engineer additional driving may damage the piling. Drive all piling to the minimum computed bearing value equal to:

Abutment No. 1: Load/pile = 45 Tn
Abutment No. 2: Load/pile = 45 Tn

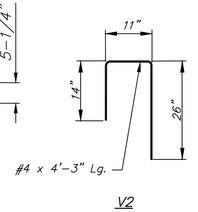
When using the pile driving formula in the KDOT Specifications, drive the pile to the min. computed bearing value, but in no case shall the pile be driven to MORE THAN 79 Tn. At any location where problems are experienced, pile damage is suspected, or apparent refusal occurs significantly above the design pile tip elevation, the Engineer may request that the Pile Driving Analyzer (PDA) equipment be used.



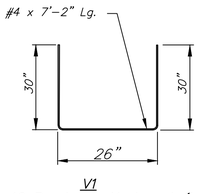
H1
8 Reqd per Abutment (Each End)



C1
20 Reqd per Abutment

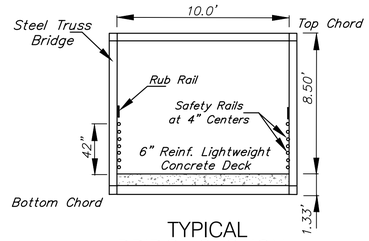


V2
20 Reqd per Abutment

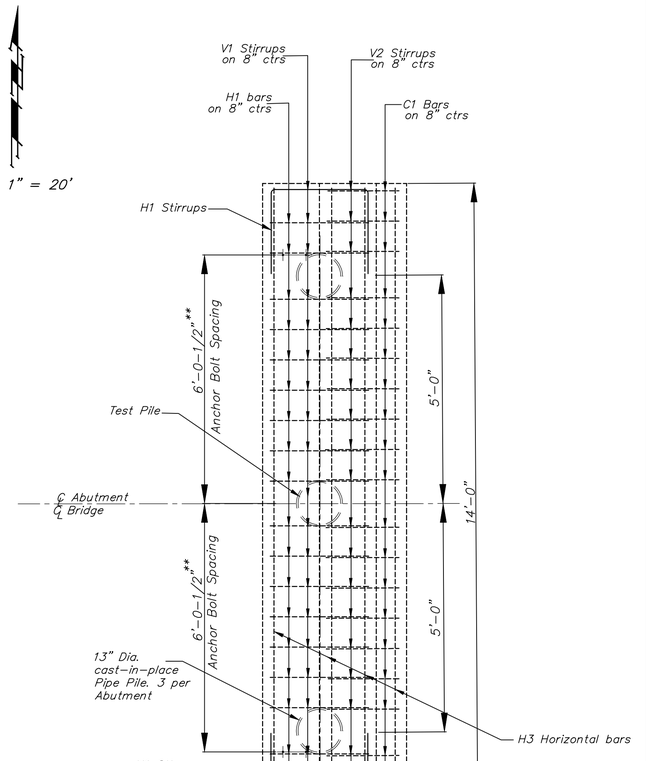


V1
40 Reqd per Abutment (In Pairs)

BOLLARD DETAILS



TYPICAL BRIDGE SECTION

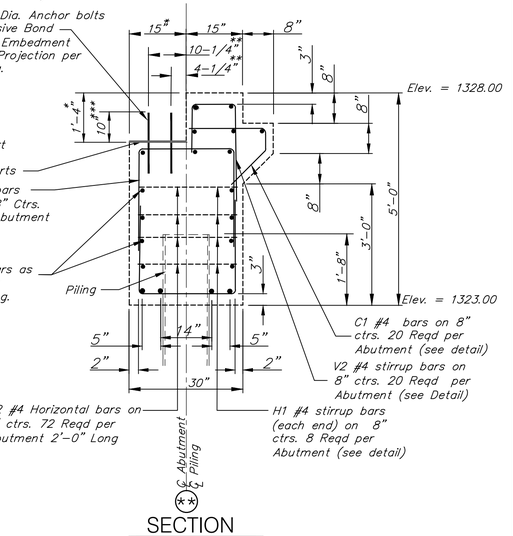


PLAN VIEW

* - Adjust Step Dimensions per bridge Manufacturer

** - 4 1-1/4" Dia. Anchor Bolts Located per Bridge Manufacturer

*** - 4 1-1/4" Dia. Anchor bolts Hilti Adhesive Bond w/6" Min. Embedment or equal. Projection per Bridge Mfg.



SECTION

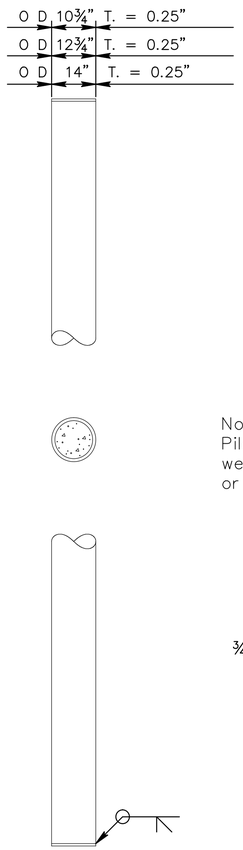
ABUTMENT DETAILS

Drawing File: E:\Projects\29th Ridge to Hoover\Details\SH-32 - Pedestrian Bridge.dwg

NOVEMBER, 2013

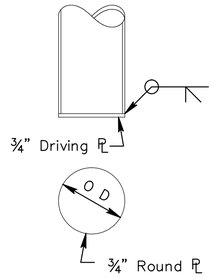
Design: KEK Drawn: KEK Approved: MWS Scale: AS NOTED	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT PEDESTRIAN BRIDGE DETAIL 29TH STREET NORTH RIDGE TO HOOVER	SHEET 32 OF 177

Baughman Company, P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

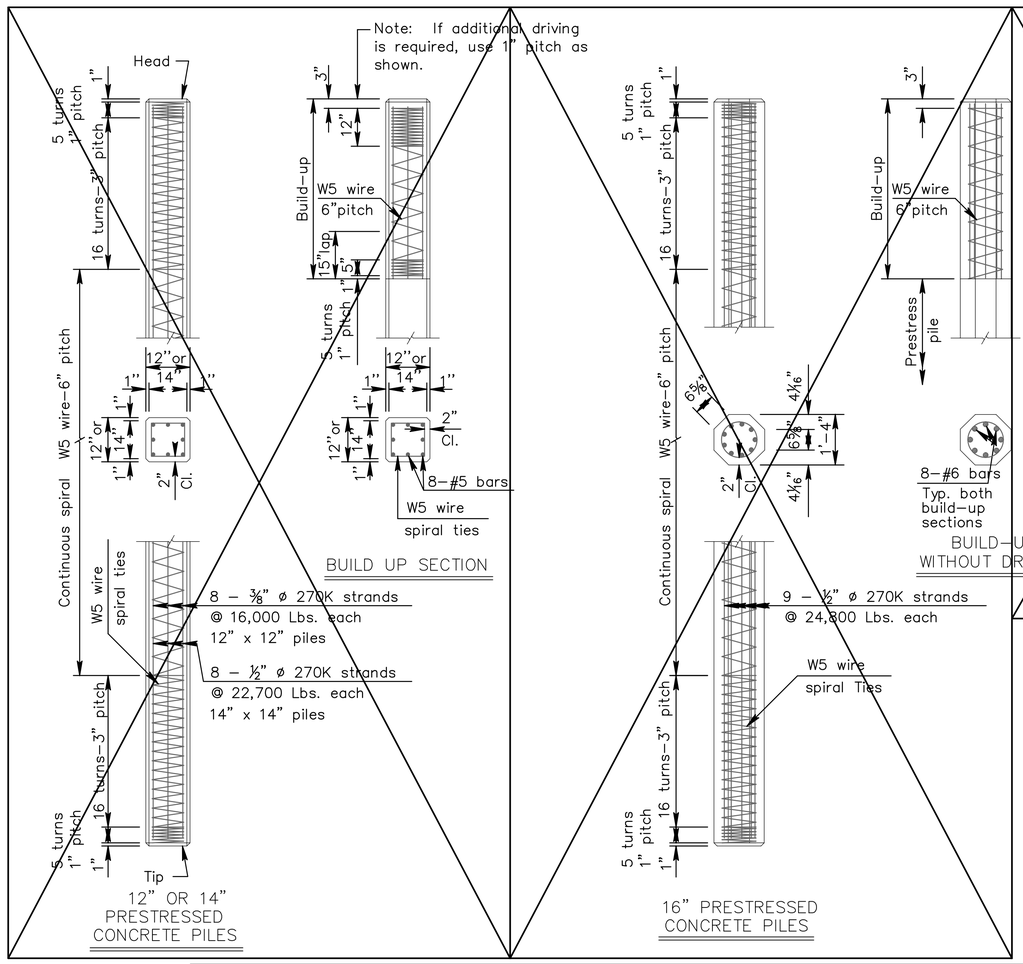


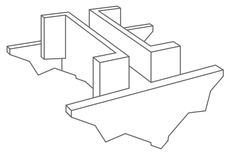
Note:
Pile shall be driven with a steel head having a projecting ring fitting inside the pipe. Clearance between ring and pipe should be ¼".

Note:
Pile pipe may be spiral welded, longitudinal welded, or seamless steel pipe.



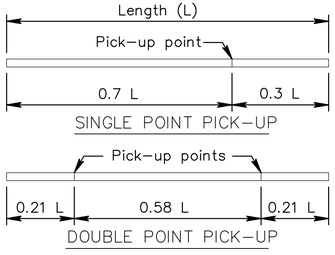
PLAIN ROUND
CAST–IN–PLACE CONCRETE PILES





CAST STEEL PILE POINT

The pile point shall be a one–piece unit of cast steel. Weld pile points in accordance with manufacturers recommendations to each steel pile before driving.



PICK–UP POINTS FOR PRESTRESSED PILING

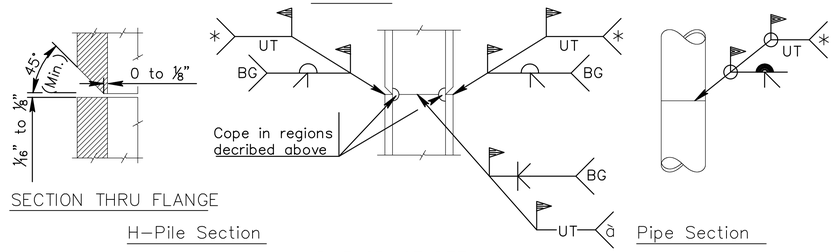
Max. length – 55' single point pick–up
Max. length – 80' double point pick–up
Note: Piles shall be marked at Pick–up points to indicate proper points for attaching handling lines.

SPLICES: Splices for steel piles and shell piling shall be in accordance with details shown on this sheet and the Standard Specifications.

For integral pile bent abutments and piers, if a pile splice is required, do not locate the pile splice within a region extending 2'–0" above and 10'–0" below the bottom of the concrete web wall. For abutments, locate the pile splice at least 10'–0" below the bottom of concrete.

With the approval of the Engineer, one splice per bent may be allowed in the region described above without testing. If additional splices are anticipated, based on the geology, the Contractor will add a sufficient amount to the bottom of pile, prior to driving, so that the splice is below the regions described above in the completed pile.

* For integral pile bent abutments and piers, if a splice is located within the regions described above, then the Contractor will test the welds by ultra–sonic test methods. Repair and retest any welds not passing the test(s). Each weld tested will have written confirmation of results. Report these results to the Engineer. This work is not paid for directly, but is subsidiary to "Piles".



BG = Backgouge

PRESTRESSED PILES

Fabricate prestressed concrete pile splices in accordance with the Manufacturer's recommendations subject to the approval of the Engineer.

Method of attachment of pile to build–up may be by any of the methods" given in the notes on "Alternate Methods. If mild reinforcing steel is used for attachment, the area shall be no less than that used in the build–up.

ALTERNATE METHODS:

Method of attachment of a pile to build–up may be by any of the following methods:
1. Cut off at least 2'–0" of pile and expose a minimum of 2'–0" of strands.
2. Cast 8–#6, or 8–#5 bars (equally (spaced into pile head. All bars shall extend into pile head and project from the pile head a minimum of 2'–0".
3. Drill 8 holes in pile head (equally spaced) for installation of 8 grouted dowel bars of same size and length as in 2.
4. Provide cored holes for bars as in 3. No bars or strands are to extend from head of pile or build–up into footing or pile cap unless approved by the Engineer.

SPECIFICATIONS: Standard Specifications for State Road and Bridge Construction as currently used by the Kansas Department of Transportation. The following items are covered in Division 700 of the Standard Specifications:

CONCRETE: Concrete for cast–in–place shall be f'c = 3,000 PSI.. Concrete for prestressed shall be f'c = 5,000 PSI.

WELDING: All field welding shall meet the requirements of the Standard Specifications.

TEST PILES: Drive test piles where called for on the bridge plans. The test piles located within the limits of the substructure will become a part of the bridge pile system.

DRIVING FORMULA: Driving formula shall conform to the Standard Specifications.

MEASUREMENT AND PAYMENT: Measurement and payment for all piles shall comply with the Standard Specifications.

The following items are covered in Division 1000 of the Standard Specifications:

REINFORCEMENT: Use reinforcing steel conforming to ASTM A615, Grade 60. Hoops and spirals may be either plain or deformed bars.

PRESTRESSING STEEL: Use uncoated seven–wire stress relieved or low relaxation prestressing strand conforming to ASTM A416, Gr. 270.

CAST–IN–PLACE SHELLS: Steel shells for cast–in–place piles shall conform to the requirements of the Standard Specifications. All piles driven without a mandrel shall be of the minimum thicknesses shown. Piles driven with a mandrel shall be of sufficient strength and thickness to withstand driving without injury and to resist harmful distortion and/or buckling due to soil pressure after the mandrel is removed.
Remove, replace or correct to the satisfaction of the Engineer improperly driven, broken or otherwise defective pipe piles. Otherwise drive an additional pile at no extra cost.
The Contractor shall maintain a light suitable for visual inspection of the pile on the job at all times prior to and during the filling of the pipe.

STEEL PILE: Steel pile shall conform to the requirements of the Standard Specifications.

PILE POINTS: Pile points shall conform to the dimensions shown and to requirements of the Standard Specifications.

PAINT: All paint shall comply with the Standard Specifications, or as specified on the plans.

MILL TEST REPORTS: Steel piles test reports and steel shell test reports shall comply with the Standard Specifications.

FOR INFORMATION ONLY
EQUIVALENT POINT BEARING PILES

STEEL PILES	CONCRETE PILES	
	Pipe	Pre–stress
HP10x42	10¾"	
HP12x53	12¾"	
HP14x73	14	12
HP14x102		14
HP14x117		16

NO.	DATE	REVISIONS	BY	APP'D
4	1–5–09	Pile Splice Location and Weld Test	JPJ	KFH
3	6–14–06	Rev. Pile Splice Note & Reinforcing	JPJ	KFH
2	11–12–03	Revised Notes	RAM	KFH
1	3–1–94	Add pile point details	LRR	KFH

KANSAS DEPARTMENT OF TRANSPORTATION

STANDARD PILE DETAILS

BR110 SH 33 of 177

FHWA APPROVAL	02–25–09	APP'D	KENNETH F. HURST
DESIGNED	DETAILED RDR	QUANTITIES	TRACED
DESIGN CK.	DETAIL CK. KOC	QUAN.CK.	TRACE CK.

Sta. 0+00 BEGIN SWS Line 1=
BL Sta 12+46.62, 55.52 Lt.
N. 20055.5760, E. 4946.4140
Core Existing Manhole & Connect 24" Pipe. Grout & Seal Water Tight. Reconstruct Invert as required. Extend 24" SWS Pipe East.

Concrete C&G, Wheelchair Ramps & Sidewalk Removed & Replaced. (Both Sides)

CAUTION
Ex. 12" Wtr, OHE
Ex. 20" Wtr Crosses

Concrete Pavement Removed & Replace. New Pavement to be 9" Reinf. Concrete w/Brick Paver Crosswalk (See Deteil)

Sta. 0+00.00 BEGIN SWS Line 1AA=
BL Sta 13+32.89, 100.40 Lt.
N. 20100.3884, E. 5032.9352
Install 15" End Section
F.L. Elev.=1326.10
Extend 15" Pipe SE
Install 10.0 S.Y. Rip-Rap, Light Stone

LINE 1AA

Sta. 1+08.65 SWS Line 1=
Sta. 0+33.00 END SWS Line 1AA
BL Sta 13+53.37, 74.54 Lt.
N. 20074.5143, E. 5053.4053
Construct MH, Standard
SWS (6') Top Elev.=1328.50

Sta. 1+57.73 SWS Line 1=
Sta. 0+00.00 SWS Line 1A=
BL Sta 13+83.32, 35.67 Lt.
N. 20035.6298, E. 5083.3409
Construct Inlet, Curb Type 1A
(L=10' W=3')
Top Elev. =1325.38

CAUTION
UG AT&T, OHE (2) Crosses

LINE 1

Sta. 4+45.90 SWS Line 1=
BL Sta 16+71.50, 35.67 Lt.
N. 20035.4910, E. 5371.5168
Construct MH, Shallow SWS (5')
Top Elev.=1327.75
Install 15" Stub (N)

NOTE:
All Pipe Trench Under Pavement Shall be Backfilled with Sand, Flushed & Vibrated

D-1079-UP
TATT LLC
1830 W Harry
WICHITA, KS 67213

7080
D-1079-1UP
Conway Bank N A
121 E Kellogg
WICHITA, KS 67202
25' KGE EASEMENT
(Film 1937, Page 0018)

KGE EASEMENT (80' x 25')
(Film 1687, Page 2461)

25' KGE EASEMENT
(Film 1937, Page 0018)

Sta. 4+57.90 SWS Line 1=
BL Sta 16+71.50, 23.67 Lt.
N. 20023.4910, E. 5371.5109
Construct Inlet, Curb Type 1A
(L=10', W=3')
Top Elev=1327.16

CAUTION
Ex. 16" Wtr, UG AT&T Crosses

Sta. 5+05.24 END SWS Line 1=
BL Sta 16+71.50, 23.67 Rt.
N. 19976.1510, E. 5371.4925
Construct Inlet, Curb Type 1A
(L=10', W=3')
Top Elev=1327.16

SCALE:
1" = 20' Horizontal
1" = 5' Vertical

Remove Existing 15" SWS Pipe

LINE 1A

LINE 1

2920 N Ridge Rd
D-1099-UP

Sta. 0+00.00 BEGIN SWS Line 1AA=
BL Sta 13+32.89, 100.40 Lt.
N. 20100.3884, E. 5032.9352
Install 15" End Section
F.L. Elev.=1326.10
Extend 15" Pipe SE
Install 10.0 S.Y. Rip-Rap, Light Stone

Sta. 0+33.00 END SWS Line 1AA=
Sta. 1+08.65 SWS Line 1=
BL Sta 13+53.37, 74.54 Lt.
N. 20074.5143, E. 5053.4053
Proposed Manhole

Sta. 0+00 BEGIN SWS Line 1=
BL Sta 12+46.62, 55.52 Lt.
N. 20055.5760, E. 4946.4140
Core Existing Manhole & Connect 24" Pipe. Grout & Seal Water Tight. Extend 30" SWS Pipe East.

Ex. 12" WL

Prop. 20" PVC WL
Ex. 20" WL
Ex. UG AT&T

Remove Existing Manhole
Remove Existing 15" SWS

Existing Ground @ ℄ Pipe
Proposed Ground @ ℄ Pipe

Ex. 38"x24" SWS

W.L. Probe 2 −60"
W.L. Probe 12 −63"

Sta. 1+08.65 SWS Line 1=
Sta. 0+33.00 END SWS Line 1AA
BL Sta 13+53.37, 74.54 Lt.
N. 20074.5143, E. 5053.4053
Construct MH, Standard
SWS (6') Top Elev.=1328.50

Sta. 1+57.73 SWS Line 1=
Sta. 0+00.00 SWS Line 1A=
BL Sta 13+83.32, 35.67 Lt.
N. 20035.6298, E. 5083.3409
Construct Inlet, Curb Type 1A
(L=10' W=3')
Top Elev. =1325.38

Sta. 4+45.90 SWS Line 1=
BL Sta 16+71.50, 35.67 Lt.
N. 20035.4910, E. 5371.5168
Construct MH, Shallow SWS (5')
Top Elev.=1327.75
Install 15" Stub (N)

Sta. 4+57.90 SWS Line 1=
BL Sta 16+71.50, 23.67 Lt.
N. 20023.4910, E. 5371.5109
Construct Inlet, Curb Type 1A
(L=10', W=3')
Top Elev=1327.16

Ex. 16" Wtr, Ex. UG AT&T

Sta. 5+05.24 END SWS Line 1=
BL Sta 16+71.50, 23.67 Rt.
N. 19976.1510, E. 5371.4925
Construct Inlet, Curb Type 1A
(L=10', W=3')
Top Elev=1327.16

W.L. Probe 8 −58"

Install 33.00 LF 15" RCP @ −5.258%

Install 108.65 LF 24" RCP @ +0.102%

Install 49.08 LF 19"x30" HERCP @ +0.102%

Install 288.17 LF 18" RCP@ +0.200%

Install 12.00 LF 18" RCP @ +0.317%

Install 47.34 LF 15" RCP @ +0.317%

LINE 1AA

LINE 1

F.L.=1326.10 15" (SE)
F.L.=1324.47 In 15" (NW)
F.L.=1322.85 In 19"x30" HCRCP (SE)
F.L.=1322.85 Out 24" (W)

F.L.=1322.74 Out 38"x24" (W)
F.L.=1323.09 In 18" (N)
F.L.=1323.09 In 24" (N)
F.L.=1322.74 In 24" (E)

F.L.=1322.79

F.L.=1322.85 Out 24" (W)
F.L.=1324.47 In 15" (N)
F.L.=1322.85 In 19"x30" HERCP" (E)

F.L.=1322.90 Out 19"x30" HERCP" (W)
F.L.=1322.90 In 12" x(2) (S)
F.L.=1322.90 In 18" (E)

F.L.=1322.99

F.L.=1323.09

F.L.=1323.19

F.L.=1323.29

F.L.=1323.39

F.L.=1323.48 Out 18" (W)
F.L.=1323.53 In 15" Stub(N)
F.L.=1323.58 In 15" (S)
F.L.=1323.62 Out 18" (N)
F.L.=1323.62 In 15" (S)

F.L.=1323.77 Out 15" (N)

1335 1330 1325 1320 1315 1310 1305

0+00 0+33.00 0+00 0+50 1+08.65 1+49.62 2+00.00 2+50.00 3+00.00 3+50.00 4+00.00 4+45.90 4+57.90 5+05.24

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\SWS.dwg
NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	NOTED

Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT
29th Street and Hoover Road
SWS Line 1
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 34 OF 177

SCALE:
1" = 20' Horizontal
1" = 5' Vertical

Sta. 0+000 SWS Line 1A=
Sta. 1+57.73 SWS Line 1=
BL Sta 13+83.32, 35.67 Rt.
N. 20035.6298, E. 5083.3409
Connect to New Inlet

LINE 1

CAUTION
Top of Pipe at Bottom of Rock

W.L. Probe 3 54.5"

CAUTION
Ex. 16" Wtr Crosses

LINE 1 A

Sta. 0+59.34 End SWS Line 1A=
BL Sta 13+83.32, 23.67 Lt.
N. 19976.2898, E. 5083.3132
Construct Inlet, Curb Type 1A
(L=10', W=3')
Top ELev.=1325.73

LINE 1A

NOTE: Mechanically Restrain End Section & First Three Pipe Joints

Sta. 0+00.00 Begin SWS Line 2=
BL Sta 30+12.50, 27.50 Rt.
N. 19971.6748, E. 6712.4865
Install Pipe, End Section 24".
Install 15 Sq. Yds. Rip-Rap
Light Stone

NOTE:
All Pipe Trench Under Pavement Shall be Backfilled with Sand, Flushed & Vibrated

Sta. 1+99.00 SWS Line 2=
BL Sta 28+13.50, 26.00 Rt.
N. 19973.2707, E. 6513.4903
Install "Hydroguard" HG5 Sediment Separation Unit as Manufactured by Hydroworks, L.L.C.
Top Elev.=1326.80

DANGER
GSL Crosses

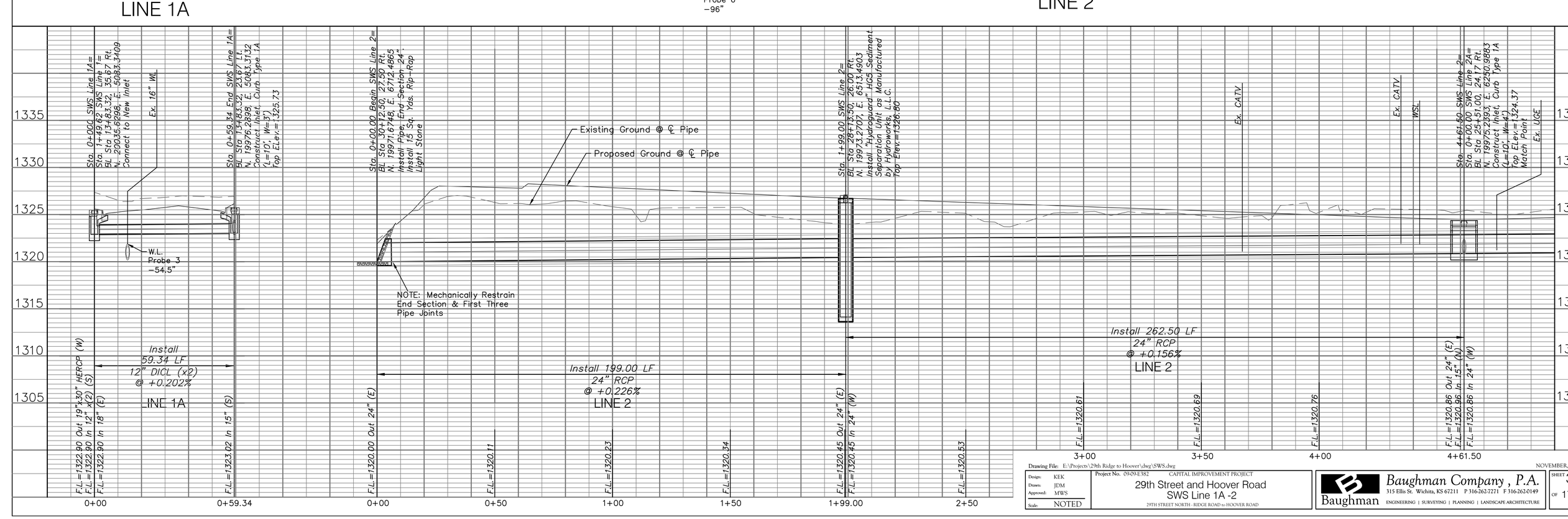
CAUTION
Ex. UG Cox (2) WSL Crosses

Sta. 4+61.50 SWS Line 2=
Sta. 0+00.00 SWS Line 2A=
BL Sta 25+51.00, 24.17 Rt.
N. 19975.2393, E. 6250.9883
Construct Inlet, Curb Type 1A
(L=10', W=4')
Top ELev.=1324.37
Match Point

SCALE:
1" = 20' Horizontal
1" = 5' Vertical

LINE 2

LINE 2A



Drawing File: E:\Projects\29th Ridge to Hoover\dwg\SWS.dwg

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	NOTED

Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT

29th Street and Hoover Road
SWS Line 1A -2
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

Sta. 4+61.50 SWS Line 2=
Sta. 0+00.00 SWS Line 2A=
BL Sta 25+51.00, 24.17 Rt.
N. 19975.2393, E. 6250.9883
Match Point

CAUTION
Ex. UGE
Crosses

NOTE:
All Pipe Trench Under
Pavement Shall be Backfilled
with Sand, Flushed & Vibrated

CAUTION
UG Cox
SS
GSL
Crosses

CAUTION
WSL
Crosses

Sta. 8+62.50 SWS Line 2=
BL Sta 21+50.00, 23.67 Rt.
N. 19975.9227, E. 5849.9881
Construct Inlet, Curb Type 1A
(L=10', W=4')
Top ELev.=1325.50

SCALE:
1" = 20' Horizontal
1" = 5' Vertical

LINE 2

LINE 2A

LINE 2

CAUTION
Top of Pipe
at Bottom of
Rock

CAUTION
16" WL
Adjacent

Sta. 9+09.84 END SWS Line 2=
BL Sta 21+50.00, 23.67 Lt.
N. 20023.2602, E. 5850.0096
Construct Inlet, Curb Type 1A
(L=10', W=3')
Top ELev.=1325.50
Install 15 Stub (N)

W.L.
Probe 5
-72"

LINE 2

Sta. 0+00.00 BEGIN SWS Line 2A=
Sta. 4+61.50 SWS Line 2=
BL Sta 25+51.00, 24.17 Rt.
N. 19975.2393, E. 6250.9883
Connect to New Inlet

SCALE:
1" = 20' Horizontal
1" = 5' Vertical

LINE 2A

CAUTION
Top of Pipe
at Bottom of
Rock

Sta. 0+47.84 END SWS Line 2A=
BL Sta 25+51.00, 23.67 Lt.
N. 20023.0672, E. 6251.0113
Construct Inlet, Curb Type 1A
(L=10', W=3')
Top ELev.=1324.37
Install 15 Stub (N)

LINE 2A

Sta. 4+61.50 SWS Line 2=
Sta. 0+00.00 SWS Line 2A=
BL Sta 25+51.00, 24.17 Rt.
N. 19975.2393, E. 6250.9883
Match Point

UG Cox
EX. SS
GSL
WSL

Proposed Ground @ ℄ Pipe

Existing Ground @ ℄ Pipe

Install 401.00 LF
24" RCP
@ +0.200%
LINE 2

Sta. 8+62.50 SWS Line 2=
BL Sta 21+50.00, 23.67 Rt.
N. 19975.9227, E. 5849.9881
Construct Inlet, Curb Type 1A
(L=10', W=4')
Top ELev.=1325.50
Install 15 Stub (N)

Sta. 9+09.84 END SWS Line 2=
BL Sta 21+50.00, 23.67 Lt.
N. 20023.2602, E. 5850.0096
Construct Inlet, Curb Type 1A
(L=10', W=3')
Top ELev.=1325.50
Install 15 Stub (N)

W.L.
Probe 5
-72"

Install
47.34 LF
15" RCP
@ +0.296
LINE 2

Sta. 0+00.00 BEGIN SWS Line 2A=
Sta. 4+61.50 SWS Line 2=
BL Sta 25+51.00, 24.17 Rt.
N. 19975.2393, E. 6250.9883
Connect to New Inlet

Existing Ground
@ ℄ Pipe

Proposed Ground
@ ℄ Pipe

Sta. 0+47.84 SWS Line 2A=
BL Sta 25+51.00, 23.67 Lt.
N. 20023.0672, E. 6251.0113
Construct Inlet, Curb Type 1A
(L=10', W=3')
Top ELev.=1324.37
Install 15 Stub (N)

Install
47.84 LF
15" RCP
@ +0.293%
LINE 2A

F.L.=1320.86 Out 24" (E)
F.L.=1320.96 In 15" (N)
F.L.=1320.86 In 24" (W)
F.L.=1320.94
F.L.=1321.04
F.L.=1321.14
F.L.=1322.24
F.L.=1321.34
F.L.=1321.44
F.L.=1321.54
F.L.=1321.58
F.L.=1321.66 Out 24" (E)
F.L.=1321.76 In 15" (N)
F.L.=1321.90 Out 15" (S)
F.L.=1322.00 Stub In 15" (N)
F.L.=1320.86 Out 24" (E)
F.L.=1320.96 In 24" (W)
F.L.=1321.10 Out 15" (S)
F.L.=1321.20 Stub In 15" (N)

4+50 4+61.50 5+00 5+50 6+00 6+50 7+00 7+50 8+00
8+50 8+62.50 9+09.84 0+00 0+47.84

1335 1330 1325 1320 1315 1310 1305

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\SWS.dwg
NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	NOTED

Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT
29th Street and Hoover Road
SWS Line 2 (2)- 2A
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

NOTE:
Mechanically Restrain
End Section & First
Three Pipe Joints

NOTE:
All Pipe Trench Under
Pavement Shall be Backfilled
with Sand, Flushed & Vibrated

LINE 3A

SCALE:
1" = 20' Horizontal
1" = 5' Vertical

EX. CONCRETE HAUNCH SLAB BRIDGE

Sta. 0+00.00 BEGIN SWS Line 3=
BL Sta 31+14.84, 40.00' Rt.
N. 19959.1255, E. 6814.8204
Install Pipe, End Section 24"
Install 78 Sq. Yds. Rip-Rap
Light Stone

Sta. 0+45.00 SWS Line 3=
BL Sta 31+58.00, 27.27' Rt.
N. 19971.8347, E. 6857.9866
Construct MH, Standard (5')
Top Elev.= 1328.67

LINE 3

Sta. 1+67.02 SWS Line 3=
BL Sta 32+80.00, 25.30 Rt.
N. 19973.7459, E. 6979.9876
Install "Hydroguard" HG6 Sediment
Separation Unit as Manufactured
by Hydroworks, L.L.C.
Top Elev.=1326.90

LINE 3B

Sta. 2+69.53 SWS Line 3=
Sta. 0+00.00 SWS Line 3A=
Sta. 0+00.00 SWS Line 3B=
BL Sta 33+82.50, 24.17 Rt.
N. 19974.8264, E. 7082.4881
Construct Inlet, Curb Type 1A
(L=10.0', W=4') Top
Elev.=1325.30

LINE 3

Match Line

LINE 3

Sta. 0+00.00 BEGIN SWS Line 3=
BL Sta 31+14.84, 40.00' Rt.
N. 19959.1255, E. 6814.8204
Install Pipe, End Section 24"
Install 78 Sq. Yds. Rip-Rap
Light Stone

Sta. 0+45.00 SWS Line 3=
BL Sta 31+58.00, 27.27' Rt.
N. 19971.8347, E. 6857.9866
Construct MH, Standard (5')
Top Elev.= 1328.67

Sta. 1+67.02 SWS Line 3=
BL Sta 32+80.00, 25.30 Rt.
N. 19973.7459, E. 6979.9876
Install "Hydroguard" HG6 Sediment
Separation Unit as Manufactured
by Hydroworks, L.L.C.
Top Elev.=1326.90

Sta. 2+69.53 SWS Line 3=
Sta. 0+00.00 SWS Line 3A=
BL Sta 33+82.50, 24.17 Rt.
N. 19974.8264, E. 7082.4881
Construct Inlet, Curb Type 1A
(L=10.0', W=4') Top Elev.=1325.30

Match Line

Existing Ground @ ℄ Pipe

Proposed Ground @ ℄ Pipe

NOTE: Mechanically Restrain
End Section & First Three
Pipe Joints

62'

Install 45.00 LF
24" RCP
@ +0.407%

Install 122.02 LF
24" RCP
@ +0.407%

LINE 3

Install 102.51 LF
24" RCP
@ +0.388%

Install 230.47 LF
18" RCP
@ +0.400%

LINE 3

F.L.=1319.90 out 24" (W)
F.L.=1320.08
F.L.=1320.31
F.L.=1320.51
F.L.=1320.58 In 24" (W)
F.L.=1320.58 In 24" (E)
F.L.=1320.71
F.L.=1320.90
F.L.=1320.98 In 24" (W)
F.L.=1321.08 In 18" (N)
F.L.=1320.98 In 18" (E)
F.L.=1321.10
F.L.=1321.30
F.L.=1321.50
F.L.=1321.70
F.L.=1321.90

0+00 0+45.00 1+00 1+50 1+67.02 2+00 2+50 2+69.53 3+00 3+50 4+00 4+50 5+00

1335 1330 1325 1320 1315 1310 1305

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\SWS.dwg

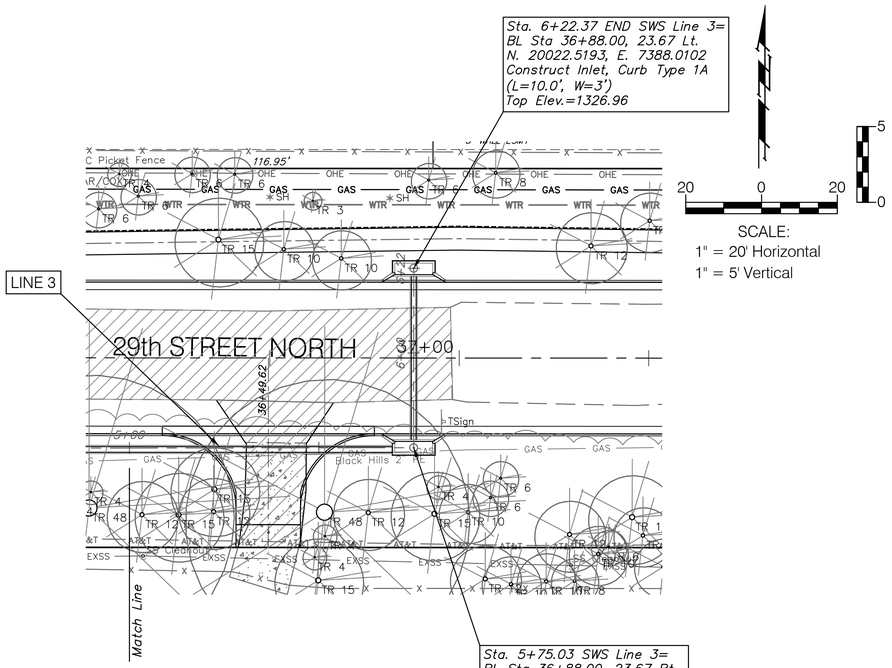
NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	NOTED

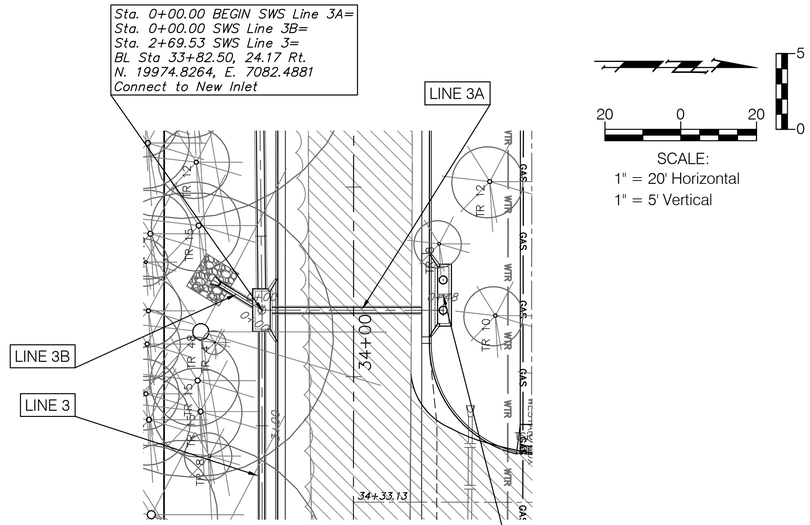
Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT

29th Street and Hoover Road
SWS Line 3
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

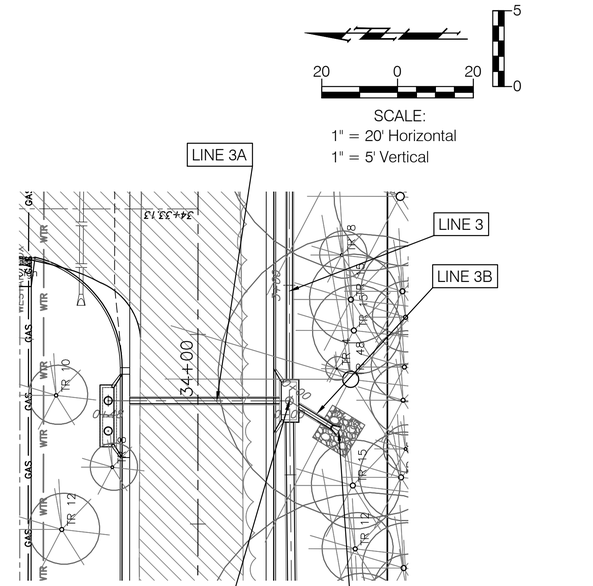
Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE



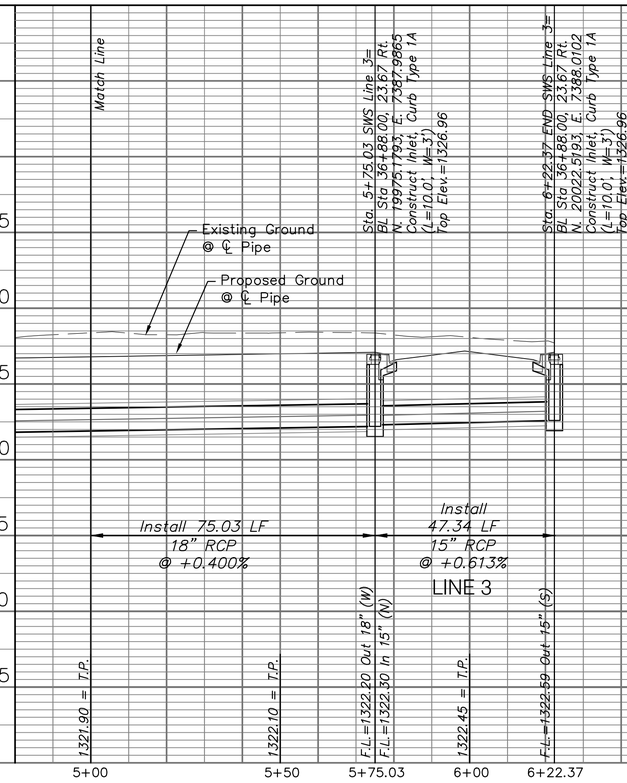
LINE 3

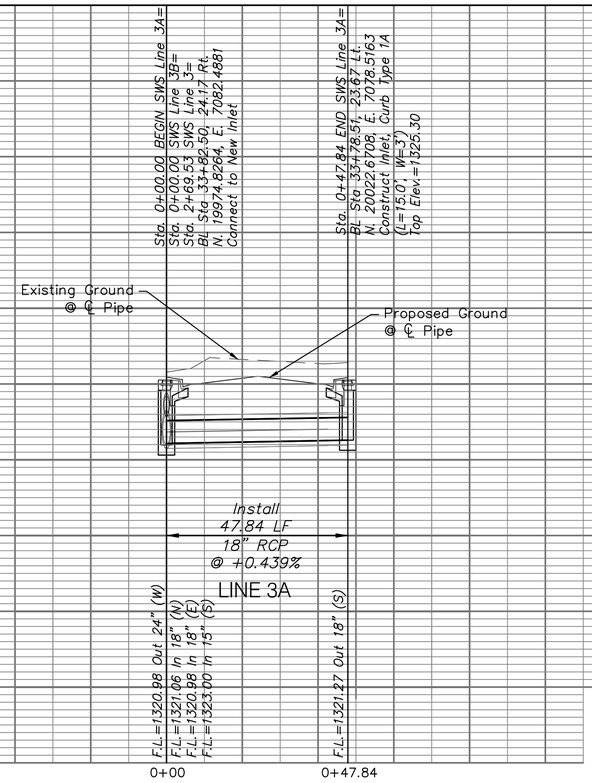


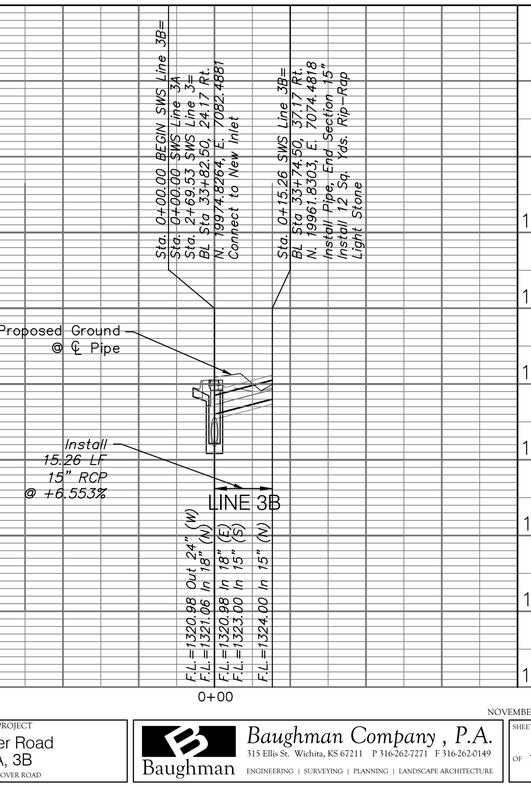
LINE 3A



LINE 3B







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NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	NOTED

Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT

29th Street and Hoover Road
SWS Line 3 (2)- 3A, 3B
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

Sta. 0+00.00 BEGIN SWS Line 4=
BL Sta 44+70.74, 148.58 Rt.
N. 19849.4079, E. 8170.5310
Construct Headwall RC 36"
Install 100.0 Sq. Yds. Rip-Rap
Light Stone. Match Existing
Rip-Rap North of Water.

NOTE:
Mechanically Restrain Headwall
& First Three Pipe Joints.

NOTE:
All Pipe Trench Under
Pavement Shall be Backfilled
with Sand, Flushed & Vibrated

SCALE:
1" = 20' Horizontal
1" = 5' Vertical

Sta. 0+48.34 SWS Line 4=
BL Sta 44+80.00, 23.25 Lt.
N. 20021.6426, E. 8180.0290
Construct Inlet, Curb Type 1A
(L=10.0', W=3') Top
Elev.=1327.89

SCALE:
1" = 20' Horizontal
1" = 5' Vertical

Construction Through Existing Gate. Protect Existing Wrought Iron Fence.

Sta. 1+08.00 SWS Line 4=
BL Sta 44+79.30, 40.92 Rt.
N. 19957.0577, E. 8179.2423
Install "Hydroguard" HG8
Sediment Separation Unit as
Manufactured by Hyroworks, L.L.C.,
or Approved Equal
Top Elev.=1327.40

CAUTION
AT&T
Crosses

CAUTION
OHE
CATV
Wtr
Crosses

DANGER
GAS
Crosses
GAS
Parallel

DANGER
GAS
Parallel

LINE 5

LINE 4

Sta. 4+04.26 SWS Line 4=
BL Sta 42+00.00, 23.67 Rt.
N. 19974.6882, E. 7899.9643
Construct Inlet, Curb Type 1A
(L=10.0', W=3')
Top Elev.=1327.70

LINE 4

LINE 5

LINE 4A

Sta. 0+00.00 SWS Line 4A=
Sta. 1+24.26 SWS Line 4=
Sta. 0+00.00 SWS Line 5=
BL Sta 44+80.00, 24.67 Rt.
N. 19973.3026, E. 8179.9618
Connect to New Inlet

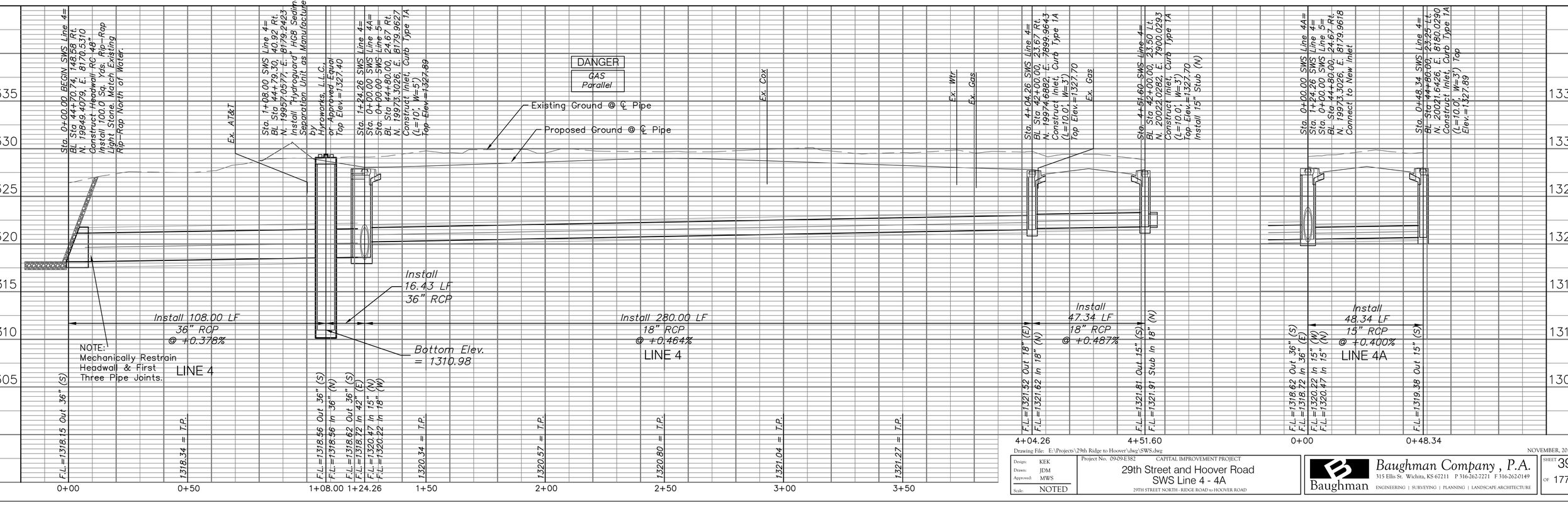
Sta. 1+24.26 SWS Line 4=
Sta. 0+00.00 SWS Line 4A=
BL Sta 44+80.00, 24.67 Rt.
N. 19973.3026, E. 8179.9627
Construct Inlet, Curb Type 1A
(L=10', W=5')
Top Elev.=1327.89

LINE 4A

Sta. 1+51.60 SWS Line 4=
BL Sta 42+00.00, 23.50 Lt.
N. 20022.0282, E. 7900.0293
Construct Inlet, Curb Type 1A
(L=10.0', W=3')
Top Elev.=1327.70
Install 15" Stub (N)

45+00 44+00 43+00 42+00

2+00 3+00 4+00 45+00



Drawing File: E:\Projects\29th Ridge to Hoover\dwg\SWS.dwg

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	NOTED

Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT

29th Street and Hoover Road
SWS Line 4 - 4A
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

NOTE:
All Pipe Trench Under
Pavement Shall be Backfilled
with Sand, Flushed & Vibrated

Sta. 0+00.00 BEGIN SWS Line 5=
Sta. 0+00.00 SWS Line 4A=
Sta. 1+24.43 SWS Line 4=
BL Sta 44+80.00, 24.75 Lt.
N. 19973.3026, E. 8179.9627
Connect to New Inlet

LINE 4A

DANGER
GAS
Parallel

CAUTION
UG Cox
UGE
Crosses

CAUTION
OHE
Crosses

LINE 5A

SCALE:
1" = 20' Horizontal
1" = 5' Vertical

Ex. Chainlink Fence
Ex. PVC Fence
Ex. Gate
1479.95' R/W
R/W
45+04.80
46+18.78
51+10.00
MBox
Key Pad
Landscape Boulders
Black Hills 2" PE
ANMW-25 PAIR
ATT Ped
308.10'
200.00'
45+00
46+00
47+00
48+00
49+00
50+00
51+00

LINE 4

DANGER
GAS
Crosses

LINE 5

Sta. 3+70.00 SWS Line 5=
Sta. 0+00.00 SWS Line 5a=
BL Sta 48.50.00, 24.67 Rt.
N. 19972.7930, E. 8549.9648
Construct Inlet, Curb Type 1A
(L=10', W=5')
Top Elev.=1327.06

LINE 5

Match Point

Sta. 0+00.00 BEGIN SWS Line 5=
Sta. 0+00.00 SWS Line 4A=
Sta. 1+24.43 SWS Line 4=
BL Sta 44+80.00, 24.75 Lt.
N. 19973.3026, E. 8179.9627
Connect to New Inlet

DANGER
GAS
Parallel

Existing Ground @ ℄ Pipe
Proposed Ground @ ℄ Pipe
Ex. Cox
UGE

Sta. 3+70.00 SWS Line 5=
Sta. 0+00.00 SWS Line 5a=
BL Sta 48.50.00, 24.67 Rt.
N. 19972.7930, E. 8549.9648
Construct Inlet, Curb Type 1A
(L=10', W=5')
Top Elev.=1327.06

Match Point

F/L=1318.62 Out 36" (S)
F/L=1320.22 In 18" (W)
F/L=1320.47 In 15" (N)
F/L=1318.72 In 36" (E)

1318.77 = T.P.
1318.82 = T.P.
1318.87 = T.P.
1318.92 = T.P.
1318.97 = T.P.
1319.02 = T.P.
1319.07 = T.P.

F/L=1319.09 In 36" (W)
F/L=1319.19 In 15" (N)
F/L=1319.09 In 30" (E)

1319.15 = T.P.
1319.25 = T.P.
1319.35 = T.P.
1319.45 = T.P.
1319.55 = T.P.

Install 370.00 LF
36" RCP
@ +0.100%
LINE 5

Install 230.00 LF
30" RCP
@ +0.200
LINE 5

1335
1330
1325
1320
1315
1310
1305

0+00 0+50 1+00 1+50 2+00 2+50 3+00 3+50 3+70.00
4+00 4+50 5+00 5+50 6+00

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\SWS.dwg
NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	NOTED

Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT
29th Street and Hoover Road
SWS Line 5 (1)
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

DANGER
GAS
Crosses

CAUTION
WSL
UGE
WSL
AT&T
UG Cox
Crosses

Sta. 7+50.00 SWS Line 5=
BL Sta 52+30.00, 24.67 Rt.
N. 19972.2696, E. 8929.9645
Construct MH, Standard (6')
Top Elev.=1328.91

NOTE:
All Pipe Trench Under
Pavement Shall be Backfilled
with Sand, Flushed & Vibrated

Sta. 10+20.00 SWS Line 5=
BL Sta 55+00.00, 24.67 Rt.
N. 19971.8977, E. 9199.9642
Construct MH, Standard (6')
Top Elev.=1328.66

SCALE:
1" = 20' Horizontal
1" = 5' Vertical

29th STREET NORTH

Relocated
16" WL

W.L.
Probe 4
-72"

Landscape Boulders

Black Hills 2" PE

Black Hills 2" Coated Welded Steel

4" Chain Link Fence

Ex. Gate

Post

LINE 5

DANGER
GAS
Crosses

DANGER
GAS
Parallel

CAUTION
Proposed 16" WL
Ex. 16" WL
Crosses

CAUTION
WSL
Crosses

DANGER
GAS
Parallel

Match Point

Match Point

Existing Ground @ ℄ Pipe

Proposed Ground @ ℄ Pipe

Install 150.00 LF
30" RCP
@ +0.200%
LINE 5

Install 270.00 LF
30" RCP
@ +0.200%
LINE 5

Install 180.00 LF
30" RCP
@ +0.201%
LINE 5

Relocated
16" WL

1319.55 = T.P.
1319.65 = T.P.
1319.75 = T.P.
F.L.=1319.85 Out 30" (W)
F.L.=1319.85 In 30" (E)
1319.95 = T.P.
1320.05 = T.P.
1320.15 = T.P.
1320.25 = T.P.
1320.35 = T.P.
F.L.=1320.39 Out 30" (W)
F.L.=1320.39 In 30" (E)
1320.45 = T.P.
1320.55 = T.P.
1320.65 = T.P.
1320.75 = T.P.

6+00 6+50 7+00 7+50 8+00 8+50 9+00 9+50 10+00 10+20.00 10+50 11+00 11+50 12+00

1335 1330 1325 1320 1315 1310 1305

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\SWS.dwg

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	NOTED

Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT

29th Street and Hoover Road
SWS Line 5 (2)
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

NOTE:
All Pipe Trench Under
Pavement Shall be Backfilled
with Sand, Flushed & Vibrated

LINE 5B

LINE 5C

SCALE:
1" = 20' Horizontal
1" = 5' Vertical

Sta. 13+63.00 SWS Line 5=
Sta. 0+00.00 SWS Line 5B=
BL Sta 58+43.00, 24.17 Rt.
N. 19971.9253, E. 9542.9662
Construct Inlet, Curb Type 1A
(L=10', W=4')
Top Elev.=1326.02

Sta. 16+40.00 SWS Line 5=
Sta. 0+00.00 SWS Line 5C=
BL Sta 61+20.00, 24.17 Rt.
N. 19971.5438, E. 9819.9635
Construct Inlet, Curb Type 1A
(L=10', W=4')
Top Elev.=1325.13

CAUTION
Wtr
Crosses

LINE 5

LINE 5

Match Point

Match Point

Existing Ground @ ℄ Pipe

Proposed Ground @ ℄ Pipe

Install 163.00 LF
30" RCP
@ +0.201%
LINE 5

Install 277.00 LF
30" RCP
@ +0.200%
LINE 5

Install 160.00 LF
24" RCP
@ +0.405%
LINE 4

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\SWS.dwg

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	NOTED

Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT

29th Street and Hoover Road
SWS Line 5 (3)
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

NOTE:
All Pipe Trench Under
Pavement Shall be Backfilled
with Sand, Flushed & Vibrated

SCALE:
1" = 20' Horizontal
1" = 5' Vertical

29th STREET NORTH

HOOVER

LINE 5D

LINE 5

CAUTION
WSL (x2)
Crosses

CAUTION
UG Traffic (3)
Crosses

CAUTION
OHE (x2)
UG Cox
UG Traffic (3)
Prop. 16" Wtr
AT&T
Wtr. Crosses

Sta. 20+60.00 SWS Line 5=
Sta. 0+00.00 SWS Line 5D=
BL Sta 65+40.00, 24.17 Rt.
N. 19970.9653, E. 10239.9639
Construct MH, Standard (5')
Top Elev.=1330.31

Sta. 22+67.24 END SWS Line 5=
BL Sta 67+00.00, 23.67 Lt.
N. 20018.0293, E. 10400.1255
Construct Inlet, Curb Type 1A
(L=5', W=3')
Top Elev.=1328.41

Sta. 22+19.90 SWS Line 5=
BL Sta 67+00.00, 23.67 Rt.
N. 19970.9601, E. 10399.8648
Construct Inlet, Curb Type 1A
(L=5', W=3')
Top Elev.=1328.41

Match Point

Existing Ground @ ℄ Pipe
Proposed Ground @ ℄ Pipe

Ex. Wtr.
Ex. Wtr.
Prop. Traffic
Prop. Traffic
Prop. Traffic
Sta. 20+60.00 SWS Line 5=
Sta. 0+00.00 SWS Line 5D=
BL Sta 65+40.00, 24.17 Rt.
N. 19970.9653, E. 10239.9639
Construct MH, Standard (5')
Top Elev.=1330.31
Ex. Traffic
Sta. 65+65.45 ℄ Hoover
Ex. Cox
Prop. Traffic
Prop. Traffic
Prop. Traffic
Prop 16" Wtr.
Ex. AT&T
Sta. 22+19.90 SWS Line 5=
BL Sta 67+00.00, 23.67 Rt.
N. 19970.9601, E. 10399.8648
Construct Inlet, Curb Type 1A
(L=5', W=3')
Top Elev.=1328.41
Sta. 22+67.24 END SWS Line 5=
BL Sta 67+00.00, 23.67 Lt.
N. 20018.0293, E. 10400.1256
Construct Inlet, Curb Type 1A
(L=5', W=3')
Top Elev.=1328.41

Install 260.00 LF
24" RCP
@ +0.405%
LINE 5

Install
159.90 LF
18" RCP
@ +0.419%
LINE 5

Install
47.34 LF
18" RCP
@ +0.401%

1322.27 = T.P.
1322.47 = T.P.
1322.68 = T.P.
1322.88 = T.P.
1323.08 = T.P.
F.I.L.=1323.33 Out 24" (W)
F.I.L.=1323.42 In 18" (N)
F.I.L.=1323.32 In 18" (E)
1323.49 = T.P.
1323.70 = T.P.
1323.92 = T.P.
F.I.L.=1324.00 Out 18" (W)
F.I.L.=1324.10 In 18" (N)
F.I.L.=1324.29 Out 18" (S)

18+00 18+50 19+00 19+50 20+00 20+60.00 21+00 21+50 22+00 21+19.90 22+66.90

1335 1330 1325 1320 1315 1310 1305

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\SWS.dwg

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	NOTED

Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT

29th Street and Hoover Road
SWS Line 5 (4)
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

Sta. 0+00.00 BEGIN SWS Line 5A=
Sta. 3+70.00 SWS Line 5=
BL Sta 48+50.00, 24.67 Rt.
N. 19972.7930, E. 8549.9648
Connect to New Inlet

20 0 20

LINE 5A

LINE 5

DANGER
GAS
Crosses

Sta. 0+48.34 END SWS Line 5A=
BL Sta 48+50.00, 23.67 Lt.
N. 20021.1329, E. 8550.0314
Construct Inlet, Curb Type 1A
(L=10', W=3')
Top Elev.=1327.06

Sta. 0+00.00 BEGIN SWS Line 5B=
Sta. 13+63.00 SWS Line 5=
BL Sta 58+43.00, 24.17 Rt.
N. 19971.9253, E. 8542.9662
Connect to New Inlet

20 0 20

LINE 5B

LINE 5

CAUTION
AT&T
OHE
Crosses

DANGER
GAS
Crosses

Sta. 0+47.84 END SWS Line 5A=
BL Sta 58+43.00, 23.67 Lt.
N. 20019.7653, E. 9543.0321
Construct Inlet, Curb Type 1A
(L=10', W=3')
Top Elev.=1326.02
Install 18" Stub (N)

Sta. 0+00.00 BEGIN SWS Line 5C=
Sta. 16+40.00 SWS Line 5=
BL Sta 61+20.00, 24.17 Rt.
N. 19971.5438, E. 9819.9635
Connect to New Inlet

20 0 20

LINE 5B

LINE 5

CAUTION
AT&T (x2)
OHE
Crosses

DANGER
GAS
Crosses

Sta. 0+47.84 END SWS Line 5C=
BL Sta 61+20.00, 23.67 Lt.
N. 20019.3838, E. 9820.0294
Construct Inlet, Curb Type 1A
(L=10', W=3')
Top Elev.=1325.13
Install 18" Stub (N)

Sta. 0+00.00 BEGIN SWS Line 5D=
Sta. 20+60.00 SWS Line 5=
BL Sta 65+40.00, 24.00 Rt.
N. 19970.9653, E. 10239.9639
Connect to Manhole

CAUTION
OHE
UG COX
AT&T
PROP TRAF
Crosses

Sta. 1+02.75 SWS Line 5D=
BL Sta 65+44.02, 78.50 Lt.
N. 20073.6321, E. 10244.1249
Construct Inlet, Curb Type 1
(L=10', W=3')
Top Elev.=1330.90

20 0 20 5 0

SCALE:
1" = 20' Horizontal
1" = 5' Vertical

LINE 5D

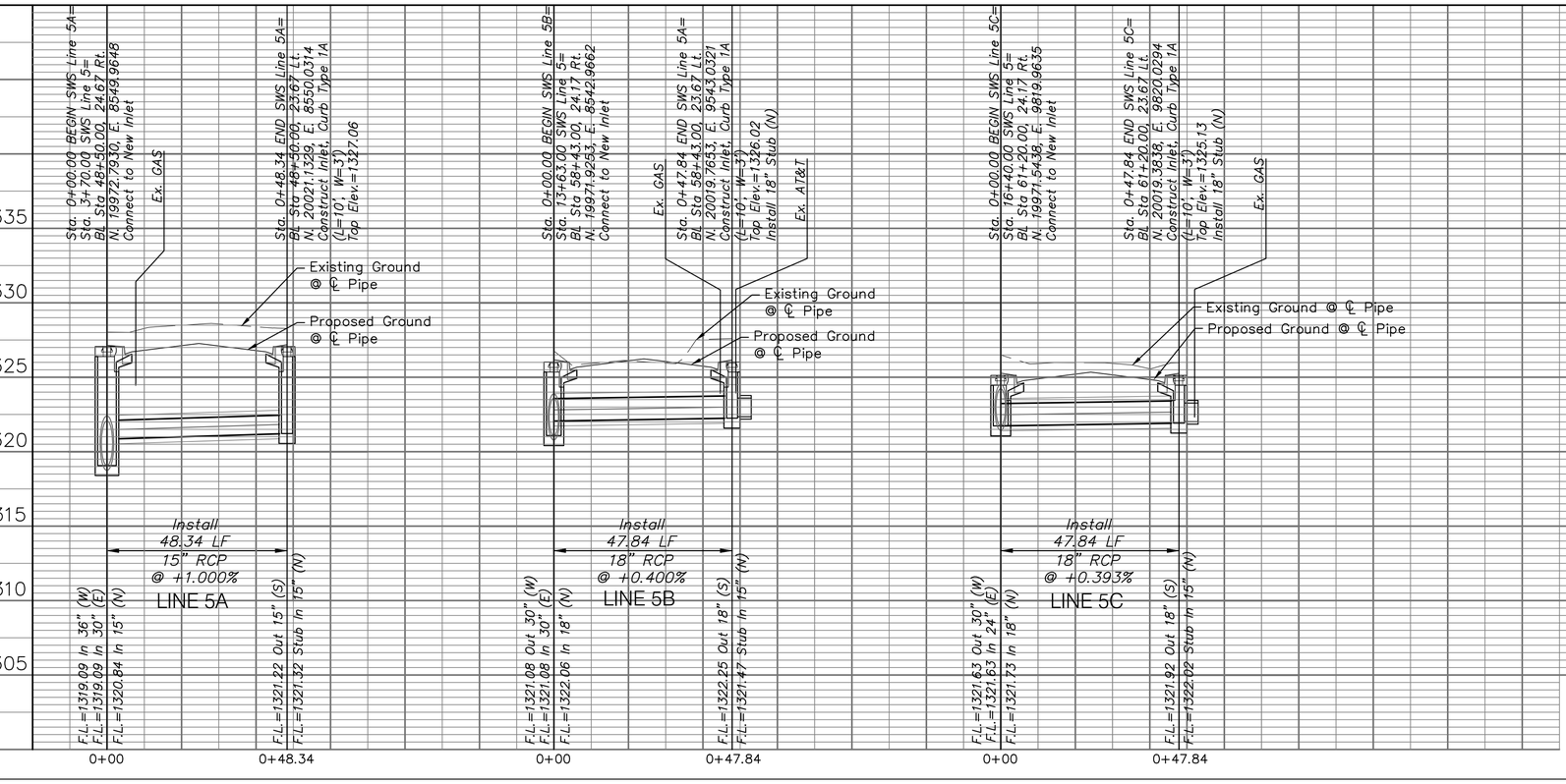
LINE 5

HOOVER RD

DANGER
GAS
Crosses

DANGER
GAS
Crosses

Sta. 1+47.92 END SWS Line 5D=
BL Sta 65+88.87, 78.50 Lt.
N. 20073.4707, E. 10289.2962
Construct Inlet, Curb Type 1A
(L=10', W=3')
Top Elev.=1330.90



Drawing File: E:\Projects\29th Ridge to Hoover\dwg\SWS.dwg

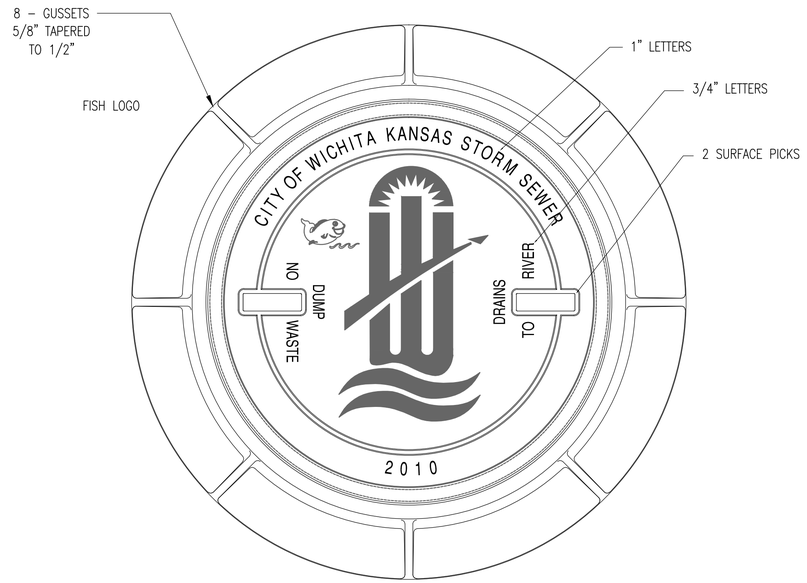
NOVEMBER, 2013

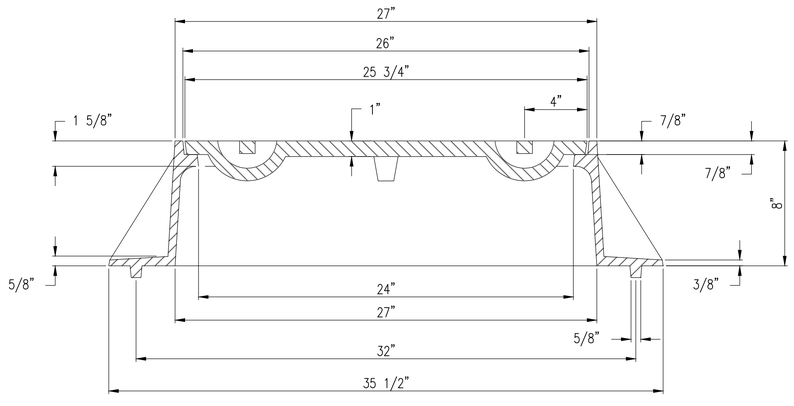
Designs:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	NOTED

Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT

29th Street and Hoover Road
SWS Line 5A-5B-5C-5D
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

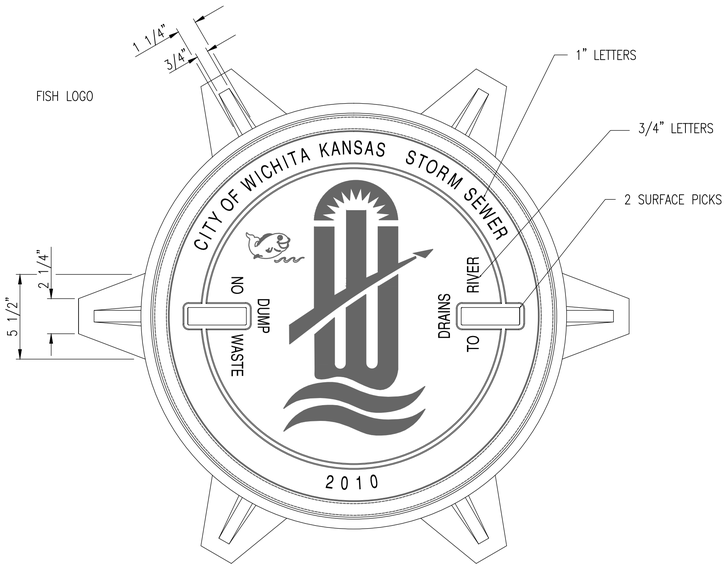


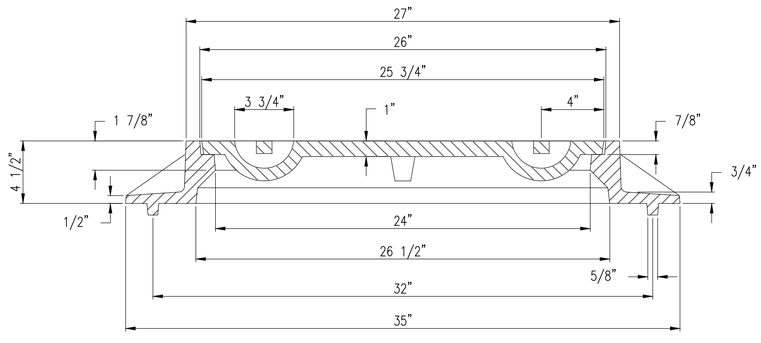


MANHOLE FRAME

DEETER #1261 OR EJIW #1936-Z1

NOTE:
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.
2. COVER TO BE DEETER #1261 OR EJIW #1936A.





INLET FRAME

DEETER #2014 OR EJIW #1936-Z4

NOTE:
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACES.
2. NOT TO BE USED UNDER PAVEMENT.
3. COVER TO BE DEETER #1261 OR EJIW #1936A.

CITY OF WICHITA

PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

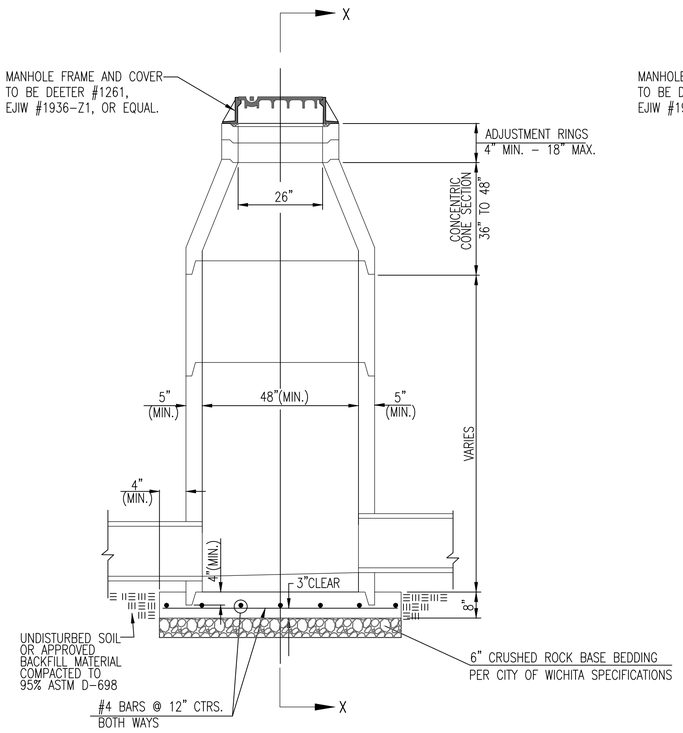
MANHOLE/INLET FRAME AND COVER (STORM SEWER)

CITY ENGINEER
GARY JANZEN, P.E.

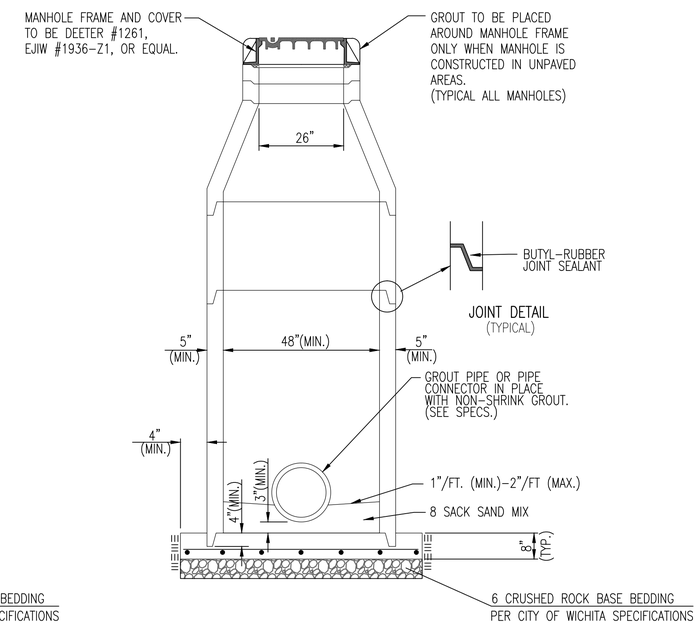
PROJECT NUMBER	OCA NUMBER	DATE
472-84691	706989	11/2010

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

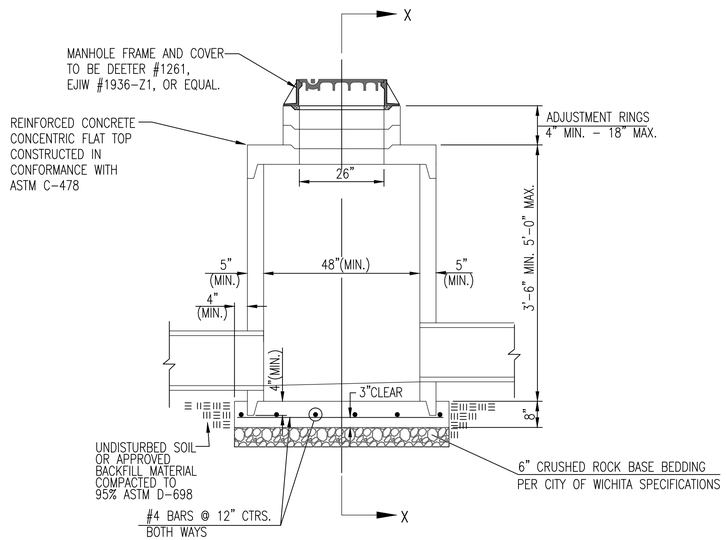
DESIGN | DRAWN



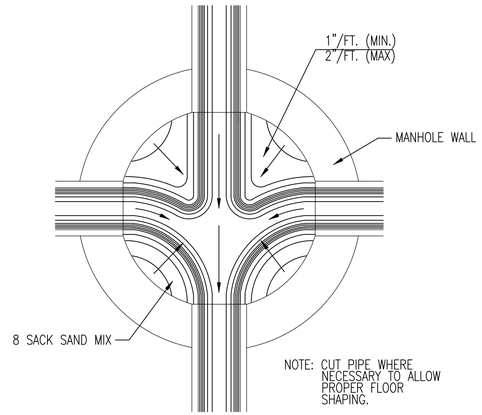
PRECAST
STANDARD MANHOLE
TYPE "A"



SECTION X-X
(TYPICAL)



PRECAST
SHALLOW MANHOLE
TYPE "B"



TYPICAL MANHOLE
FLOOR SHAPING

GENERAL NOTES

1. IF, IN THE OPINION OF THE ENGINEER, THE MANHOLE SUBGRADE APPEARS UNSTABLE, THE CONTRACTOR WILL HAVE THE OPTION TO COMPACT SUBGRADE AS SHOWN OR INCREASE THE THICKNESS OF THE MANHOLE BASE AS DIRECTED BY THE ENGINEER.
2. STEEL REINFORCING WILL BE REQUIRED IN ALL MANHOLE BASES.
3. ALL MANHOLE CONSTRUCTION SHALL BE WATER TIGHT.
4. TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
5. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISION OF ASTM C-478 AS MODIFIED BY THE SPECIFICATIONS.
6. CONCRETE USED FOR MANHOLE CONSTRUCTION SHALL CONFORM TO CITY OF WICHITA SPECIFICATIONS FOR CONCRETE PAVEMENT MIX.
7. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO MANHOLE BASE.
8. MANHOLES WITH PIPE SIZES 24" AND LARGER SHALL HAVE 5 FOOT INSIDE DIAMETER (MIN.)
9. MANHOLES WITH PRECAST BASES MAY BE USED AT THE CONTRACTORS OPTION. THESE MANHOLES SHALL HAVE AN 8" MINIMUM BASE THICKNESS AND SHALL BE PLACED ON AN 8" MIN. CRUSHED ROCK BASE. PIPES SHALL BE ENCASED WITH CRUSHED ROCK TO AT LEAST 3 FEET FROM THE MANHOLE WALL.
10. CONTRACTOR SHALL REMOVE LIFTING HOOKS AFTER INSTALLATION. RECESSES IN MANHOLE WALL SHALL BE GROUTED FLUSH TO THE MANHOLE WALL WITH HYDRAULIC CEMENT AFTER THE MANHOLE IS IN PLACE. LIFTING HOLES THRU THE MANHOLE WALL WILL NOT BE ACCEPTED.
11. THE ENDS OF ALL PIPES IN MANHOLES SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE MANHOLE WALL.
12. MANHOLE INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE MANHOLE WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.
13. MANHOLE FRAME AND COVER TO BE DEETER #1261, EJIW #1936-Z1, OR APPROVED EQUAL, SEE SW-303.
14. FOR FLAT GRATED INLET APPLICATION, GRATE TO BE DEETER #1933, EJIW #1205 MDI, OR APPROVED EQUAL.
15. FOR BEEHIVE GRATE APPLICATION, GRATE TO BE DEETER #4495, EJIW #120545, OR APPROVED EQUAL.

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

PRECAST CONCRETE MANHOLE (STORM SEWER)

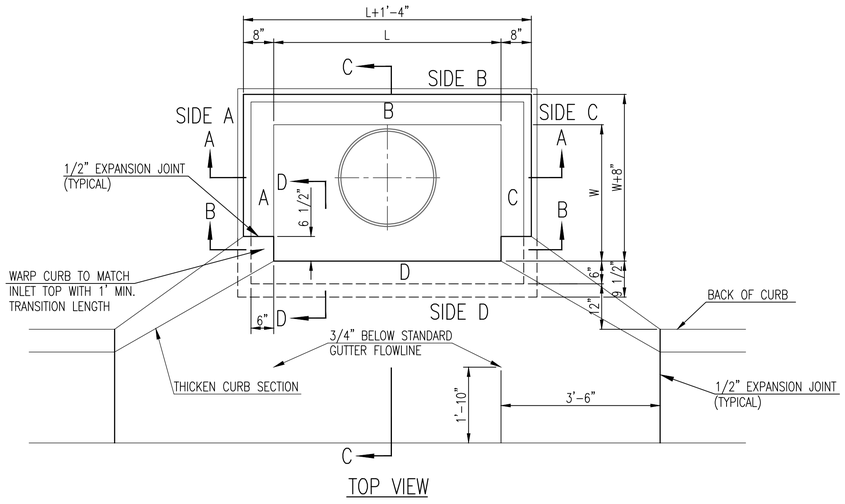
CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
472-84691	706989	11/2010

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

DESIGN	DRAWN

SHEET



TOP VIEW

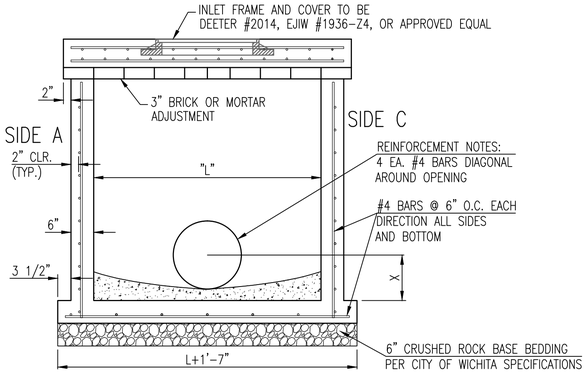
BAR SCHEDULE		
INLET OPENING	B1 BARS	SPACING
5'-0"	#4	4"
10'-0"	#6	3.5"

PRECAST CURB INLET WIDTHS				
W	PRE-CAST TOP SIZE			PIPE DIA.**
	WIDTH	LENGTH	TOP	
3'-0"	W+8"	L+1'-4"	7 1/2"	21" & SMALLER
4'-0"	W+8"	L+1'-4"	7 1/2"	24" & 30"
5'-0"	W+8"	L+1'-4"	7 1/2"	36" & 42"
6'-0"	W+8"	L+1'-4"	7 1/2"	48" & 54"
7'-0"	W+8"	L+1'-4"	7 1/2"	60" & 66"

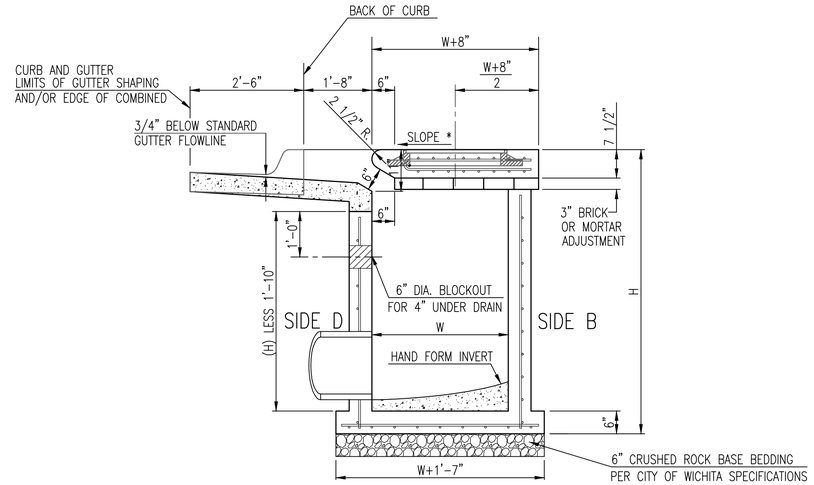
** FOR PIPES PERPENDICULAR TO INLET WALL

GENERAL NOTES

1. CONCRETE TOPS TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK. CONCRETE TOPS MAY BE CAST IN PLACE OR PRECAST. CONCRETE USED FOR INLET CONSTRUCTION SHALL CONFORM TO CITY OF WICHITA SPECIFICATIONS FOR CONCRETE PAVEMENT MIX.
2. CONTRACTOR SHALL HAVE THE OPTION OF CONSTRUCTING 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP OF THIS INLET WHEN W=5'-0" AND H=7'-0" OR LESS.
3. INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.
4. THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.
5. INLET FRAME AND COVER TO BE DEETER #2014, EJIW #1936-Z4, OR APPROVED EQUAL, SEE SW-303.
6. CONTRACTOR SHALL REMOVE LIFTING HOOKS AFTER INSTALLATION. RECESSES IN INLET WALL SHALL BE GROUTED FLUSH TO THE INLET WALL WITH HYDRAULIC CEMENT AFTER THE INLET IS IN PLACE. LIFTING HOLES THRU THE INLET WALL WILL NOT BE ACCEPTED.

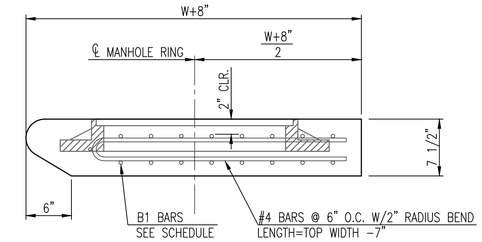


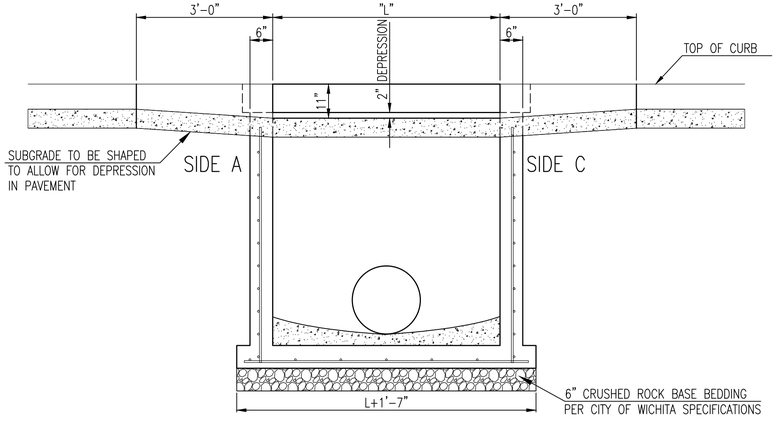
SECTION "A-A"



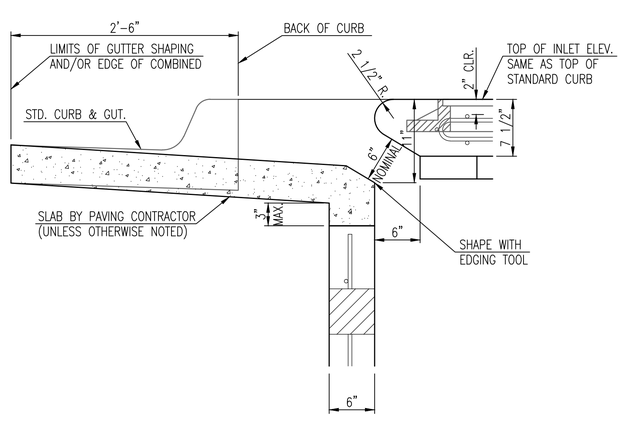
SECTION "C-C"

NOTES:
* SLOPE OF INLET TOP TO MATCH SIDEWALK OR PARKING SLOPES WITHIN LIMITS INDICATED.





SECTION "B-B"



SECTION "D-D"

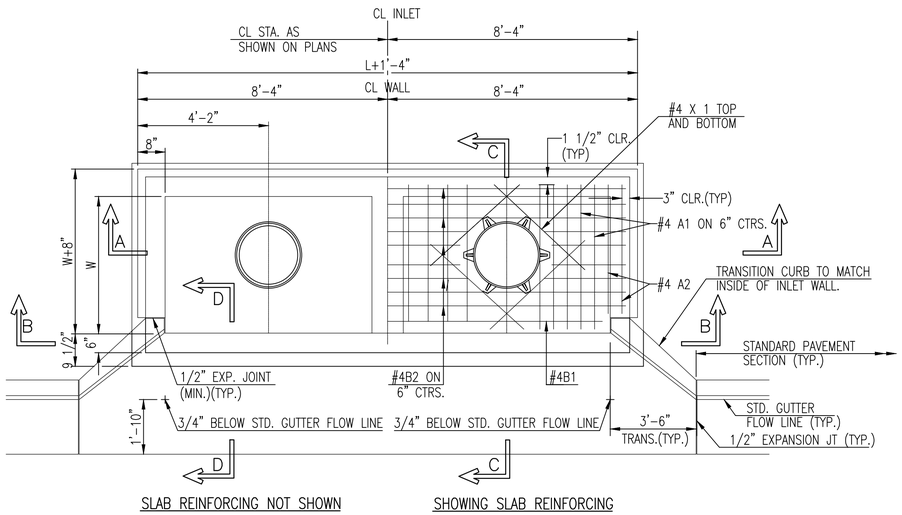
CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

STANDARD TYPE 1A CURB INLET 5'-0" OR 10'-0" OPENING

CITY ENGINEER
Gary Janzen, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
472-84691	706989	4/2012

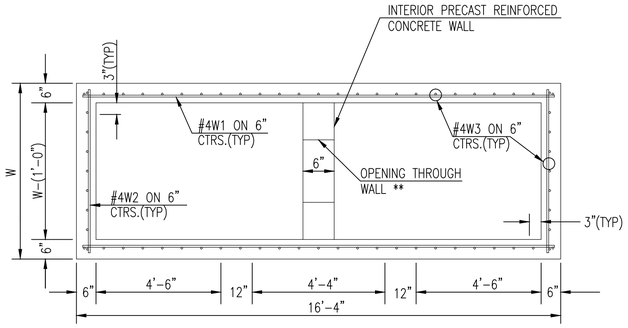
CITY ENGINEER'S OFFICE	DESIGN	DRAWN
CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501	Staff	Staff
	SHEET	
	47 of 177	



SLAB REINFORCING NOT SHOWN

SHOWING SLAB REINFORCING

PLAN



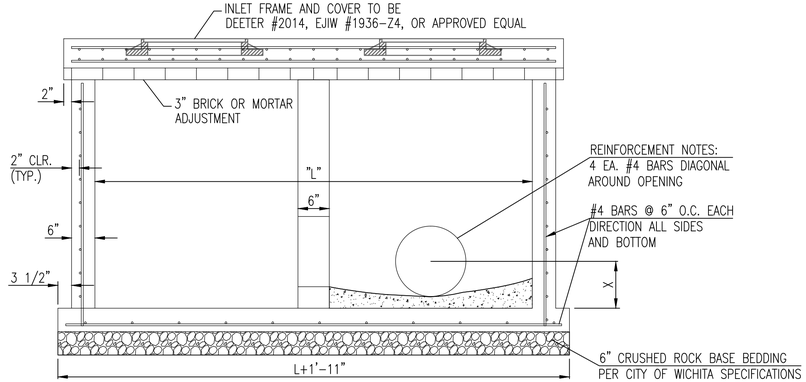
SECTION B-B

PRECAST CURB INLET WIDTHS				
W	PRE-CAST TOP SIZE			PIPE DIA.***
	WIDTH	LENGTH	TOP	
3'-0"	W+8"	L+1'-4"	7 1/2"	21" & SMALLER
4'-0"	W+8"	L+1'-4"	7 1/2"	24" & 30"
5'-0"	W+8"	L+1'-4"	7 1/2"	36" & 42"
6'-0"	W+8"	L+1'-4"	7 1/2"	48" & 54"
7'-0"	W+8"	L+1'-4"	7 1/2"	60" & 66"

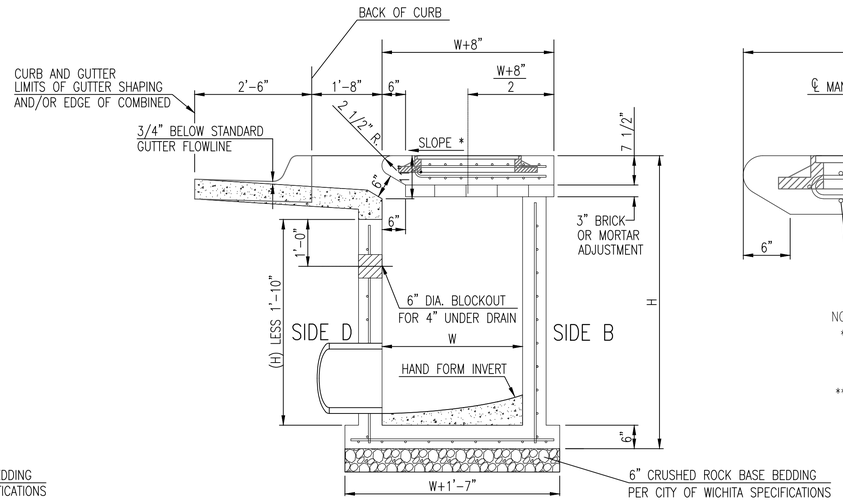
*** FOR PIPES PERPENDICULAR TO INLET WALL

GENERAL NOTES

1. CONCRETE TOPS TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK. CONCRETE TOPS MAY BE CAST IN PLACE OR PRECAST. CONCRETE USED FOR INLET CONSTRUCTION SHALL CONFORM TO CITY OF WICHITA SPECIFICATIONS FOR CONCRETE PAVEMENT MIX.
2. CONTRACTOR SHALL HAVE THE OPTION OF CONSTRUCTING 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP OF THIS INLET WHEN W=5'-0" AND H=7'-0" OR LESS.
3. INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.
4. THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.
5. INLET FRAME AND COVER TO BE DEETER #2014, EJIW #1936-Z4, OR APPROVED EQUAL, SEE SW-303.
6. CONTRACTOR SHALL REMOVE LIFTING HOOKS AFTER INSTALLATION. RECESSES IN INLET WALL SHALL BE GROUTED FLUSH TO THE INLET WALL WITH HYDRAULIC CEMENT AFTER THE INLET IS IN PLACE. LIFTING HOLES THRU THE INLET WALL WILL NOT BE ACCEPTED.

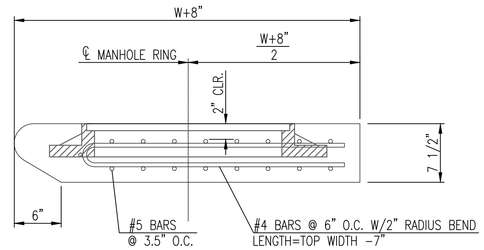


SECTION "A-A"

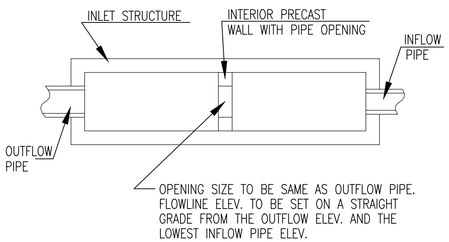


SECTION "C-C"

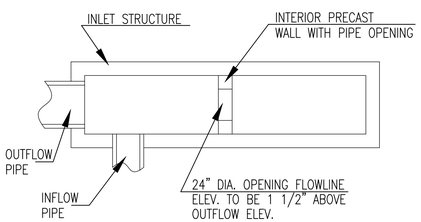
NOTES:
* SLOPE OF INLET TOP TO MATCH SIDEWALK OR PARKING SLOPES WITHIN LIMITS INDICATED.



NOTES:
* SLOPE OF INLET TOP TO MATCH SIDEWALK OR PARKING SLOPES WITHIN LIMITS INDICATED.
** AN INTERIOR WALL OPENING SHALL BE PROVIDED. SEE CASE I AND CASE II.

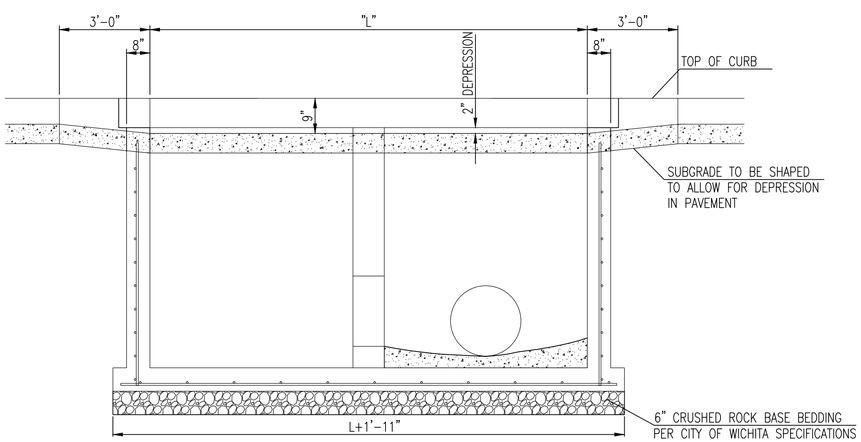


CASE I

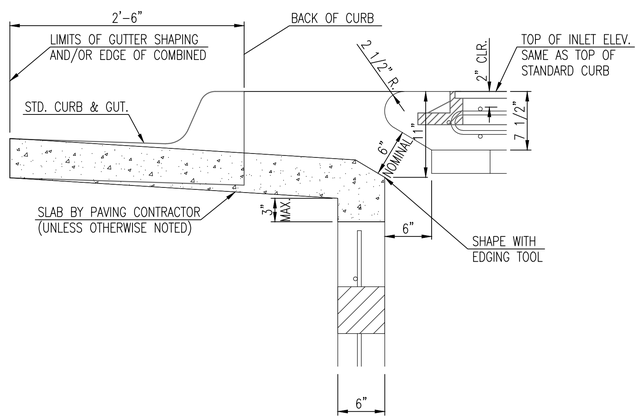


CASE II

NOTE: INTERIOR WALL OPENING SIZE SHALL BE AS SPECIFIED IN THE INLET CONSTRUCTION NOTE ON THE PLAN/ PROFILE SHEETS FOR THOSE CASES NOT SHOWN HERE.



SECTION "B-B"



SECTION "D-D"

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STANDARD TYPE 1A CURB INLET 15'-0" OPENING

CITY ENGINEER
JAMES L. ARMOUR, P.E., L.S.

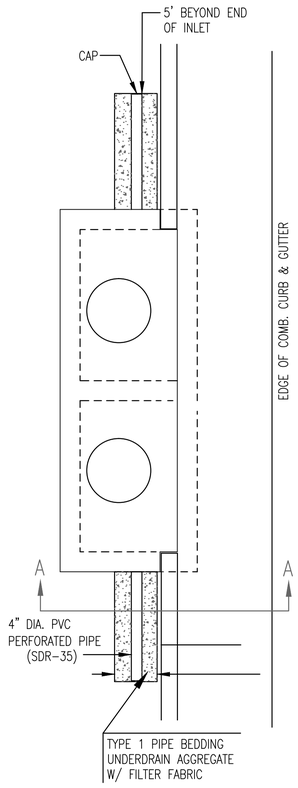
PROJECT NUMBER	OCA NUMBER	DATE
472-84691	706989	11/2010

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

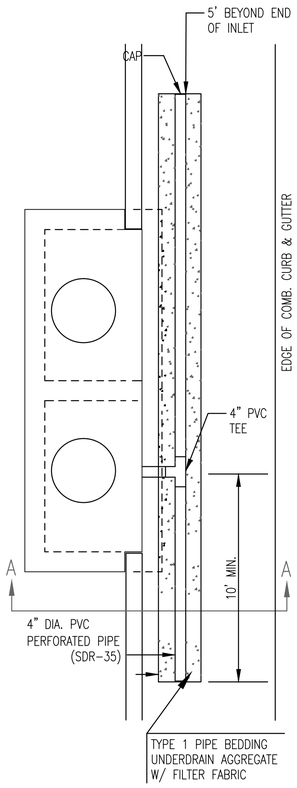
DESIGN | DRAWN

SHEET 48 of 177

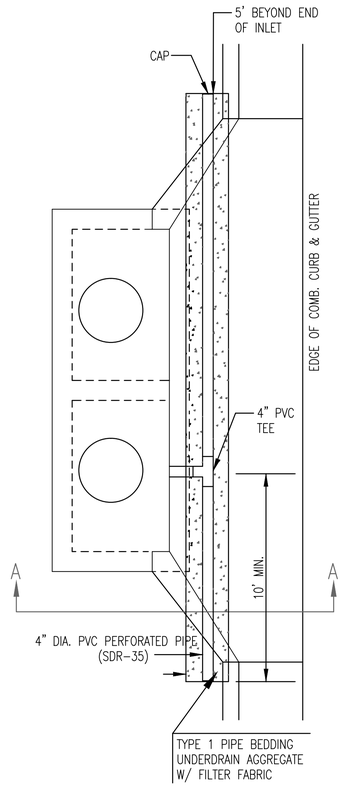
PAVEMENT UNDERDRAIN SHALL BE INSTALLED ON ALL CURB INLETS.



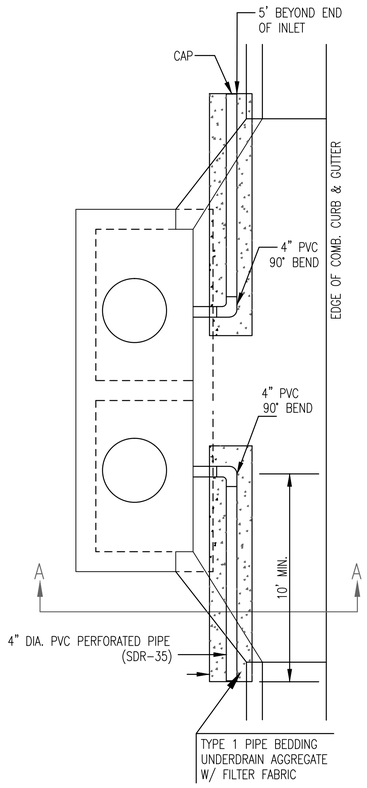
TYPE 1
OPTION 1



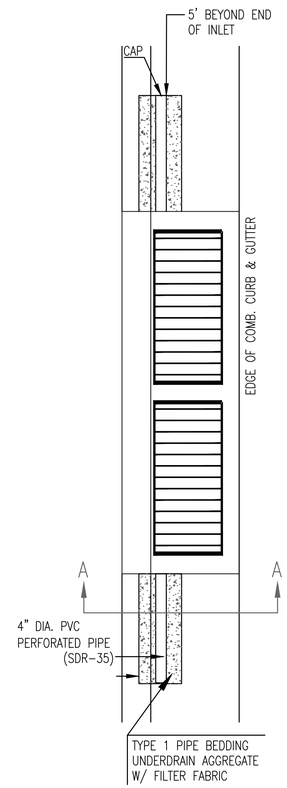
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OPTION 2



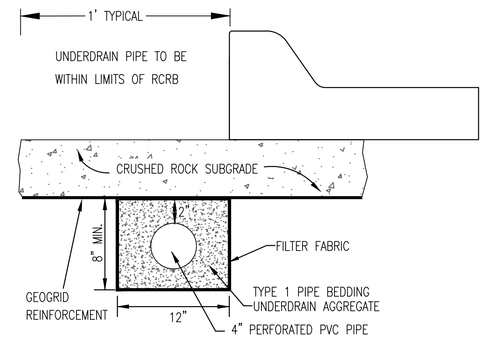
TYPE 1-A INLET
OPTION 1



TYPE 1-A INLET
OPTION 2



TYPE 2



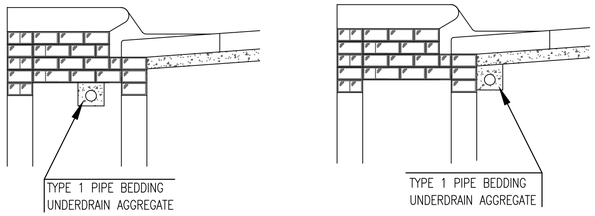
SECTION A-A (TYPICAL)

GENERAL NOTES

1. PAVEMENT CONTRACTOR WILL BE REQUIRED TO INSTALL SDR 35, 4" PERFORATED DRAIN PIPE AND TEE AS INDICATED IN THE DETAILS.

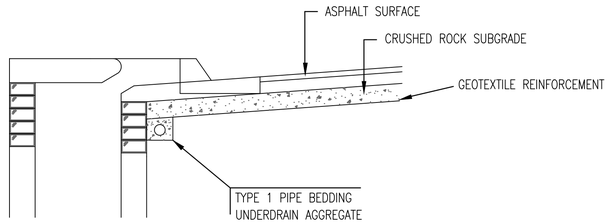
2. WHEN SWS CONSTRUCTED BY SEPARATE PROJECT, SWS CONTRACTOR SHALL INSTALL SDR 35, 4" DRAIN PIPE STUB ONLY THROUGH WALLS OF CURB INLETS AND CAP TO ALLOW FUTURE CONNECTION OF TEE AND ADDITIONAL DRAIN PIPE BY OTHERS.

2. UNDERDRAIN PIPE SHALL BE PAID AS A MEASURED QUANTITY BY THE LINEAL FOOT.



(MIN. 16 PERFORATIONS PER LIN. FT. @ 1/4" DIA.)
PERFORATIONS TO BE ON BOTTOM HALF

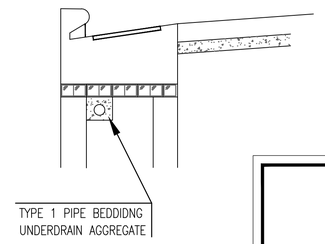
SECTION A-A



SECTION A-A

PAVEMENT UNDERDRAIN DETAIL

BID ITEM TO BE PROVIDED PER 4" PERFORATED UNDERDRAIN PIPE.



SECTION A-A

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

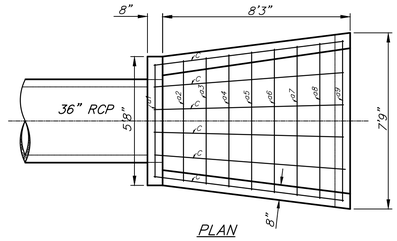
CURB INLET PAVEMENT UNDERDRAIN DETAIL

INTERIM CITY ENGINEER
GARY JANZEN, P.E.

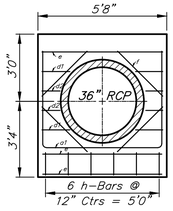
PROJECT NUMBER	OCA NUMBER	DATE
472-84691	706989	10/2012

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

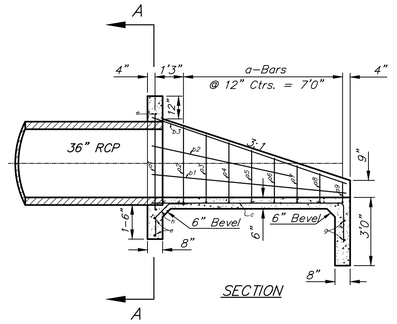
SHEET



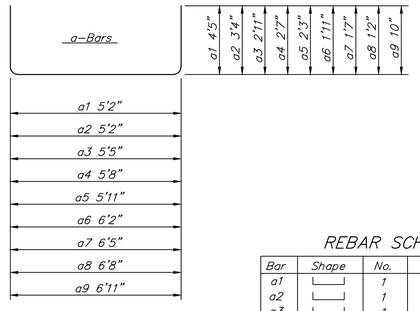
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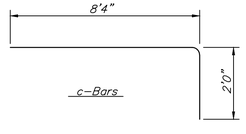


SECTION A-A

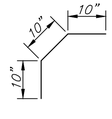


SECTION





c-Bars



h-Bars

REBAR SCHEDULE

Bar	Shape	No.	Length	Weight
a1		1	14'0"	9.35
a2		1	11'10"	7.90
a3		1	11'3"	7.52
a4		1	10'10"	7.24
a5		1	10'5"	6.96
a6		1	10'0"	6.68
a7		1	9'7"	6.40
a8		1	9'0"	6.01
a9		1	8'7"	5.73
b1		2	8'5"	11.24
b2		2	4'7"	6.12
b3		2	9'0"	12.02
c		6	10'4"	41.42
d1		4	1'6"	4.01
d2		4	10"	2.23
e		3	5'4"	10.69
f		4	3'0"	8.02
g		2	7'0"	9.35
h		6	2'6"	10.02
Total Rebar				178.91 Lbs.
Concrete				3.20 C.Y.

A Deduction in Concrete Quantities Has Been Made for Pipe Openings Through the Headwall

* Field Bend or Cut Reinforcing as Required for Clearance.

All Concrete Reinforcement to be #4 Rebar

All Rebar to Have Min. of 1 1/2" Conc. Cover

GENERAL NOTES

1. ALL PIPES SHALL BE FLUSH CUT PRIOR TO BEING CAST INTO CONCRETE HEADWALL
2. CONCRETE USED IN HEADWALL CONSTRUCTION SHALL BE SAME AS PER CITY STANDARD PAVING MIX EXCEPT THAT IT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI.
3. ALL EXPOSED EDGES SHALL BE BEVELED 1/2" .
4. REINFORCING STEEL SHALL COMPLY TO A.S.T.M. DESIGNATION A615 GRADE 60. ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTERLINE OF BAR UNLESS OTHERWISE NOTED.
5. THE "REIN. CONC. HEADWALL" SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH IN PLACE WHICH SHALL INCLUDE ALL LABOR, MATERIALS, EXCAVATION, CONCRETE, REINFORCING STEEL AND ALL OTHER INCIDENTAL ITEMS NECESSARY TO COMPLETE THE WORK. MATERIAL QUANTITIES SHOWN ARE FOR INFORMATION ONLY.

HEADWALL FOR 36" RCP

Drawing File: E:\Projects\29th Ridge to Hoover\Details\Hydroworks Detals

NOVEMBER, 2013

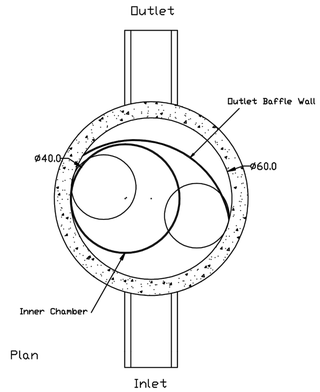
Design: -
Drawn: -
Approved: -
Scale: None

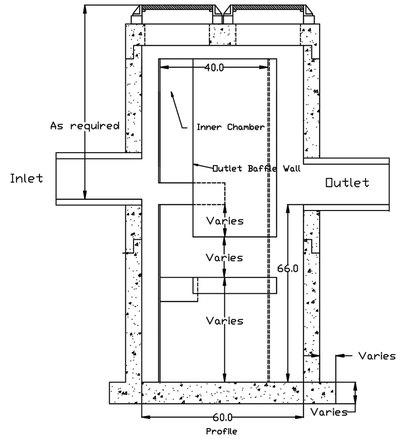
Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT

HEADWALL DETAIL

29th Street Ridge to Hoover

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE



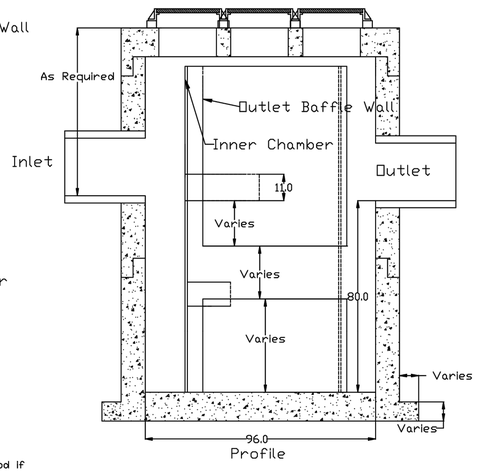


U.S. Patent No. 6,951,619

Dimensions in inches
Permanent Pool Volume = 800 US gallons
The Hydroguard must be cleaned after the construction period if it is used as a sediment and erosion control measure
The Hydroguard should be inspected once per year for stabilized sites
Inspection will determine the maintenance frequency (annual maintenance or once every two years typical for stabilized sites)
Sites with unstable conditions (exposed soil or materials storage) will require more frequent inspection and maintenance

Hydroworks, LLC
50 S. 21st St., Kenilworth, NJ 07033
Phone: 888-290-7900 Fax: 888-783-7271
Web: www.hydroworks.com

Hydroworks HG5 (60"ø)	
PROJECT:	
LOCATION:	
REVISION DATE: 02/10/2011	

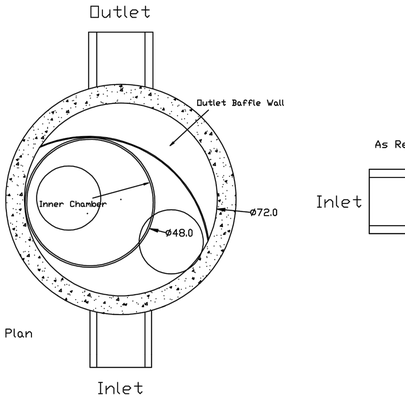


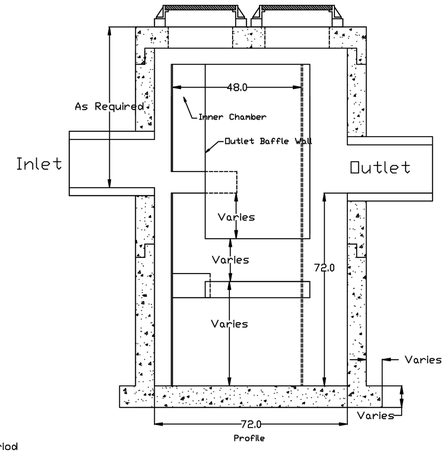
U.S. Patent No. 6,951,619

Dimensions in inches
Permanent Pool Volume = 2500 US gallons
The Hydroguard must be cleaned after the construction period if it is used as a sediment and erosion control measure
The Hydroguard should be inspected once per year for stabilized sites
Inspection will determine the maintenance frequency (annual maintenance or once every two years typical for stabilized sites)
Sites with unstable conditions (exposed soil or materials storage) will require more frequent inspection and maintenance

Hydroworks, LLC
50 S. 21st St., Kenilworth, NJ 07033
Phone: 888-290-7900 Fax: 888-783-7271
Web: www.hydroworks.com

Hydroworks HG8 (96"ø)	
PROJECT:	
LOCATION:	
REVISION DATE: 02/10/2011	





U.S. Patent No. 6,951,619

Dimensions in inches
Permanent Pool Volume = 1250 US gallons
The Hydroguard must be cleaned after the construction period if it is used as a sediment and erosion control measure
The Hydroguard should be inspected once per year for stabilized sites
Inspection will determine the maintenance frequency (annual maintenance or once every two years typical for stabilized sites)
Sites with unstable conditions (exposed soil or materials storage) will require more frequent inspection and maintenance

Hydroworks, LLC
50 S. 21st St., Kenilworth, NJ 07033
Phone: 888-290-7900 Fax: 888-783-7271
Web: www.hydroworks.com

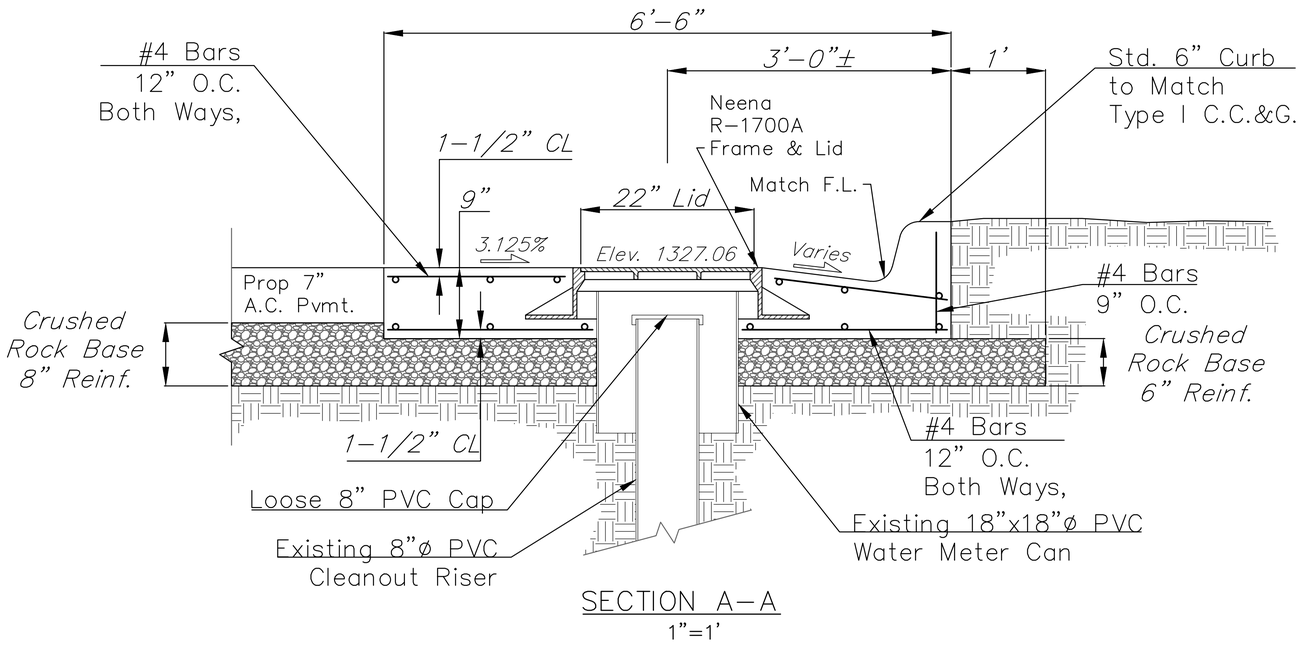
Hydroworks HG6 (72"ø)	
PROJECT:	
LOCATION:	
REVISION DATE: 02/10/2011	

Drawing File: E:\Projects\29th Ridge to Hoover\Details\Hydroworks Details — NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: None	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT SEDIMENT SEPARATION UNIT DETAILS 29th Street Ridge to Hoover	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE	SHEET 51 OF 177

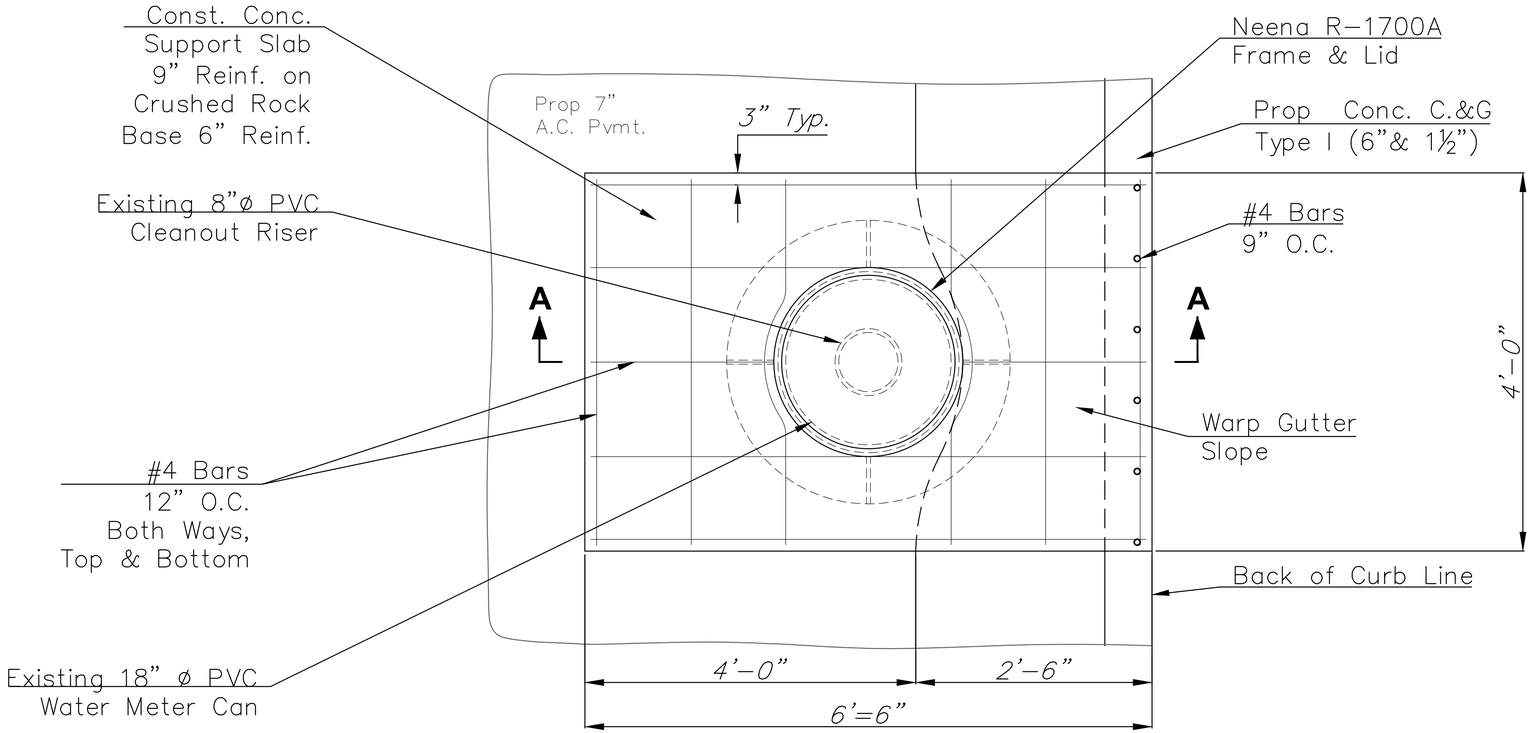
NOTE: Lower Existing 18" PVC Water Meter Can and Cut Existing 8" PVC Riser to Fit New Elevations.

NOTE: Top of 8"ø Cleanout Riser to be 6" – 12" Below New Paving Surfaces.



SECTION A–A
1"=1'

NOTE: Postion 18" ø PVC Water Meter Can to Fit and Pour Concrete Around it.



PLAN VIEW
1"=1'

NOTE: Cost of Reinforced Concrete Slab, Frame & Lid, Lowering Water Meter Can and Cutting Cleanout Riser to be Included in the Bid Item "Cleanout Adjusted".

NOTE: Bend or Cut Reinf. Bars to Fit Around Manhole Frame as Required.

CONCRETE SS CLEANOUT SUPPORT DETAIL

Drawing File: E:\Projects\29th Ridge to Hoover\Details\Cleanout Support Detail — NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: None	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT SS CLEANOUT ADJUSTMENT 29th Street Ridge to Hoover	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

D-1079-1UP
Conway Bank N A
121 E Kellogg
WICHITA, KS 67202

2920 N Ridge Rd
D-1099-UP
Terry Alan Richards
9216 Thurman
WICHITA, KS 67212

Note: Cost for Fence Removal to be Included in the Lump Sum Bid Price for "Site Clearing".

D-1079-UP
TATT LLC
1830 W Harry
WICHITA, KS 67213

Note: Earthwork Limits Shown are Approximate, Base on Cross-Sections and Should be a Guide Only. Exact Earthwork Limits to be Determined in the Field as Necessary for Construction.

Note: Large Trees Shall be 12" or Larger. Large Tree Removal to be Paid per Each as the Bid Item "Large Tree Removal". Small Trees Shall be Less than 12". Small Tree Removal to be Paid per Each as the Bid Item "Small Tree Removal". Tree Trimming or Brush Removal to be Included in the Lump Sum Bid Price for "Site Clearing". Save Trees Marked for Removal Whenever Possible. Some Trees not Marked for Removal May Require Removal.

QUANTITIES
92 Each Large Trees Removed
80 Each Small Trees Removed

Note: Trees/Shrubs to be removed are marked thus:

Note: EARTHWORK Fill Limit Slope

Irrigation

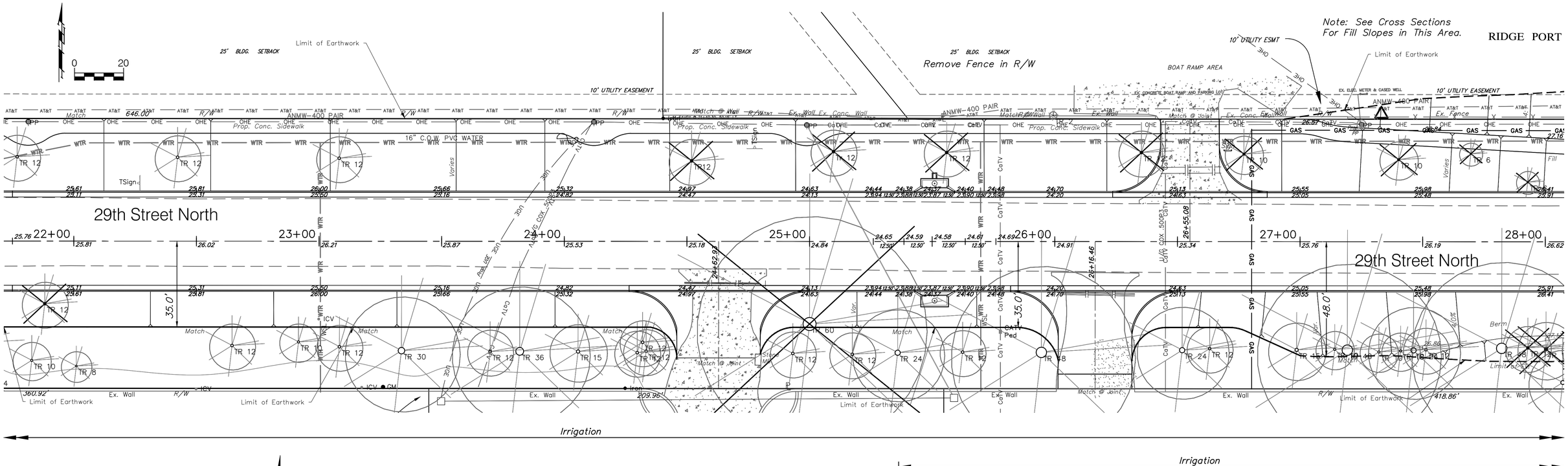
Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg NOVEMBER, 2013

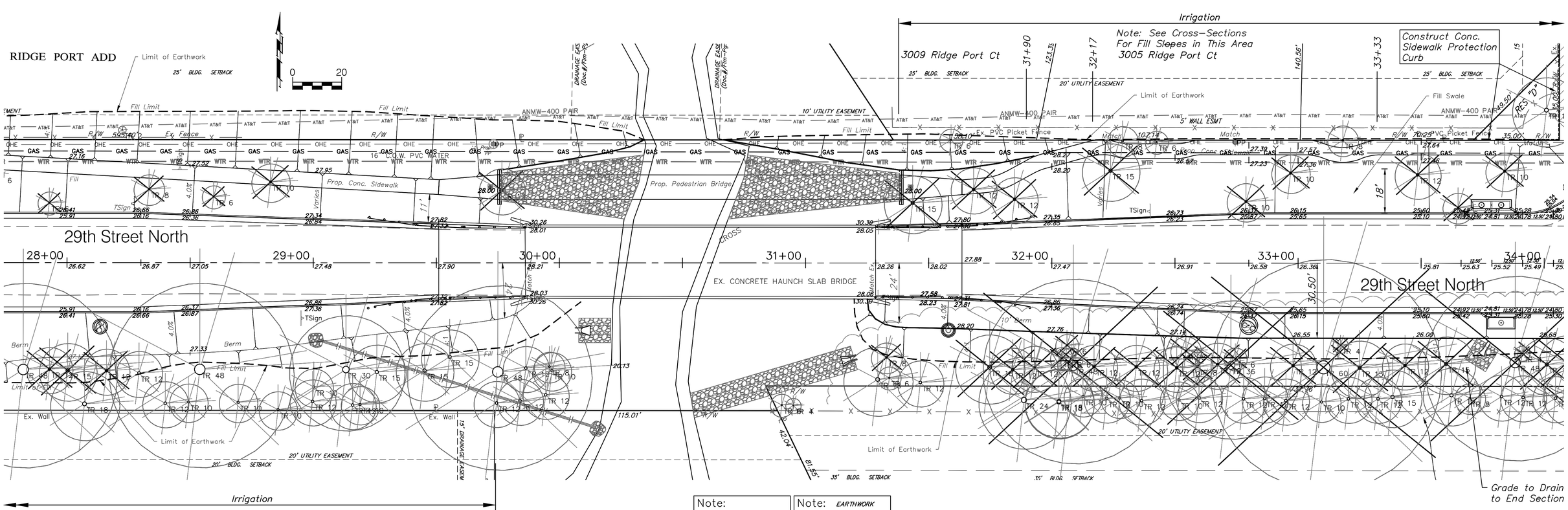
Design: KEK
Drawn: JDM
Approved: MWS
Scale: Noted

Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT
29th St. N.- Earthwork, Tree Removal, Irrigation
Sta. 10+50.00 - Sta. 22+00.00
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 53 OF 177





Note:
Trees/Shrubs to be removed are marked thus:

Note: EARTHWORK
Fill Limit
Slope
Slope

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

CAPITAL IMPROVEMENT PROJECT
Project No. 09-09-E382
29th St. N.- Earthwork, Tree Removal, Irrigation
Sta. 22+00.00 - Sta. 34+00.00
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 54 OF 177

Irrigation

Irrigation

Construct Conc. Sidewalk Protection Curb

3006 Ridge Port Ct

3010 Ridge Port Ct

3014 Ridge Port Ct

3018 Ridge Port Ct

Construct 250 L.F. Concrete Sidewalk Protection Curb

NOTE: Slope Fill Beyond Curb to Sidewalk @ 12% from Sta. 35+50 to Sta. 38+75

37+00

38+50

0 20

Limit of Earthwork

20' UTILITY EASEMENT

5' WALL ESMT

Ex. PVC Picket Fence

ANMW-400 PAIR

16" C.O.W. PVC WATER

10" C.O.W. PVC SS

8" C.O.W. PVC SS

SSMH

Ex. Chainlink

Match @ Fence

Prop. Conc. Sidewalk

Prop. Conc. Curb

Match

Varies

29th Street North

34+00 35+00 36+00 37+00 38+00 39+00 40+00

Irrigation

Limit of Earthwork

Ex. Chainlink Fence

Prop. Conc. Sidewalk

16" C.O.W. PVC WATER

Varies

Match

Prop. Conc. Curb

Black Hills 2" PE

Ex. Gate

20' UTILITY EASEMENT

29th Street North

40+00 41+00 42+00 43+00 44+00 45+00 46+00

Landscape Boulders

Key Pad

Trim Tree Overhang Here as Required for Construction

Note:

Trees/Shrubs to be removed are marked thus:

Note: EARTHWORK

Fill Limit

Slope

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg

NOVEMBER, 2013

Design: KEK
Drawn: JDM
Approved: MWS
Scale: Noted

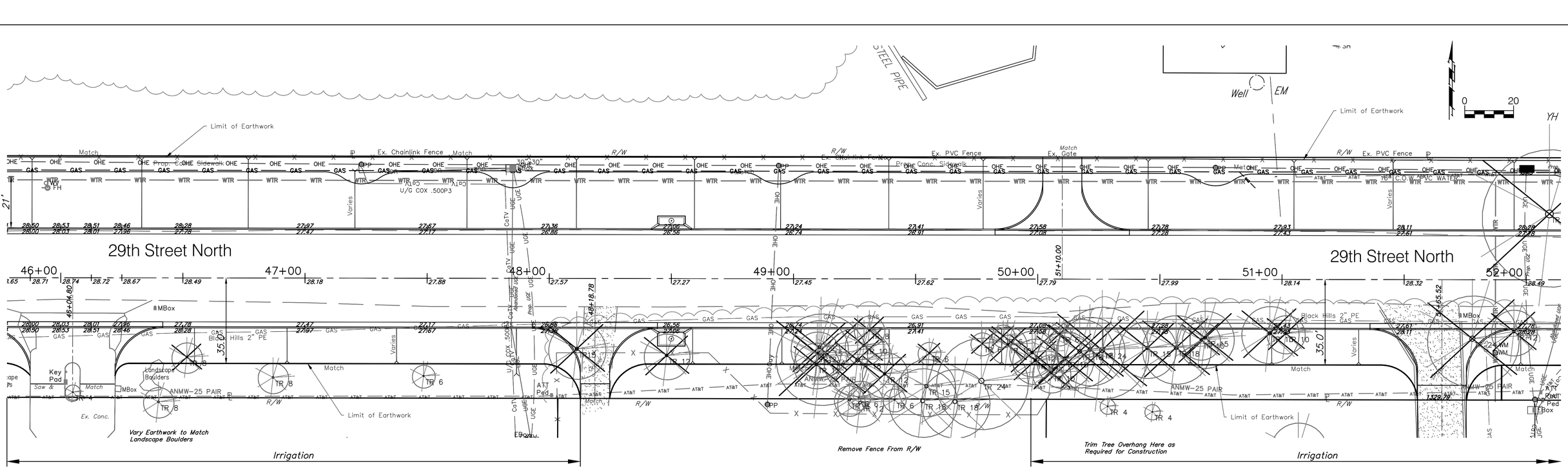
Project No. 09-09-E382

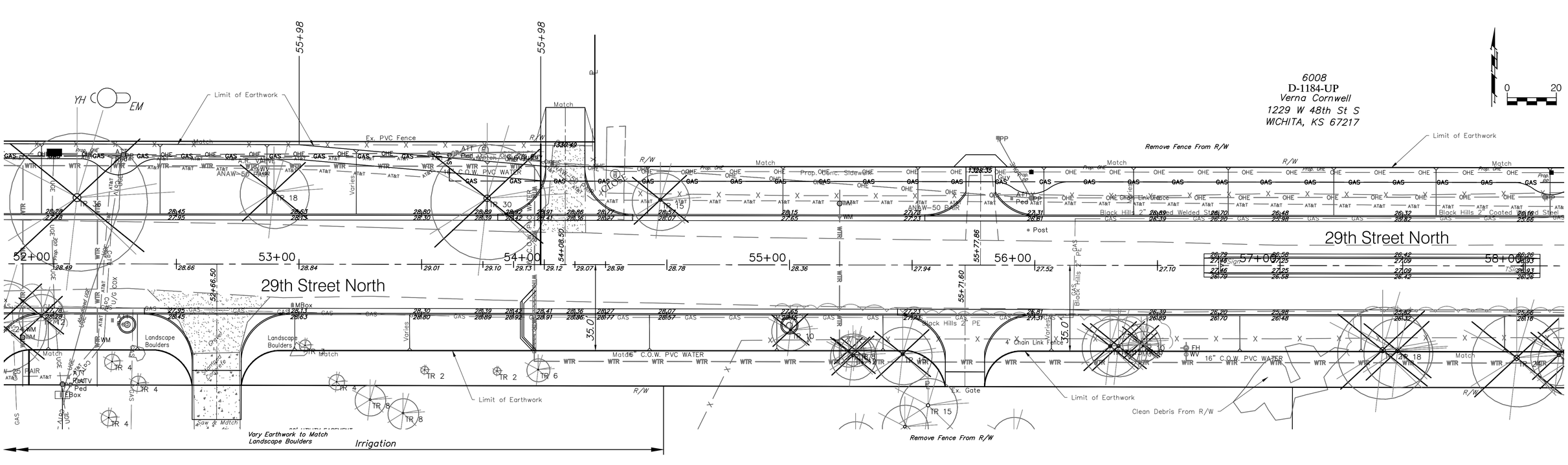
CAPITAL IMPROVEMENT PROJECT

29th St. N.- Earthwork, Tree Removal, Irrigation
Sta. 34+00.00 - Sta. 46+00.00

29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE





Note:
Trees/Shrubs to be removed are marked thus:

Note: EARTHWORK
Fill Limit
Slope
Slope

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

Project No. 09-09-E382 — CAPITAL IMPROVEMENT PROJECT

29th St. N.- Earthwork, Tree Removal, Irrigation
Sta. 46+00.00 - Sta. 58+00.00
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

0 20

5706
D-1185-UP
Jolynn Oakman
5620 W 29th St N
WICHITA, KS 67205

5620
D-1188-UP
Mary S. Oakman
5620 W 29th St N
WICHITA, KS 67205

5618
D-1187-UP
Jenola A Harrell & Shirley Vincent
1037 Road 240
EMPORIA, KS 66801

Limit of Earthwork

Remove Fence From R/W

29th Street North

58+00 59+00 60+00 61+00 62+00 63+00 64+00

4' Chain Link Fence

Remove Fence From R/W

3025 N Hoover Road
WICHITA, KS 67205

Hoover Road

64+00 65+00 66+00 67+00 68+00 69+00 70+00

Remove Fence From R/W to Sta. 68+50

Note:
Trees/Shrubs to be removed are marked thus:

Note: EARTHWORK
Fill Limit
Slope
Slope

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg

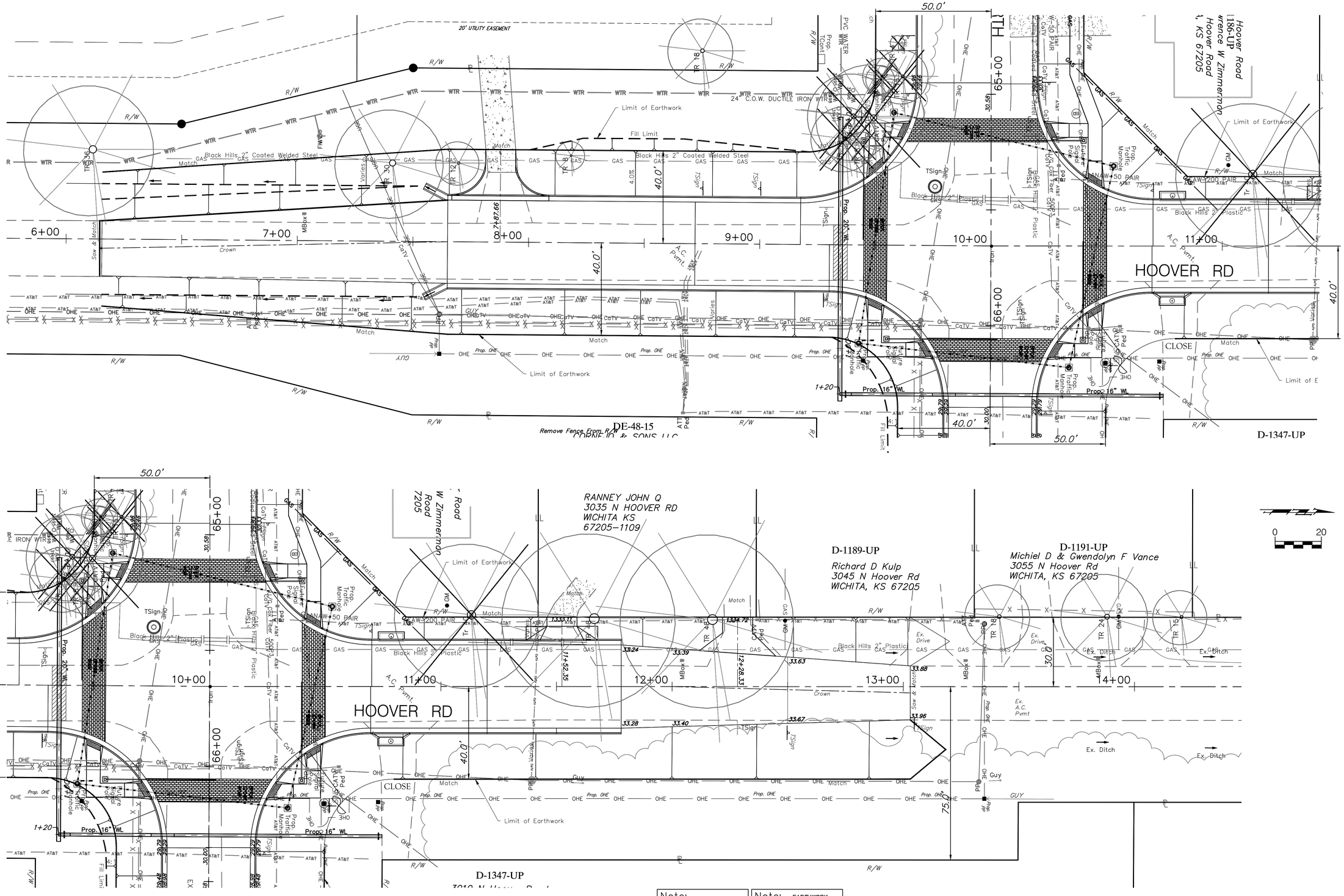
NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

Project No. 09-09-E382
CAPITAL IMPROVEMENT PROJECT
29th St. N.- Earthwork, Tree Removal, Irrigation
Sta. 58+00.00 - Sta. 69+00.00
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

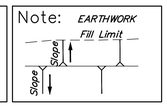
Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 57 OF 177



Note:
Trees/Shrubs to be removed are marked thus:

Note: *EARTHWORK*



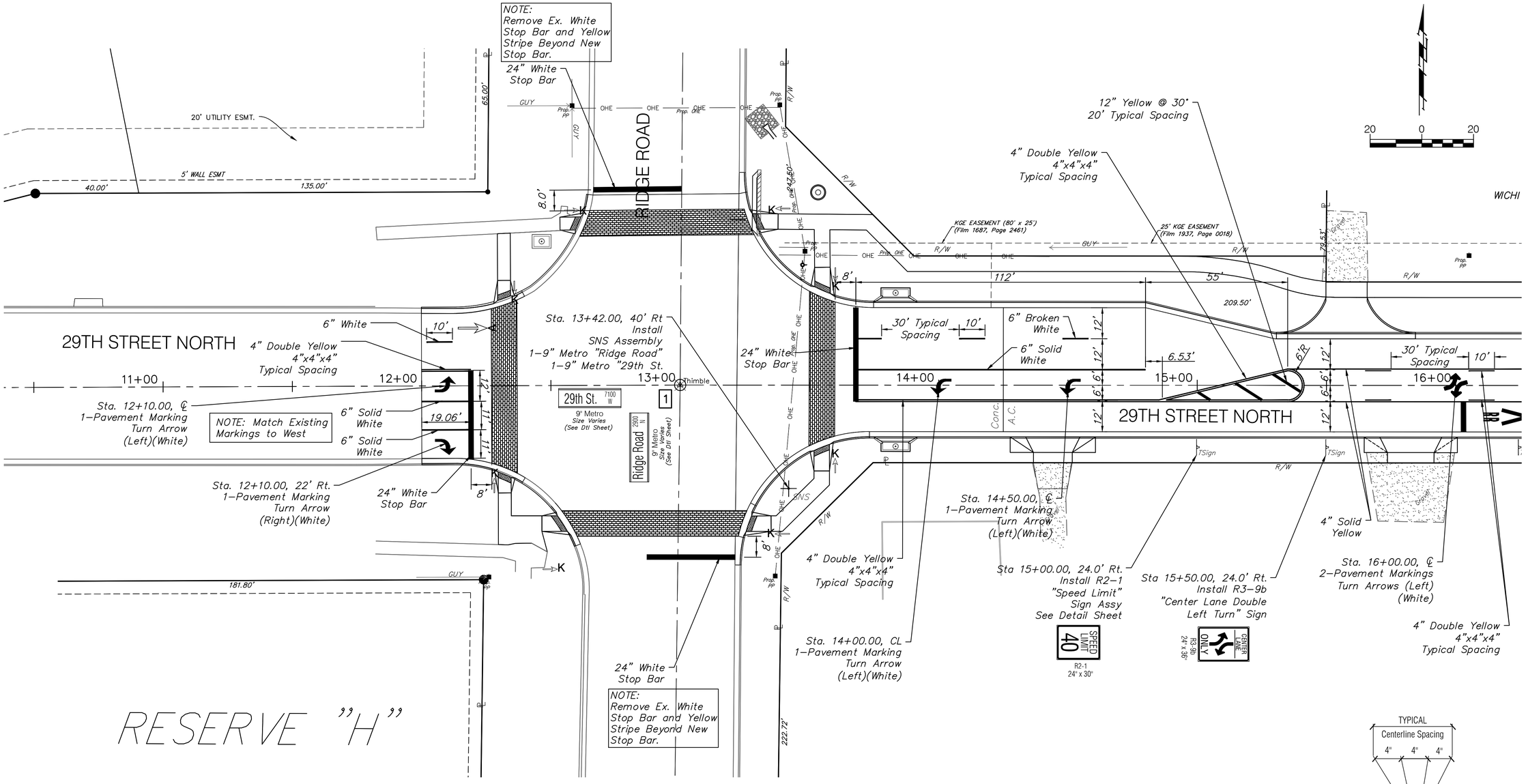
Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg

NOVEMBER, 2013

Design: KEK	Project No. 09-99-E382
Drawn: JDM	CAPITAL IMPROVEMENT PROJECT
Approved: MWS	HOOVER ROAD NORTH PAVING
Scale: Noted	Sta. 6+15.00 to Sta. 14+00.00
	29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 58 OF 177



RESERVE "H"

TOTAL BILL OF MATERIALS*		
ITEMS	UNITS	TOTAL
PAVEMENT MARKING (6" WHITE)	LF	885
PAVEMENT MARKING (24" WHITE)	LF	232
PAVEMENT MARKING (4" WHITE)	LF	751
PAVEMENT MARKING (4" YELLOW)	LF	15607
PAVEMENT MARKING (12" YELLOW)	LF	566
PAVEMENT MARKING, TURN ARROW (RT) (WHITE)	EA	3
PAVEMENT MARKING, TURN ARROW (LT) (WHITE)	EA	38
PAVEMENT MARKING, RR CROSSING SYMBOL	EA	2

*FOR INFORMATION ONLY (Contractor to Bid as needed)

NOTE:
PAVEMENT MARKING TO BE PAID FOR AS THE LUMP SUM BID ITEM "PAVEMENT MARKING". SIGN INSTALLATION TO BE PAID FOR AS THE LUMP SUM BID ITEM "SIGNING".

NOTE:
Pavement Markings shall be two–part Epoxy.

TYPICAL
Centerline Spacing
4" 4" 4"

NOTE: ALL DIMENSIONS SHOWN ARE TO CENTERLINE OF MARKING UNLESS OTHERWISE NOTED.

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Marking Plan.dwg NOVEMBER, 2013

Design: KEK
Drawn: JDM
Approved: MWS
Scale: Noted

Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT

PAVEMENT MARKING & SIGNING

29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

D-1079-UP
TATT LLC
1830 W Harry
WICHITA, KS 67213

Sta. 16+80.00

Sta 16+82.00, 24.0' Lt.
Install R3-9b
"Center Lane Double
Left Turn" Sign

CENTER LANE ONLY
R3-9b
24" x 36"

Sta. 18+30.00

Sta. 19+10.00

12" Yellow @ 30°
20' Typical Spacing

4" Double Yellow
4"x4"x4" Typical Spacing

Sta. 20+60.00

Sta. 21+00.00, CL
2-Pavement Markings
Turn Arrows (Left)
(White)

4" Double Yellow
4"x4"x4"
Typical Spacing

4" Double Yellow
4"x4"x4"
Typical Spacing

20 0 20

4" Solid Yellow

25' KGE EASEMENT
(Film 1937, Page 0018)

10' UTILITY EASEMENT

Saw & Match

R/W

R/W

TSign

RR Sig

EX. GUARD RAIL

15'

KANSAS-OKLAHOMA RAILROAD

A.C. Conc.

A.C. Conc.

16+00

17+00

18+00

19+00

20+00

21+00

29TH STREET NORTH

6'R

12'

6'

6'

12'

25'

25'

RR

W10-1
36" DIA

Match

Curb

707.50'

℄

R/W

30' SAW (Film 2)

30' Typical Spacing

10'

R/W 103.21'

20' BLDG. SETBACK

4" Double Yellow
4"x4"x4"
Typical Spacing

24" White
Stop Bar

4" Double Yellow
4"x4"x4"
Typical Spacing

24" White
Stop Bar

Sta. 16+24.00, 24' Rt
Install W10-1
"Railroad Warning" Sign
Install 1-Pavement Marking,
Railroad Crossing Symbol

12" Yellow @ 30°
20' Typical Spacing

Sta 20+65.00, 24.0' Rt.
Install R3-9b
"Center Lane Double
Left Turn" Sign

CENTER LANE ONLY
R3-9b
24" x 36"

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Marking Plan.dwg

NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT PAVEMENT MARKING & SIGNING 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

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RIDGE PORT ADD

W10-1
36" DIA

Sta. 21+59.00, 24' Lt
Install W10-1
"Railroad Warning" Sign
Install 1-Pavement Marking,
Railroad Crossing Symbol

20 0 20

BOAT RAMP AREA

R/W R/W R/W R/W R/W R/W

PP PP PP

Iron

25'

25'

30' Typical Spacing

10'

12'

6'

6'

12'

29TH STREET NORTH

22+00 23+00 24+00 25+00 26+00 27+00

24+62.93

26+55.08

26+16.46

Match @ Joint

Stone MB

Match @ Joint

Match @ Joint

4" Solid Yellow

4" Double Yellow
4"x4"x4"
Typical Spacing

R/W R/W

6951

BAREFOOT BAY ESTATES

2

6737

Sta. 24+00.00, CL
2-Pavement Markings
Turn Arrows (Left)
(White)

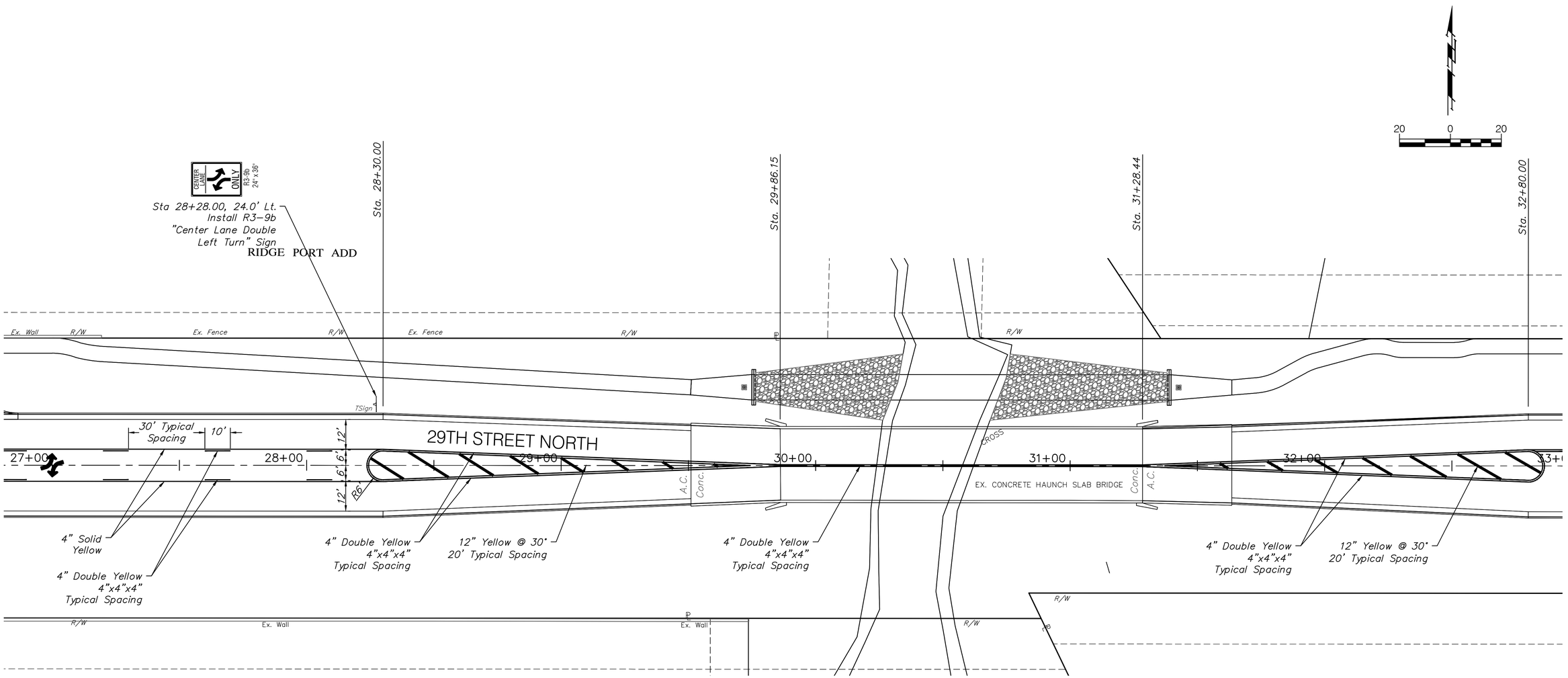
Sta. 27+00.00, CL
2-Pavement Markings
Turn Arrows (Left)
(White)

A

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Marking Plan.dwg

NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT PAVEMENT MARKING & SIGNING 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE	SHEET 61 OF 177



Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Marking Plan.dwg

NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT PAVEMENT MARKING & SIGNING 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 62 OF 177

29TH STREET NORTH

Sta. 32+80.00

Sta. 33+91.22

Sta. 35+05.30

R1-1
30" X 30"
STOP

Sta. 34+16.00, 53' Lt
Install R1-1
"Stop" Sign

29th St. 6400 W
9" Metro
Size Varies
(See Dtl Sheet)

Ridge Port 3000 N
9" Metro
Size Varies
(See Dtl Sheet)

Sta. 34+91.00, 36' Lt
Install
1-SNS Assembly
1-9" Metro "29th St."
1-9" Metro "Ridge Port"

20 0 20

2 1 & BLDG. St

Ex. Conc. Walk

Ex. A.C. Pvmt.

Saw & Match Saw & Match

RES "D"

RES "E"

RIDGE PORT

Ex. Conc. Walk

RES "F"

1 2 3

R/W

TSign

SNS

6' R

33+00 34+00 35+00 36+00 37+00 38+00

6" Solid White

50.00'

30' Typical Spacing

10'

12' 6' 6' 12'

4" Double Yellow
4"x4"x4"
Typical Spacing

Match @ Joint

Match @ Joint

4" Solid Yellow

4" Double Yellow
4"x4"x4"
Typical Spacing

Sta. 33+64.00, CL
1-Pavement Marking
Turn Arrow
(Left)(White)

Sta. 35+70.00, 24.0' Rt.
Install R3-9b
"Center Lane Double
Left Turn" Sign

R3-9b
24" X 36"
CENTER LANE ONLY

Sta. 36+00.00, CL
2-Pavement Markings
Turn Arrows (Left)
(White)

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Marking Plans.dwg

NOVEMBER, 2013

Design: KEK
Drawn: JDM
Approved: MWS
Scale: Noted

Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT

PAVEMENT MARKING & SIGNING

29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

20 0 20

4

R/W

℄

Match R/W

SPEED LIMIT 40 R2-1 24" x 30"

Sta. 39+75.00, 24.0' Lt.
Install R2-1
"Speed Limit"
Sign Assy
See Detail Sheet

R4-7 24" x 30"

OM-1 18" X 18"

Sta. 41+24.00, CL
Install R4-7
"Keep Right"
Install OM-1
"Hazzard Panel Sign"

4" Solid Yellow

℄ R/W

TSign

30' Typical Spacing

10'

38+00 39+00 40+00 41+00 42+00 43+00

TSign TSign

12' 6' 6' 12'

29TH STREET NORTH

4" Single Yellow Through Median

4" Double Yellow 4"x4"x4" Typical Spacing

TSign

℄ R/W R/W

Saw & Match R/W

Sta. 39+00.00, CL
2-Pavement Markings
Turn Arrows (Left)
(White)

Sta. 39+50.00, 24.0' Rt.
Install R2-1
"Speed Limit"
Sign Assy
See Detail Sheet

SPEED LIMIT 40 R2-1 24" x 30"

Sta. 40+01.00, CL
Install R4-7
"Keep Right"
Install OM-1
"Hazzard Panel Sign"

OM-1 18" X 18"

R4-7 24" x 30"

Sta. 42+00.00, CL
2-Pavement Markings
Turn Arrows (Left)
(White)

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Marking Plan.dwg

NOVEMBER, 2013

Design: KEK
Drawn: JDM
Approved: MWS
Scale: Noted

Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT

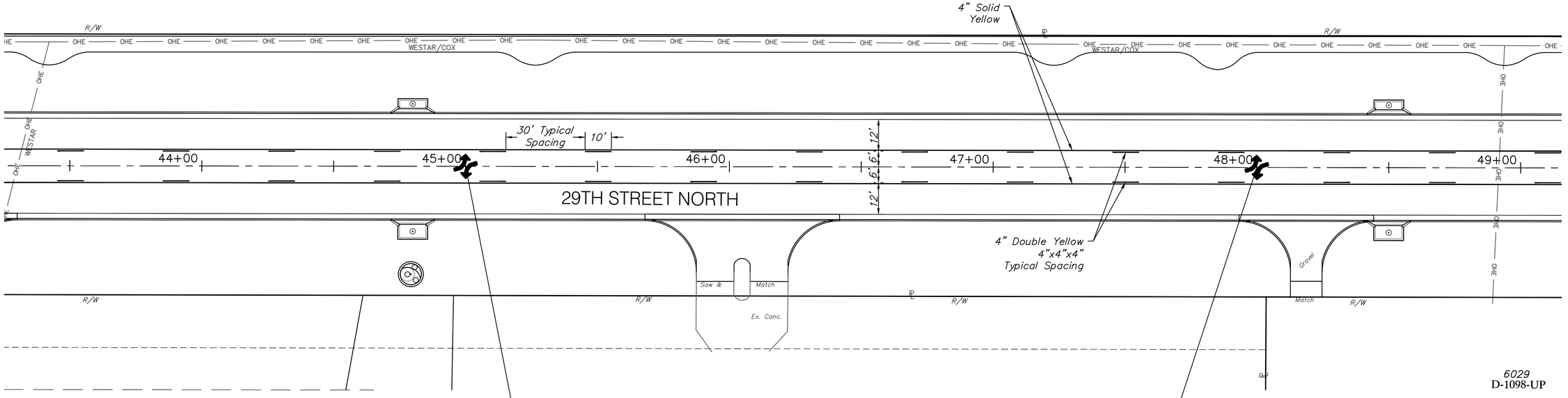
PAVEMENT MARKING & SIGNING

29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
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SHEET 64 OF 177

20 0 20



6029
D-1098-UP

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Marking Plan.dwg

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT

PAVEMENT MARKING & SIGNING

29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 65 OF 177

20 0 20

Ex. Pond Shoreline

Ex. Pond Shoreline

18" STEEL PIPE

BLDG.

R/W

Match

R/W

℄

R/W

R/W

CLOSE

4" Solid Yellow

30' Typical Spacing

10'

12'

6'

6'

12'

49+00

50+00

51+00

52+00

53+00

54+00

29TH STREET NORTH

4" Double Yellow
4"x4"x4"
Typical Spacing

Gravel

Stamped Concrete

Gravel

R/W

℄

R/W

R/W

Saw & Match

Match @ Concrete

Conc.

Concrete

℄

4

5

Sta. 51+00.00, CL
2–Pavement Markings
Turn Arrows (Left)
(White)

Sta. 54+00.00, CL
2–Pavement Markings
Turn Arrows (Left)
(White)

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Marking Plan.dwg

NOVEMBER, 2013

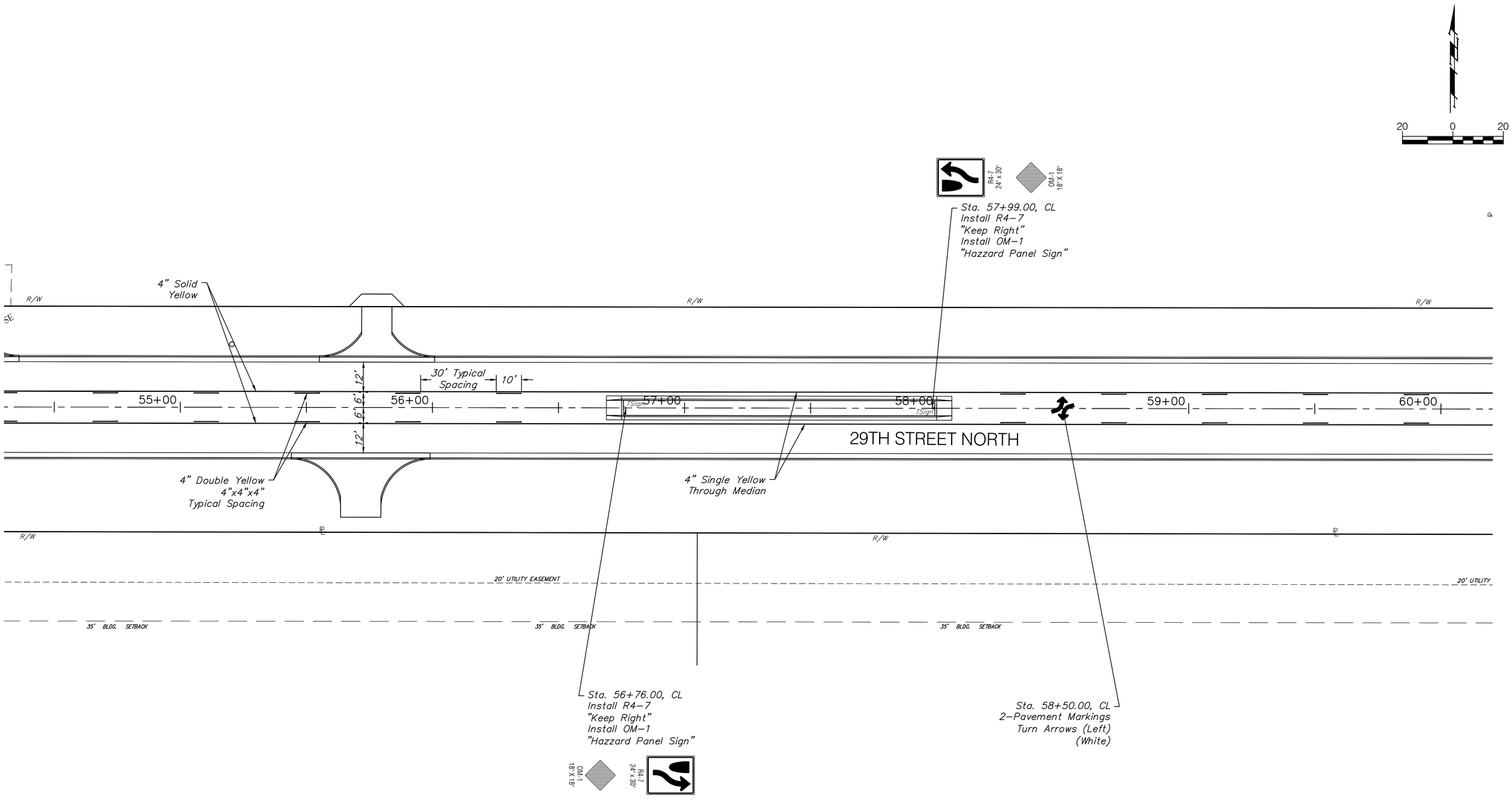
Design: KEK
Drawn: JDM
Approved: MWS
Scale: Noted

Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT

PAVEMENT MARKING & SIGNING

29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

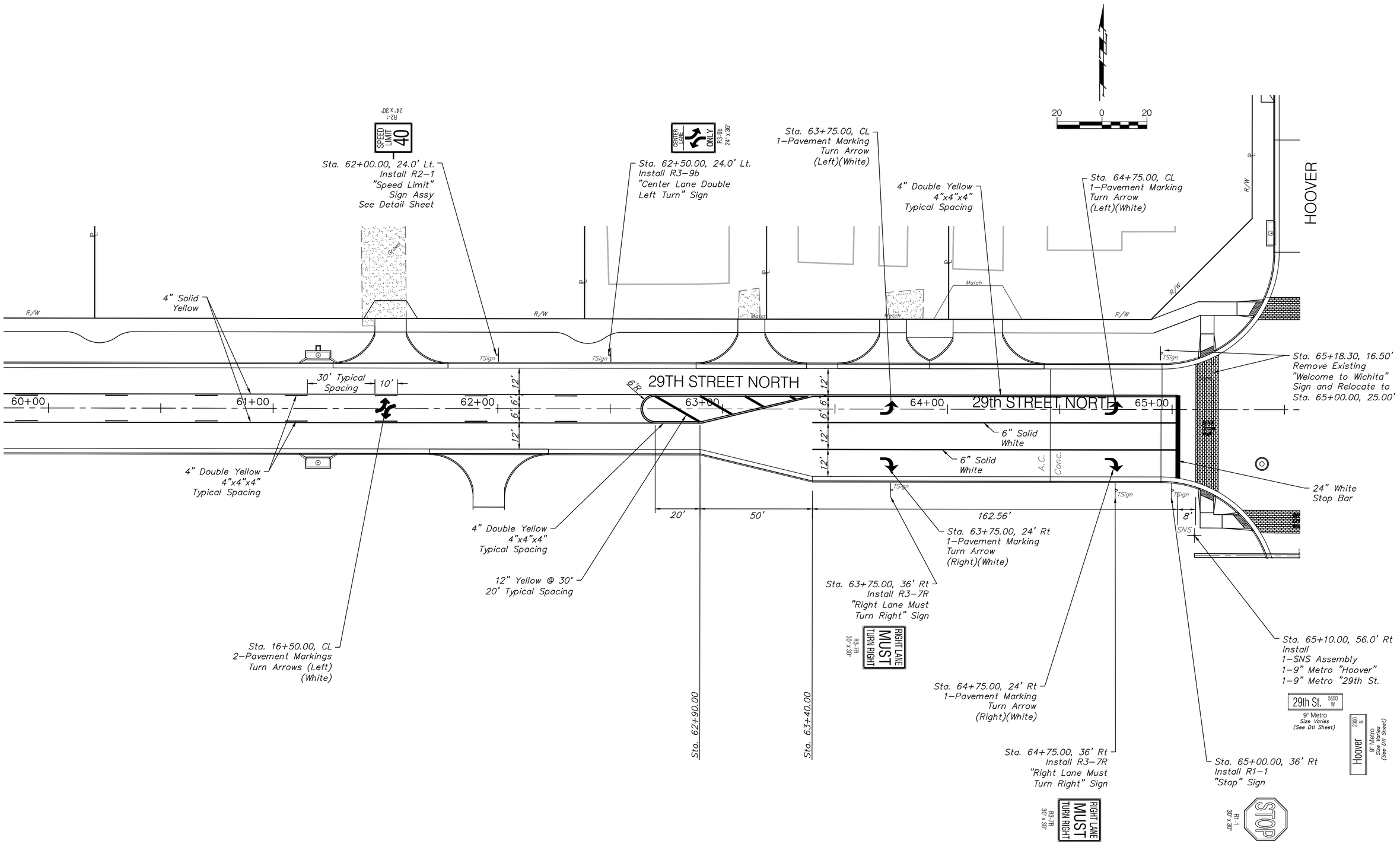


Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Marking Plan.dwg

NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT PAVEMENT MARKING & SIGNING 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 67 OF 177

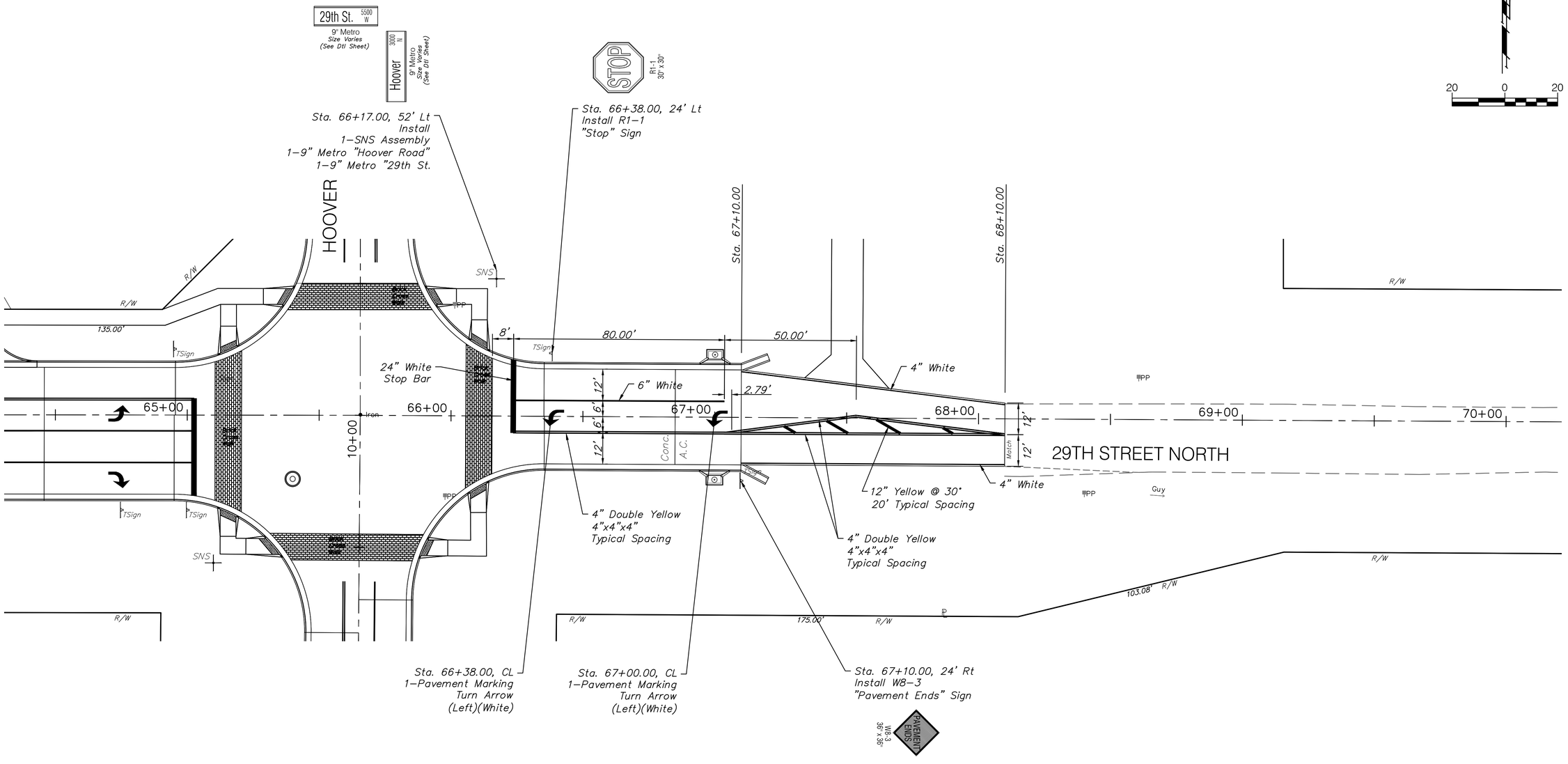


Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Marking Plan.dwg

NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT PAVEMENT MARKING & SIGNING 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

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NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT PAVEMENT MARKING & SIGNING 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE	SHEET 69 OF 177

20 0 20

Sta. 6+15.50

Sta. 7+65.00

Sta. 9+28.76, 16.3 Lt.
Remove Existing
"Welcome to Wichita"
Sign and Relocate to
Sta. 9+00.00, 24.0 Lt.

29TH STREET NORTH

R/W

℄

SPEED LIMIT 35 R2-1 24"x30"

Sta. 8+75.00, 24.0' Lt.
Install R2-1 Speed Limit"
Sign

4" Double Yellow
4"x4"x4"
Typical Spacing

Match

4" White

HOOVER

A.C.

Conc.

TSign

SNS

6+00

7+00

8+00

9+00

10+00

11+00

65+00

66+00

Front

12'

6'

Saw & Match

Match
Existing
Markings

23.14'

4" White

6" White

12" Yellow @ 30°
20' Typical Spacing

125.00'

50.00'

146.00'

8'

Sta. 8+25.00, CL
1-Pavement Marking
Turn Arrow
(Left)(White)

Sta. 9+00.00, CL
1-Pavement Marking
Turn Arrow
(Left)(White)

Sta. 9+29.20, 21.4' Rt.
Remove Existing
"County Maintenance Begins"
Sign and Relocate to
Sta. 13+05.00, 16.0' Rt.

Sta. 10+75.00, CL
1-Pavement Marking
Turn Arrow
(Left)(White)

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Marking Plan.dwg

NOVEMBER, 2013

Design: KEK
Drawn: JDM
Approved: MWS
Scale: Noted

Project No. 09-09-ES82 CAPITAL IMPROVEMENT PROJECT

PAVEMENT MARKING & SIGNING

29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

20 0 20

29TH STREET NORTH

65+00

66+00

29TH STREET NORTH

HOOVER

HOOVER

9+00

10+00

11+00

12+00

13+00

14+00

Sta. 7+65.00

8'

93.00'

50.00'

102.00'

Match

Match

Match Existing Markings

R/W

R/W

R/W

R/W

R/W

R/W

R/W

R/W

PL

PL

PL

PL

LL

LL

LL

LL

6" White

4" White

4" White

Conc.

A.C.

12'

6'

6'

12'

12'

12'

4" Double Yellow
4"x4"x4"
Typical Spacing

Sta. 11+25.00, CL
1–Pavement Marking
Turn Arrow
(Left)(White)

12" Yellow @ 30°
20' Typical Spacing

4" Double Yellow
4"x4"x4"
Typical Spacing

Sta. 12+50.00, 20.0' Rt.
Install R2–1 Speed Limit" Sign

SPEED LIMIT 45
R2-1
24" x 30"

Sta. 13+05.00, 16.0' Rt.
Install Existing Relocated
"County Maintenace Begins"
Sign from Sta. 9+29.2, 21.4' Rt.

TSign

SNS

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Marking Plan.dwg

NOVEMBER, 2013

Design: KEK
Drawn: JDM
Approved: MWS
Scale: Noted

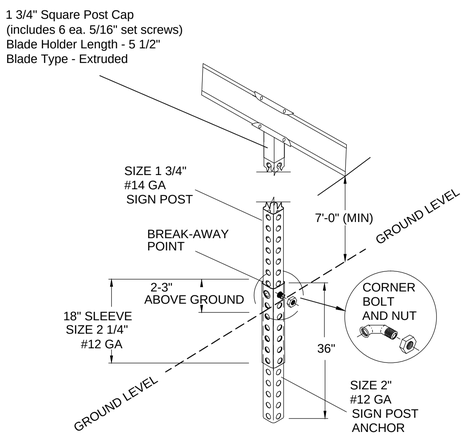
Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT

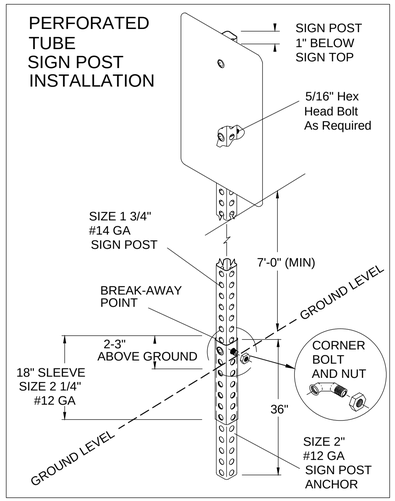
PAVEMENT MARKING & SIGNING

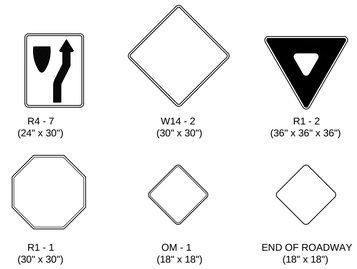
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

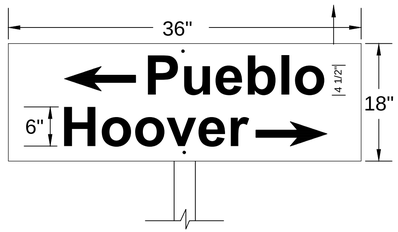
SHEET 71 OF 177



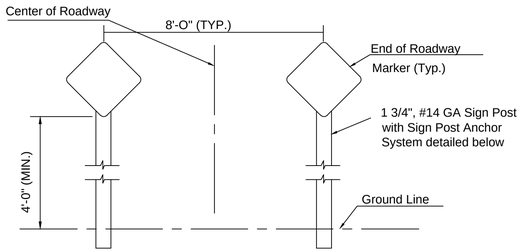




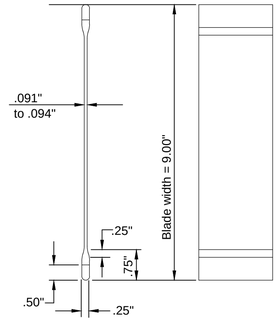
* IN NO CASE SHALL THE SPECIFICATIONS BE LESS THAN REQUIRED BY THE CURRENT MUTCD.



FLAT PLATE STREET NAME SIGN



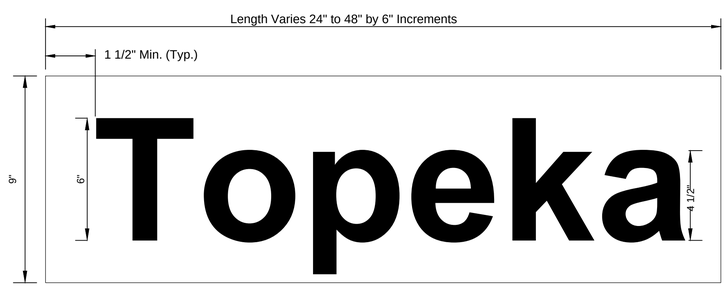
TYPICAL END OF ROADWAY SIGN MOUNTING INSTALLATION



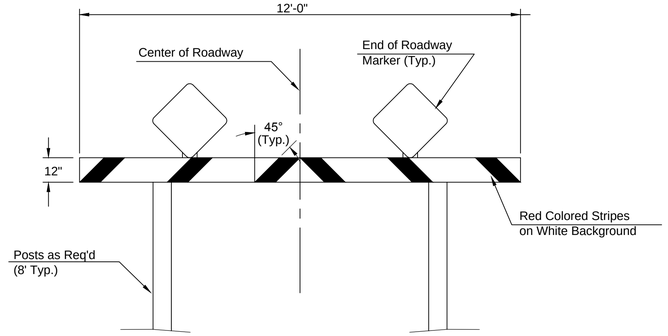
STREET NAME SIGN
BLADE DETAILS

TYPICAL TRAFFIC CONTROL AND STREET NAME SIGN MOUNTING INSTALLATION

CURB AND GUTTER SECTION



DETAIL A
9" STANDARD



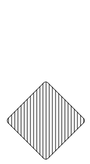
TYPE I BARRICADE DETAIL W/ E.O.R. MARKERS

SEE SHEET 64 FOR SIGN ASSEMBLY TABLE

SIGN ASSEMBLY TABLE			
STATION	OFFSET	SIGN	QUANTITY*

SIGN ASSEMBLY TABLE - PROJECT TOTALS

STREET	STATION	OFFSET	SIGN	DESCRIPTION	QTY
29TH	15+50	24.0' RT	R3-9b	2-WAY LEFT TURN ONLY	1 Ea.
29TH	16+82	24.0' LT	R3-9b	2-WAY LEFT TURN ONLY	1 Ea.
29TH	20+65	24.0' Rt	R3-9b	2-WAY LEFT TURN ONLY	1 Ea.
29TH	28+28	24.0' Lt	R3-9b	2-WAY LEFT TURN ONLY	1 Ea.
29TH	35+70	24.0' RT	R3-9b	2-WAY LEFT TURN ONLY	1 Ea.
29TH	62+50	24.0' LT	R3-9b	2-WAY LEFT TURN ONLY	1 Ea.
TOTAL					6 Ea.
29TH	15+00	24.0' RT	R2-1	SPEED LIMIT (40MPH)	1 Ea.
29TH	39+50	24.0' RT	R2-1	SPEED LIMIT (40MPH)	1 Ea.
29TH	39+75	24.0' LT	R2-1	SPEED LIMIT (40MPH)	1 Ea.
29TH	62+00	24.0' LT	R2-1	SPEED LIMIT (40MPH)	1 Ea.
HOOVER	8+75	24.0' LT	R2-1	SPEED LIMIT (35MPH)	1 Ea.
HOOVER	12+50	20.0' RT	R2-1	SPEED LIMIT (45MPH)	1 Ea.
TOTAL					6 Ea.
29TH	67+10	24.0' RT	W8-3	PAVEMENT ENDS	1 Ea.
TOTAL					1 Ea.
29TH	63+75	36.0' RT	R3-7R	RT LN MUST TURN RT	1 Ea.
29TH	64+75	36.0' RT	R3-7R	RT LN MUST TURN RT	1 Ea.
TOTAL					2 Ea.
29TH	40+01	Centerline	R4-7	KEEP RIGHT	1 Ea.
29TH	41+24	Centerline	R4-7	KEEP RIGHT	1 Ea.
29TH	56+76	Centerline	R4-7	KEEP RIGHT	1 Ea.
29TH	57+99	Centerline	R4-7	KEEP RIGHT	1 Ea.
TOTAL					4 Ea.
29TH	34+16	53.0' LT	R1-1	STOP	1 Ea.
29TH	65+00	36.0' RT	R1-1	STOP	1 Ea.
29TH	66+38	24.0' LT	R1-1	STOP	1 Ea.
TOTAL					3 Ea.
29TH	16+24	24.0' RT	W10-1	RR CROSSING	1 Ea.
29TH	21+59	24.0' LT	W10-1	RR CROSSING	1 Ea.
TOTAL					2 Ea.
29TH	40+01	Centerline	OM-1	HAZARD PANEL	1 Ea.
29TH	41+24	Centerline	OM-1	HAZARD PANEL	1 Ea.
29TH	56+76	Centerline	OM-1	HAZARD PANEL	1 Ea.
29TH	57+99	Centerline	OM-1	HAZARD PANEL	1 Ea.
TOTAL					4 Ea.



OM-1
18" X 18"



W10-1
36" DIA



R4-7
24" X 30"



W8-3
30" x 30"



R3-7R
30" x 30"



R1-1
30" x 30"



R3-9b
24" x 36"



R2-1
24" x 30"



9" Metro
Size Varies (See Dtl)



9" Metro
Size Varies (See Dtl)



9" Metro
Size Varies (See Dtl)



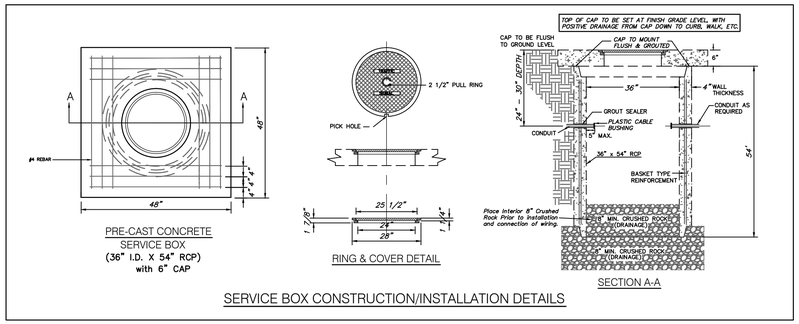
9" Metro
Size Varies (See Dtl)

EXISTING SIGNS RELOCATED

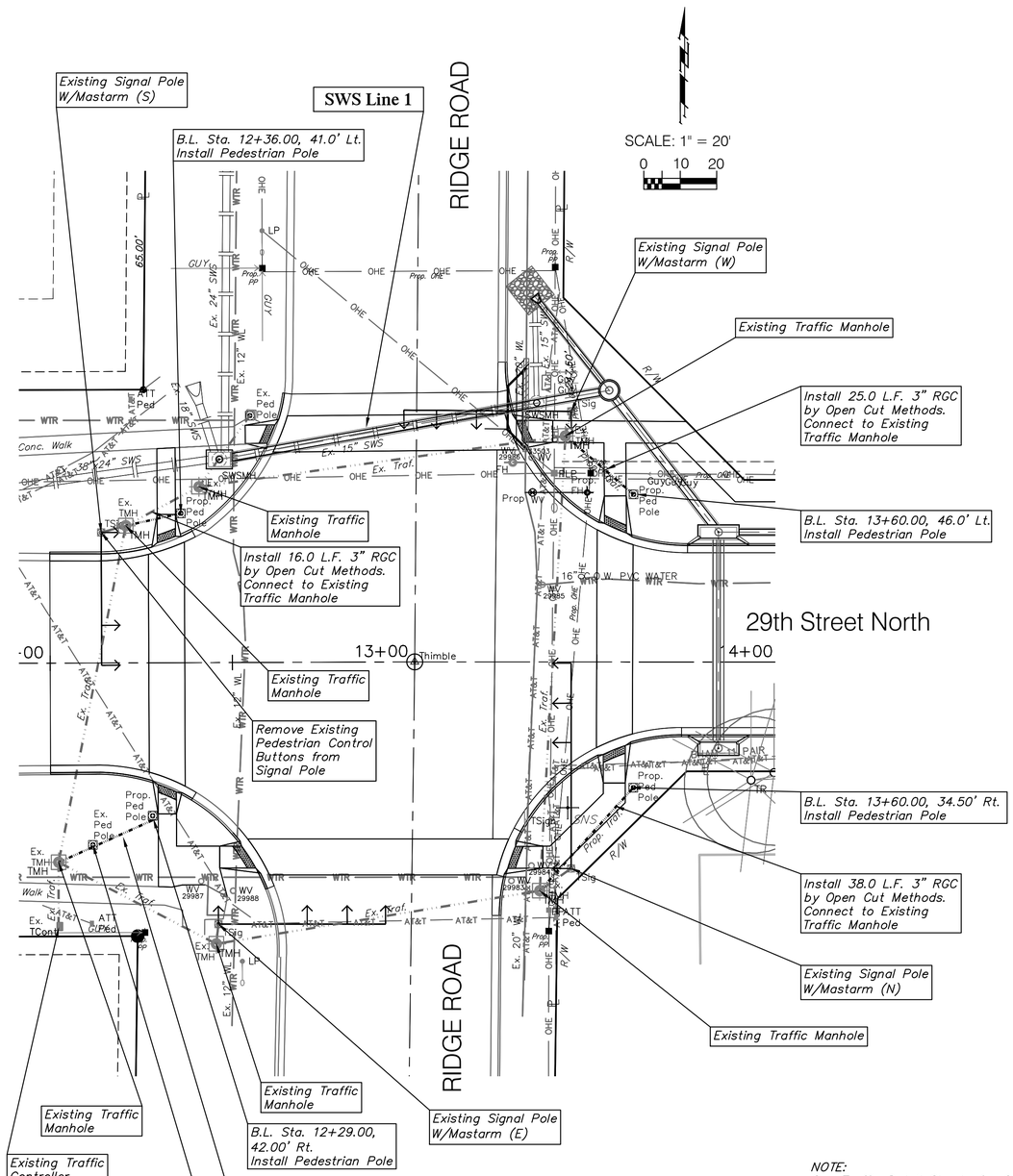
STREET	FROM STATION	OFFSET	TO STATION	OFFSET	DESCRIPTION
29TH	65+18.3	16.5' LT	65+00.00	25.0' LT	WELCOME TO WICHITA
Hoover	9+28.79	16.3' LT	9+00.00	24.0' LT	WELCOME TO WICHITA
Hoover	9+29.20	21.4' RT	13+05.00	16.0' RT	COUNTY MAINTENANCE BEGINS

STREET NAME SIGN ASSEMBLY TABLE

STREET	STATION	OFFSET	TYPE	STREET NAME	BLADE QUANTITIES
29th	13+42	40.0' Rt	9"Metro	29th St (7100 W)	1
			9"Metro	Ridge Road (2900 N)	1
29th	34+91	36.0' Lt	9"Metro	29th St (6400 W)	1
			9"Metro	Ridge Port (3000 N)	1
29th	65+10	56.0' Rt	9"Metro	29th St (5600 W)	1
			9"Metro	Hoover (2900 N)	1
29th	66+17	52.0' Lt	9"Metro	29th St (5500 W)	1
			9"Metro	Hoover (3000 N)	1
TOTAL SIGN BLADES					8



SERVICE BOX CONSTRUCTION/INSTALLATION DETAILS



29th & RIDGE RD. TRAFFIC MANHOLE, CONDUIT & PEDESTRIAN POLE PLAN

— New 3" Rigid Conduit

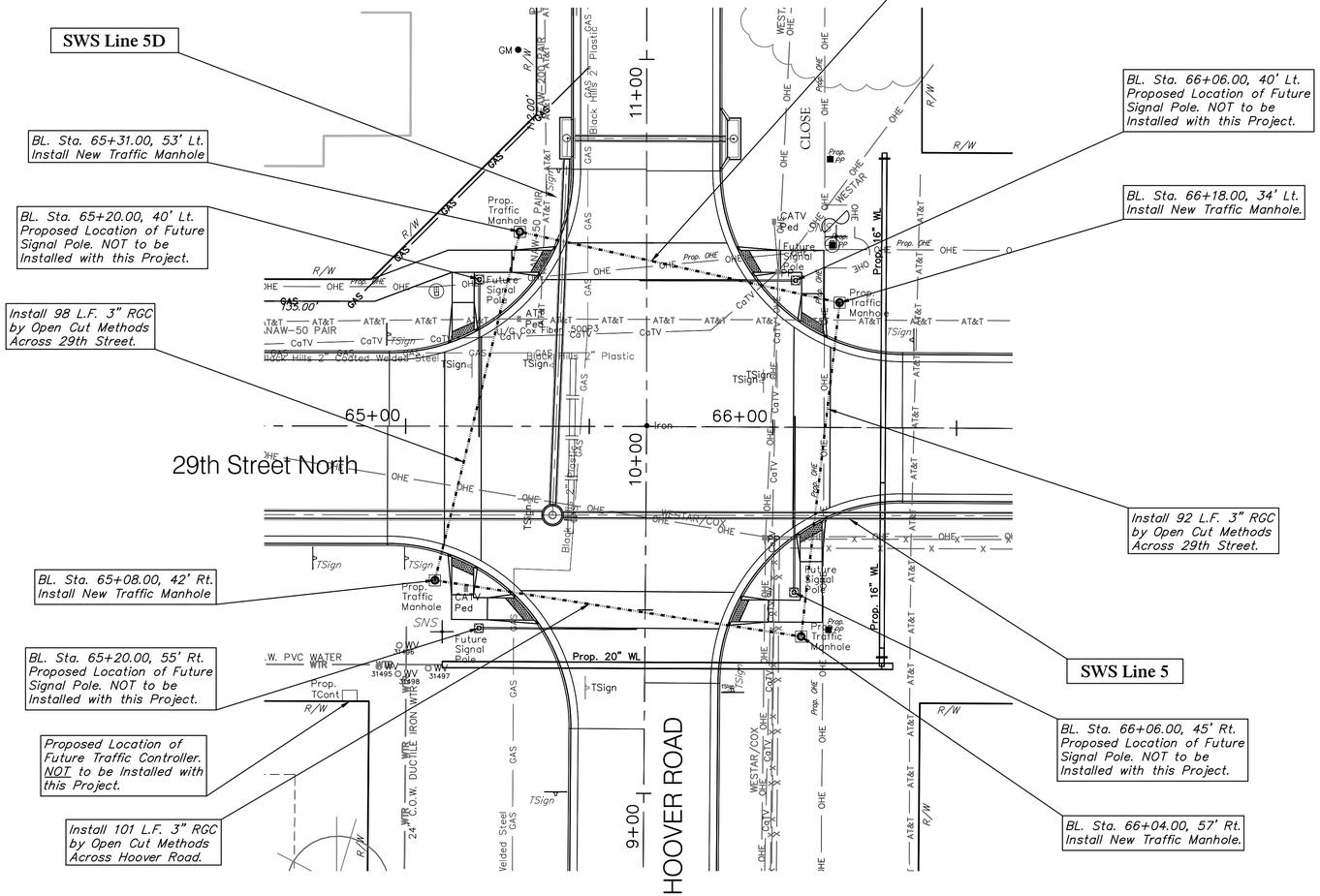
— Existing 3" Rigid Conduit

TOTALS:
467.0 L.F. 3" RGC (by Open Cut)
6 Each Traffic Manholes

NOTE:
See Traffic Detail Sheets for Conduit & Pedestrian Pole Details.

See Traffic Manhole (Service Box) Details, this Sheet.

NOTE:
The Lump Sum Bid Items "Traffic Signalization 29th & Ridge Rd." & "Traffic Signalization 29th & Hoover". Shall Include all Material and Labor Necessary to Install the Manholes, Conduits and Pedestrian Poles as Shown on the Plans.



29th & HOOVER RD. TRAFFIC MANHOLE & CONDUIT PLAN

— New 3" Rigid Conduit

29th & HOOVER RD.

CHART 'D' - CONDUIT

CONDUIT SIZE	TRENCHED	PUSHED
1.5" RGC	-	-
2" PVC	-	-
2" PVC	-	-
3" RGC	380	-
3" RGC	-	-

29th & HOOVER RD.

CHART 'E' -TRAFFIC MANHOLE SUMMARY

STATION	DISTANCE	SIDE
Sta 65+08.00	42.0'	Rt.
Sta 65+31.00	53.0'	Lt.
Sta 66+04.00	57.0'	Rt.
Sta 66+18.00	34.0'	Lt.

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg

NOVEMBER , 2013

Design: KEK
Drawn: JDM
Approved: MWS
Scale: Noted

Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT

SIGNALIZATION CONDUIT & STRUCTURES
29th & Ridge / 29TH & Hoover
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

BILL OF MATERIALS - 29th & Ridge Road

ITEM	UNIT	EST. QUANTITIES (*)
Model 336 Controller	Each	–
Controller Cabinet	Each	–
Concrete Base for Controller	Each	–
Traffic Signal w/ Mast Arm (See Chart B)	Each	–
Traffic Signal Pedestal	Each	–
Pedestrian Signal Pole	Each	4
Concrete Base for Signal Poles	Each	–
Traffic Signal Head (Type A) w/ Backplate & Brkt	Each	1
Traffic Signal Head (Type C) w/ Backplate & Brkt	Each	–
Traffic Signal Head (Type J)	Each	–
Pedestrian Indication (16"X18") W/ Countdown (Type K)	Each	8
Traffic Signal Lamp (Red LED Kit)	Each	1
Traffic Signal Lamp (Yellow LED Kit)	Each	1
Traffic Signal Lamp (Green LED Kit)	Each	1
Traffic Signal Lamp (Red Arrow LED Kit)	Each	–
Traffic Signal Lamp (Yellow Arrow LED Kit)	Each	–
Traffic Signal Lamp (Green Arrow LED Kit)	Each	–
R10–10 (Left Turn Signal) w/ Mtg. Brackets	Each	–
D3 Assy. (Street Name Size) w. Mtg. Brackets	Each	–
Pedestrian Pushbutton w/ Sign	Each	4
Ground Rod & Clamp	Each	4
Service Box	Each	–
3" RGC Conduit	L.F.	109
2" RGC Conduit	L.F.	–
1 1/2" RGC Conduit	L.F.	–
2" PVC (Street Light Conduit)	L.F.	–
Video Detection Camera and Mounting Hardware	Each	–
Video Detection Processor	Each	–
Camera Housing	Each	–
Video Power Cable No. 16 AWG 3/C (V3)	L.F.	–
Video Cable 75 OHM Coaxial (Beldon 8281)(CX)	L.F.	–
TV Monitor	Each	–
Camera Charged Coupling Device	Each	–
		–
Multi–Conductor Cable 7C #14 AWG	L.F.	546
Ground Wire 1C (THHN #8 AWG)	L.F.	546
Power Supply Wire (THHN #6 AWG)	L.F.	–

(*) For Information Only

CHART 'A' - SIGNAL INVENTORY

NO. WAYS	NO. SECTIONS (Per Face)	SIGNAL FACE ARRANGEMENT	MOUNTING TYPE	QTY
1	3	A	TYPE I	1
1	3	A	TYPE III	-
1	2	K (SYMB)	TYPE II	-

CHART 'C' -PEDESTRIAN SIGNAL POLE SUMMARY

STATION	DISTANCE	SIDE
B.L. Sta 29th 12+36.00	42.0'	Rt.
B.L. Sta 29th 12+36.00	41.0'	Lt.
B.L. Sta 29th 13+60.00	34.5'	Rt.
B.L. Sta 29th 13+60.00	46.0'	Lt.

CHART 'B' - TRAFFIC SIGNAL POLES

STATION	DIST.	SIDE	ARM LENGTH	NO. OF SIGNALS ON ARM	SIGNAL SPACING	TYPE*
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-

* Signal Poles and Arms supplied by the City of Wichita.

CHART 'D' - CONDUIT

CONDUIT SIZE	TRENCHED	PUSHED
1.5" RGC	-	-
2" PVC	-	-
2" PVC	-	-
3" RGC	109	-
3" RGC	-	-

GENERAL NOTES

1. The Contractor shall be responsible for furnishing and installing the controller, cabinet, concrete base, and all other equipment necessary for the complete and satisfactory operation of the traffic signal, whether said equipment is specifically mentioned or not.
2. Lengths given are to the centerline of poles/boxes and do not include lengths for elbows and risers.
3. Signal heads, pedestrian signals, traffic signals, & etc. shall INCLUDE all brackets, hardware, & other incidentals necessary for installation.
4. See City of Wichita Standard Specifications for additional wiring notes.

TYPE 2070 CONTROLLER SPECIFICATIONS

A. Controller Unit: The 2070L controllers supplied shall meet the requirements outlined in CalTrans TEES 2002 (letest revision), and the following requirements:

1. The 2070L controllers shall have a 19" EIA rack mountable chasis (mated to the 107 cabinet).
2. 2070–1B CPU module with RJ–45 Ethernet port.
3. 2070–2A C1 field I\O module for compatibility with CalTrans style C1 connector.
4. 2070–3B 8X40 front panel with LCD display.
5. 2070–4A 10 amp power supply.
6. 2070–7A asynchronous serial communications module (RS–232).
7. Any unused slot position shall have a cover plate.

B. Conflict Monitors supplied shall be 2010 ECL conflict monitors with Ethernet Capabilities.
C. 1–Loop–back cable for 2070–2A Field I\O (Type 170,104 pin and 37 pin connector).
D. 1– Loop–back cable for 2070–7A Port.

SPECIAL FINISH FOR TRAFFIC SIGNAL EQUIPMENT:

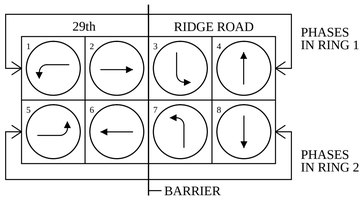
The traffic signal controller cabinet, brackets, sign blank backs, signal backs and other exposed surfaces shall be shop painted with an aerosol lacquer cellulose ester to match the traffic signal pole color. The Contractor shall submit two copies of the proposed coating system to the City for approval to application.

TRAFFIC SIGNAL POLE EXTERIOR COATING:

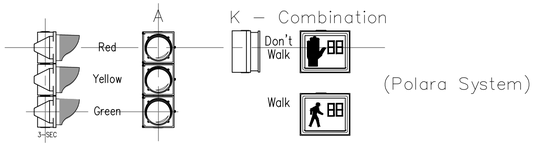
In addition to being galvanized, all exterior surfaces shall be coated with a zinc rich epoxy powder to a minimum dry film thickness of 2.0 mils. The coating shall be electrostatically applied and partially cured in a gas fired convection oven by heating the steel substrate to a minimum of 250° Fahrenheit.

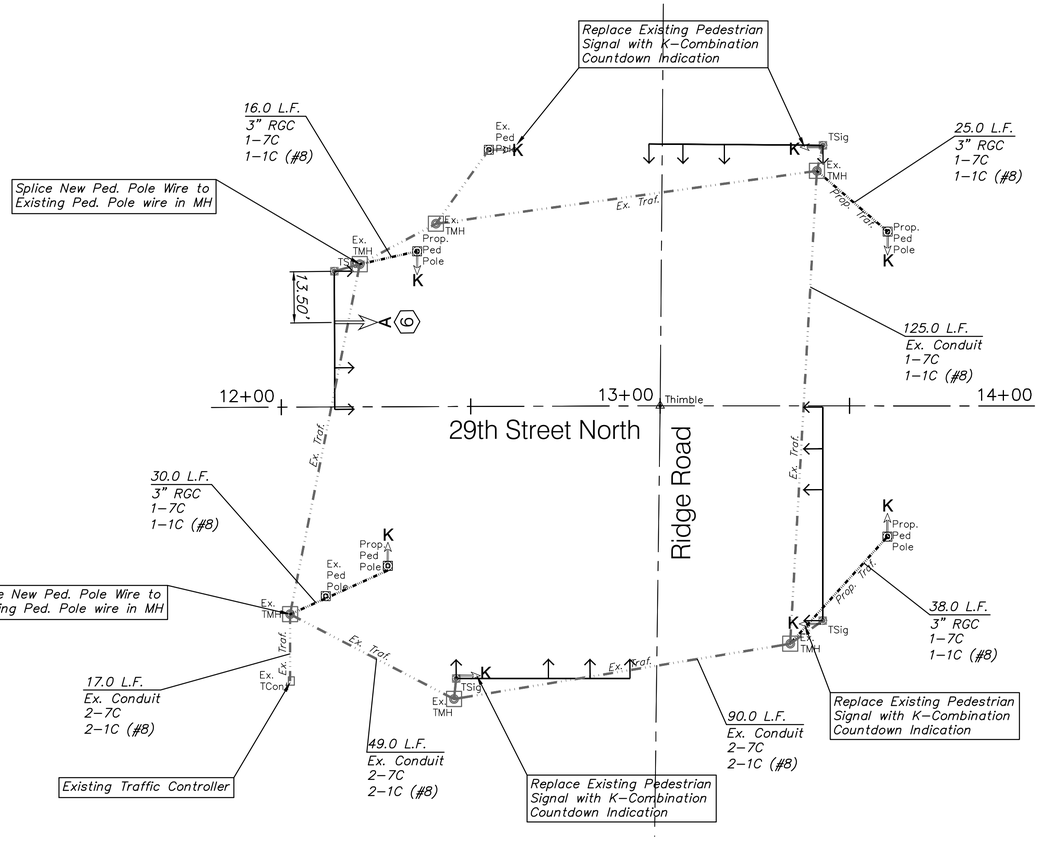
The powder primed surface shall be coated with an intermediate coat of polyester powder to a minimum dry film thickness of 2.0 mils. The coating shall be electrostatically applied and cured by heating the steel substrate in a convection oven to a minimum of 350° Fahrenheit and a maximum of 400° Fahrenheit.

The intermediate coat shall be top coated with one coat of high–build acrylic polyurethane enamel to a minimum dry film thickness of 2.0 mils. The coating shall be electrostatically applied and cured by heating the the steel substrate in a convection oven to a minimum of 225° Fahrenheit. The final top coating color shall be BLACK.



TYPICAL TRAFFIC SIGNAL HEADS





NOTE:
Splices are to be done in a pole base or in the cabinet only.

29th & RIDGE RD. SIGNALIZATION

New Wire Runs in New or Existing Conduits (See Below)

– New 3" Rigid Conduit

– Existing 3" Rigid Conduit

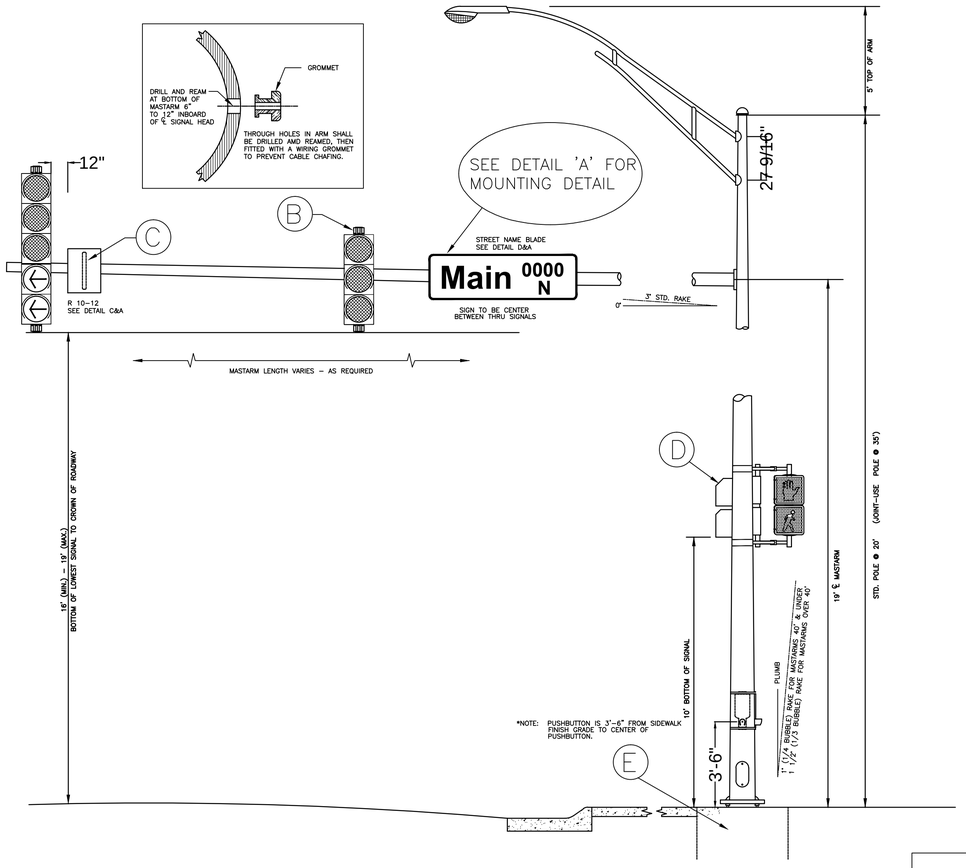
NOTE:
The Lump Sum Bid Item "Traffic Signalization 29th & Ridge Rd" Shall Include all Material and Labor Necessary to Install the Wiring as Shown on the Plans.

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg

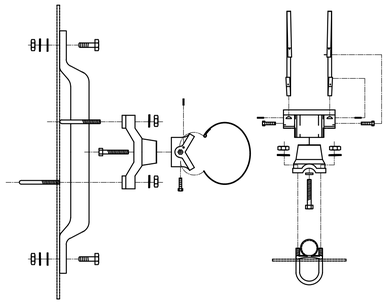
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT SIGNALIZATION WIRING 29th & Ridge Road 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 75 OF 177

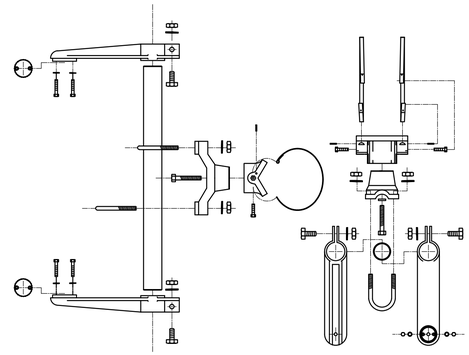


BANDED SIGN MOUNTING BRACKET DETAIL



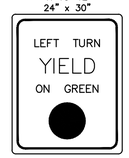
A

TYPE I SIGNAL MOUNTING BRACKET ASSEMBLY DETAIL



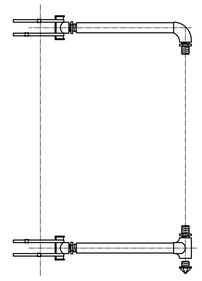
B

STANDARD SIGNING



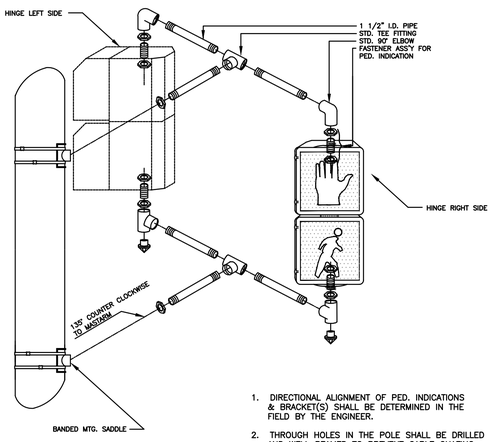
C

TYPE III SIDE-OF-POLE MOUNTING BRACKET ASSEMBLY



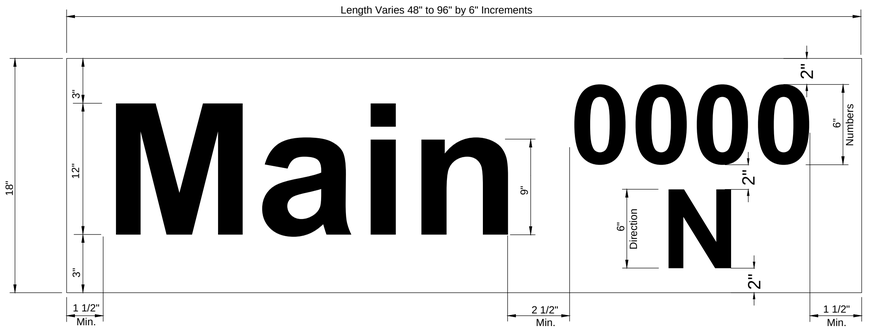
F

TYPE II SIGNAL MOUNTING BRACKET ASSEMBLY (SIDE-OF-POLE)

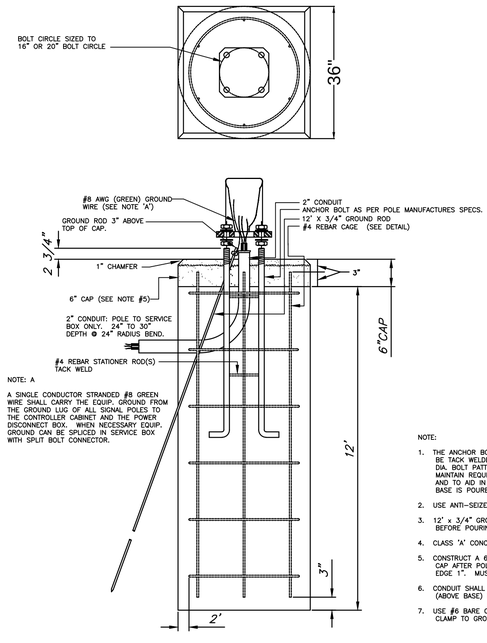


1. DIRECTIONAL ALIGNMENT OF PED. INDICATIONS & BRACKET(S) SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. THROUGH HOLES IN THE POLE SHALL BE DRILLED AND WELL REAMED TO PREVENT CABLE CHAFING.
3. HINGE PEDESTRIAN SIGNAL DOORS AWAY FROM POLE.
4. CLAM SHELL BRACKETS ARE NOT ACCEPTABLE.

D



DETAIL D
METRO



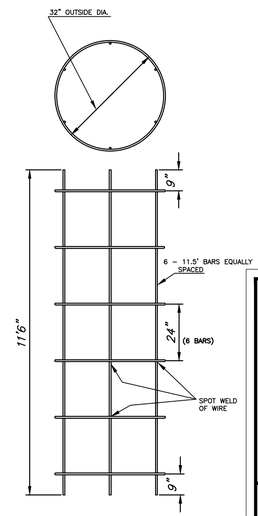
NOTE: A

A SINGLE CONDUCTOR STRANDED #8 GREEN WIRE SHALL CARRY THE EQUIP. GROUND FROM THE GROUND LUG OF ALL SIGNAL POLES TO THE CONTROLLER CABINET AND THE POWER DISCONNECT BOX. WHEN NECESSARY EQUIP. GROUND CAN BE SPLICED IN SERVICE BOX WITH SPLIT BOLT CONNECTOR.

NOTE:

1. THE ANCHOR BOLTS FOR THE SIGNAL POLE SHALL BE TACK WELDED TOGETHER IN A 16" OR 20" DIA. BOLT PATTERN (ON CENTERS AS SHOWN) TO MAINTAIN REQUIRED BOLT CONFIGURATION PATTERN AND TO AID IN VERTICAL POSITIONING WHILE CONCRETE BASE IS POURED.
2. USE ANTI-SEIZE COMPOUND ON ALL THREADS.
3. 12' x 3/4" GROUND ROD TO BE POSITIONED BEFORE POURING BASE.
4. CLASS 'A' CONCRETE SHALL BE USED TO CONSTRUCT BASE.
5. CONSTRUCT A 6" THICK x 36" SQUARE CONCRETE CAP AFTER POLE HAS BEEN ERECTED & PLUMBED. CHAMFER EDGE 1". MUST BE APPROVED BY ENG. BEFORE POURED.
6. CONDUIT SHALL HAVE PLASTIC (OR METAL) BUSHING (ABOVE BASE) TO PREVENT CABLE CHAFING.
7. USE #6 BARE COPPER GROUND CONDUCTOR FROM CLAMP TO GROUND BOLT IN ACCESS HOLE.

REBAR CAGE



E

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STEEL SIGNAL POLE ASSEMBLY DETAILS

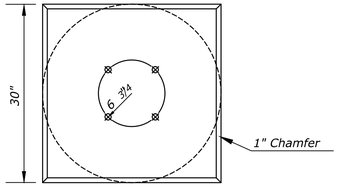
TRAFFIC ENGINEER
PAUL GUNZELMAN, P.E.

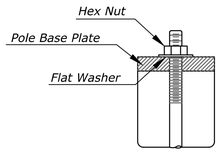
PROJECT NUMBER	OCA NUMBER	DATE
472-84691	706989	10/2012

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

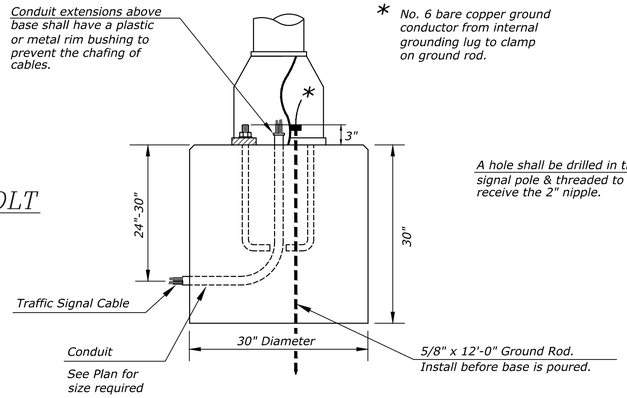
SHEET

Use Keystone "No-Weld Number 1 Anti-Seize Compound" on all bolts & nuts.

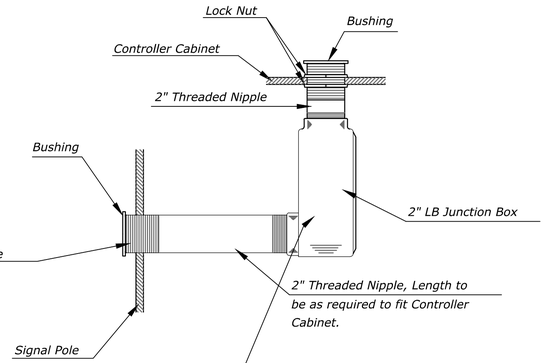


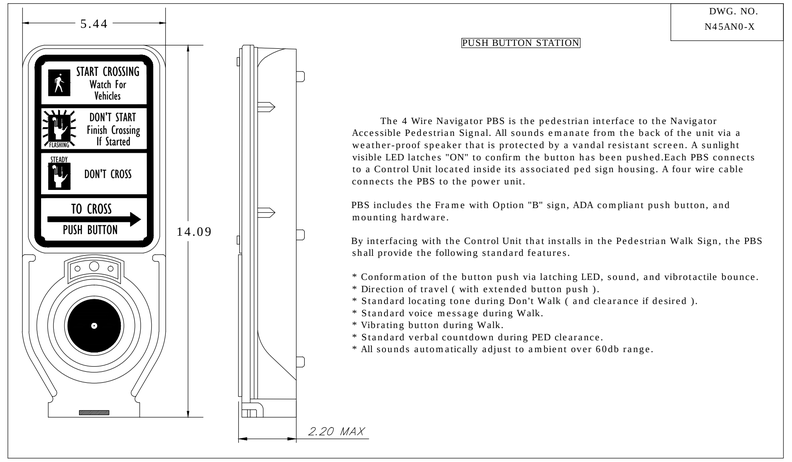


ANCHOR BOLT DETAIL



CONCRETE BASE DETAIL





DWG. NO. N45AN0-X

PUSH BUTTON STATION

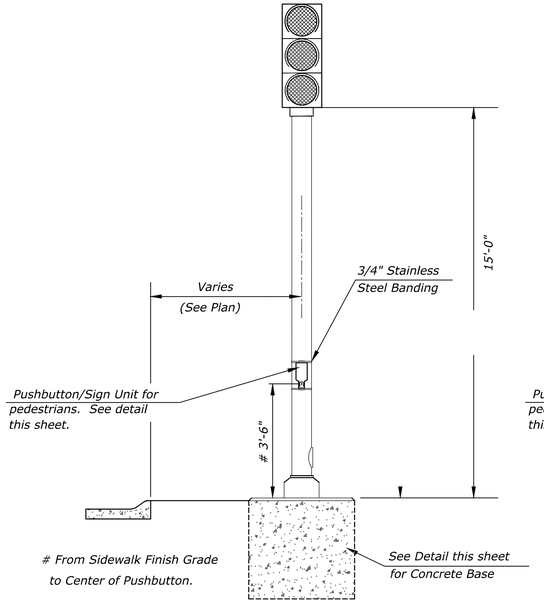
The 4 Wire Navigator PBS is the pedestrian interface to the Navigator Accessible Pedestrian Signal. All sounds emanate from the back of the unit via a weather-proof speaker that is protected by a vandal resistant screen. A sunlight visible LED latches "ON" to confirm the button has been pushed.Each PBS connects to a Control Unit located inside its associated ped sign housing. A four wire cable connects the PBS to the power unit.

PBS includes the Frame with Option "B" sign, ADA compliant push button, and mounting hardware.

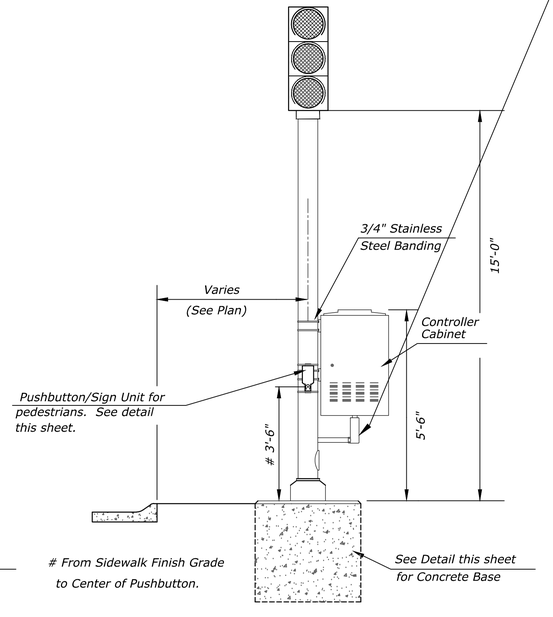
By interfacing with the Control Unit that installs in the Pedestrian Walk Sign, the PBS shall provide the following standard features.

* Conformation of the button push via latching LED, sound, and vibrotactile bounce.
* Direction of travel (with extended button push).
* Standard locating tone during Don't Walk (and clearance if desired).
* Standard voice message during Walk.
* Vibrating button during Walk.
* Standard verbal countdown during PED clearance.
* All sounds automatically adjust to ambient over 60db range.

PEDESTRIAN PUSHBUTTON/SIGN UNIT DETAIL



TRAFFIC SIGNAL PEDESTAL



TRAFFIC SIGNAL PEDESTAL WITH CONTROLLER CABINET

DWG. NO. N45AN0-X

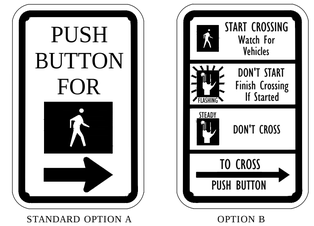
PUSH BUTTON STATION

Message and Sound options include:
* Locating tone
* Verbal Street Name (Example: Crossing Main at Central)
* All features field selectable using a Configurator.

Construction :
* Die-cast aluminum, powder coated Black in color.
* Street Name in Braille in the directional arrow of the sign.
* Option "B" signing option.

Push button :
* ADA compliant
* Raised tactile arrow on the button
* Solid State switch rated at a Minimum of 20 million actuations

PLATE MARKING OPTIONS



STANDARD OPTION A

OPTION B

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

SIGNAL PEDESTAL & BASE WITH ADA PUSH BUTTON

TRAFFIC ENGINEER
PAUL D. GUNZELMAN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
472-84691	706989	10/2012

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET
77 of 177

PLANT SCHEDULE

DECIDUOUS TREES	BOTANICAL NAME	COMMON NAME	CONT	CAL
7	*Acer freemanii 'Autumn Blaze'* Full & Healthy	*Autumn Blaze Maple*	B & B	2"Cal
7	*Acer rubrum 'October Glory' TM* Full & Healthy	*October Glory Maple*	B & B	2"Cal
17	*Acer truncatum* Full & Healthy	*Shantung Maple*	B & B	2"Cal
13	*Pistacia chinensis* Full & Healthy	*Chinese Pistache*	B & B	2"Cal
4	*Quercus acutissima* Full & Healthy	*Sawtooth Oak*	B & B	3"Cal
4	*Quercus macrocarpa* Full & Healthy	*Burr Oak*	B & B	3"Cal
3	*Quercus shumardii* Full & Healthy	*Shumard Red Oak*	B & B	3"Cal
6	*Taxodium distichum 'Shawnee Brave' TM* Full & Healthy	*Bald Cypress*	B & B	2"Cal
14	*Ulmus parvifolia 'Allee'* Single Stem, Full & Healthy	*Allee Lacebark Elm*	B & B	3"Cal

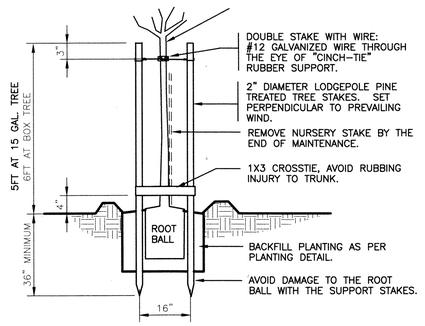
FLOWERING TREES	BOTANICAL NAME	COMMON NAME	CONT	CAL
5	*Cercis canadensis texensis 'Oklahoma Whitebud'* Single Stem Only, Full & Healthy	*Oklahoma Whitebud*	B & B	2"Cal
9	*Cercis canadensis 'Oklahoma'* Single Stem Only, Full & Healthy	*Oklahoma Redbud*	B & B	2"Cal
14	*Cornus mas 'Spring Glow'* Full & Healthy	*Cornelian Cherry Dogwood*	B & B	2"Cal
11	*Crataegus crus-galli inermis TM* Full & Healthy	*Thornless Cockspur Hawthorn*	B & B	2"Cal
6	*Koelreuteria paniculata 'Coral Sun'* Full & Healthy	*Golden Rain Tree*	B & B	2"Cal
7	*Malus x 'Prairifire'* Single Stem Only, Full & Healthy	*Prairifire Crab Apple*	B & B	2"Cal
4	*Malus x 'Snowdrift'* Single Stem Only, Full & Healthy	*Snowdrift Crab Apple*	B & B	2"Cal
7	*Prunus virginiana 'Shubert'* Full & Healthy	*Canada Red Cherry*	B & B	2"Cal
28	*Pyrus calleryana 'Aristocrat' TM* Full & Healthy	*Aristocrat Flowering Pear*	B & B	2"Cal

LANDSCAPE NOTES:

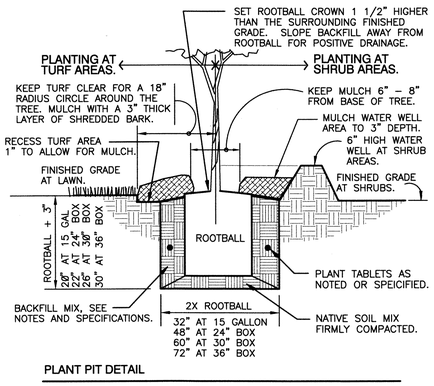
1. All landscape work shall be done in accordance with industry standards.
2. Refer to Engineer's Seeding plan for all turf ground cover, except turf in medians. Median turf shall be sodded with Buffalo Sod
3. Trees with broken leaders or no central leader will not be accepted.
4. All planting beds shall be prepared by killing all existing vegetation with Round-Up (or equal) according to label directions. A Pre-emergent herbicide such as Treflan (5%) (or equal) shall be applied per label directions. All planting beds to receive 2" organic matter (such as cotton bur mulch, compost, or humus) and shall be rototilled in to a depth of 10-12".
5. Mulch all planting beds with min. 3" of mulch. Mulch all tree saucer wells with min. 3" of mulch. Mulch material to be shredded cypress mulch of uniform consistency.
6. Metal edging shall be used to separate all turf areas from planting beds. Edging shall be 10 gauge thickness, commercial grade, or approved equal.
7. Topsoil hauled onto site shall be fertile, friable, natural loam topsoil, of uniform quality characteristic of representative local soils which produce heavy growth of crops, grass, or other vegetation. It shall be free of trash, or other matter toxic to plant growth.
8. Topsoil shall be delivered in an unfrozen and non- muddy condition and shall be subject to approval by the Landscape Architect.
9. Prior to any excavation for landscaping purposes the location of underground utilities shall be determined by calling Kansas One Call at 687-2470/1-800-344-7233. Contractor shall be responsible for any damage done to existing utilities.
10. Report any discrepancies in the planting plan to the Landscape Architect, prior to starting construction.
11. The Landscape Contractor shall coordinate with the G.C. to gain site access to install the plants and maintain grounds, until final acceptance from owner. Upon final acceptance, the one (1) year guarantee period will begin.
12. The Landscape Contractor shall coordinate with the G.C. to install the plants and maintain grounds, until final acceptance from owner.
13. The Landscape Contractor shall submit bid with unit prices for all plants, including mulch, installation, 1 year guarantee, bed preparation, fertilizer, etc.
14. The Landscape Contractor is responsible for any damage done to sidewalks, curbs, pavement, utilities, existing trees to remain, or adjacent property not within project limits when installing or maintaining the plantings before final acceptance.
15. General Contractor to coordinate with appropriate Local City Official to Remove/Transplant existing trees.
16. Fall planting season shall be September 1 through October 31. Spring planting season shall be April 1 through June 30. For grass seeding, fall season shall be September 1 through mid October. Spring season for seeding shall be from March 15 through mid May.
17. Quantities listed on the plant palette are for informational purposes only. Landscape Contractor shall be responsible for calculating quantities necessary to complete the installation of theses plans.
18. Landscape Contractor shall provide maintenance until final project acceptance including landscape maintenance and watering.

Existing Tree to Remain

Trees to be removed not shown. (See Grading Plan Sheets for Tree Removal)

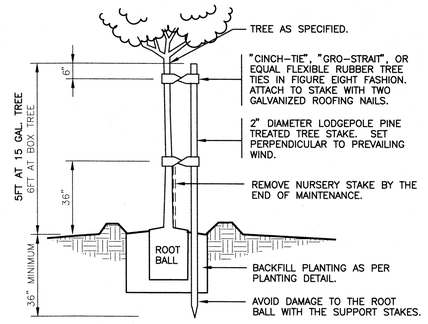


STAKING DETAIL

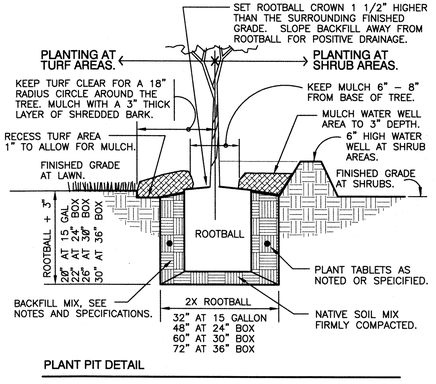


PLANT PIT DETAIL

1 TREE PLANTING DOUBLE STAKE
1" = 1'-0" 329343.19-03



STAKING DETAIL



PLANT PIT DETAIL

2 TREE SINGLE STAKE PLANTING
1" = 1'-0" 329343.16-03

BRANDON K. BOYDSTUN LICENSED 797 12/14/13 KANSAS LANDSCAPE ARCHITECT

Drawing File: E:\Projects\29th Ridge to Hoover\Landscape — November 2013

Design: BKB Drawn: BKB Approved: BKB Scale: N/A	Project No. 09091.E382	CAPITAL IMPROVEMENT PROJECT 29TH STREET NORTH LANDSCAPE NOTES, SCHEDULE, DETAILS 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company, P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

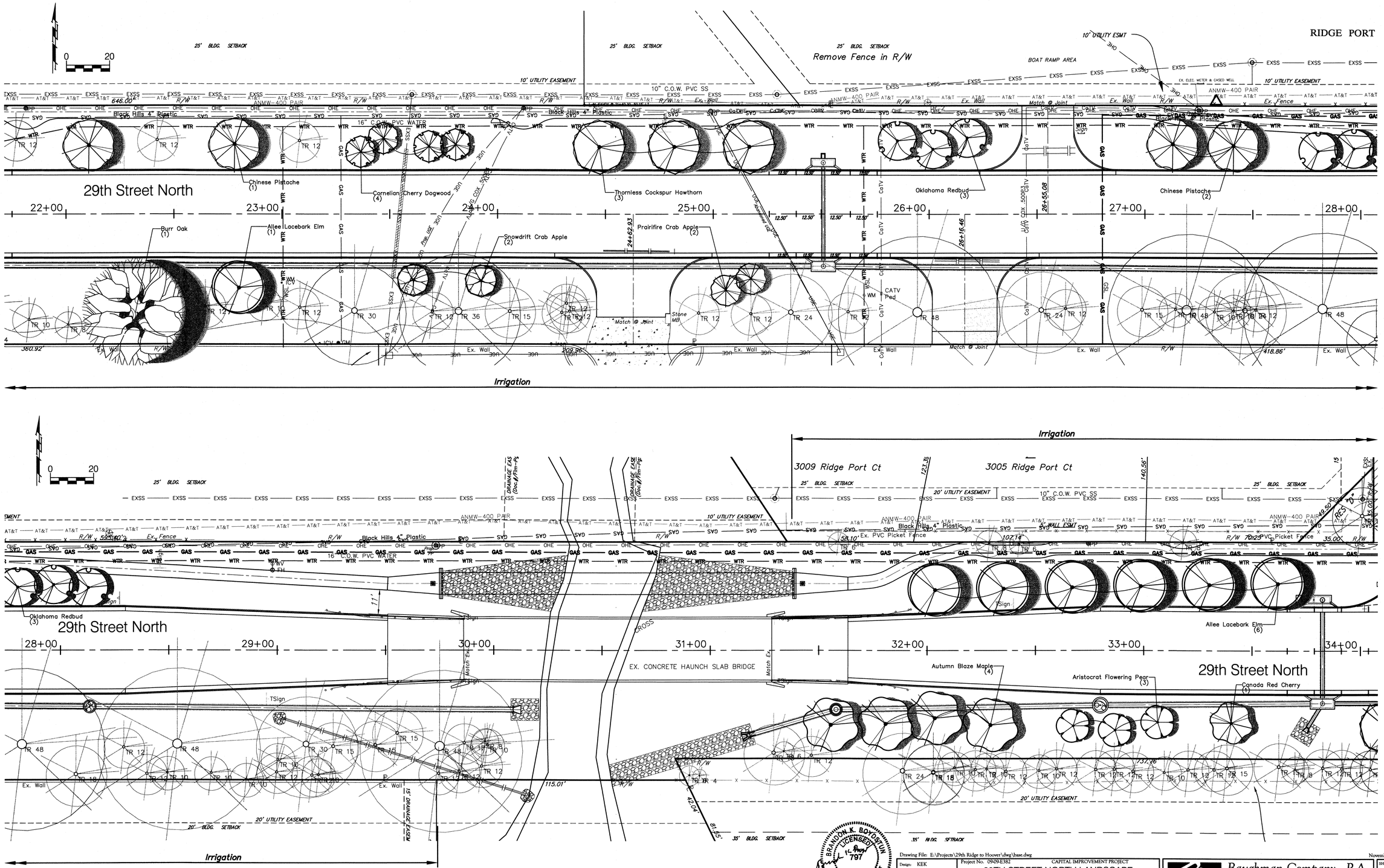
D-1079-1UP
Conway Bank N A
121 E Kellogg
WICHITA, KS 67202

2920 N Ridge Rd
D-1099-UP
Terry Alan Richards
9216 Thurman
WICHITA, KS 67212

0 20

5' WALL ESMT
40.00'
135.00'
46.39'
Ex. 12" WL
Ex. Conc. Walk
Ex. 38"x24" SWS
SWSMH
Ex. TMH
Prop. Ped Pole
Ex. Ped Pole
ATT Ped
Ex. 18" WL
Saw & Match
Joint
Ex. Trail
Prop. Trail
Ex. Traf.
Prop. Traf.
Ex. 12" WL
Ex. 20" WL
Ex. TCon
Ex. TMH
TSig
LP
Ex. 20" WL
35.00'
181.80'
Ridge Road
29th Street North
10+00
11+00
12+00
13+00
14+00
15+00
16+00
Thimble
14+44.17
15+57.73
15+89.62
Aristocrat Flowering Pear (2)
Prairifire Crab Apple (2)
Golden Rain Tree (3)
16" C.O.W. PVC WATER
WESTAR/COX
OHE
Guy
Prop. PPP
Ex. Wood Privacy Fence
Ex. Gate
TR 24
TR 8
GPost
209.50'
29°22'22"
R/W
Gravel
Match
Ex. Wall
Ex. Gate
AT&T
BHAM-11 PAIR
WM
WV 29985
WV 29986
WV 29987
WV 29988
WV 29989
Ex. 20" WL
Ex. 12" WL
Ex. 16" WL
Ex. 8" WL
Ex. 6" WL
Ex. 4" WL
Ex. 2" WL
Ex. 1" WL
Ex. 3/4" WL
Ex. 1/2" WL
Ex. 3/4" WL
Ex. 1" WL
Ex. 2" WL
Ex. 4" WL
Ex. 6" WL
Ex. 8" WL
Ex. 12" WL
Ex. 16" WL
Ex. 20" WL
Ex. 24" WL
Ex. 30" WL
Ex. 36" WL
Ex. 42" WL
Ex. 48" WL
Ex. 54" WL
Ex. 60" WL
Ex. 66" WL
Ex. 72" WL
Ex. 78" WL
Ex. 84" WL
Ex. 90" WL
Ex. 96" WL
Ex.

RIDGE PORT

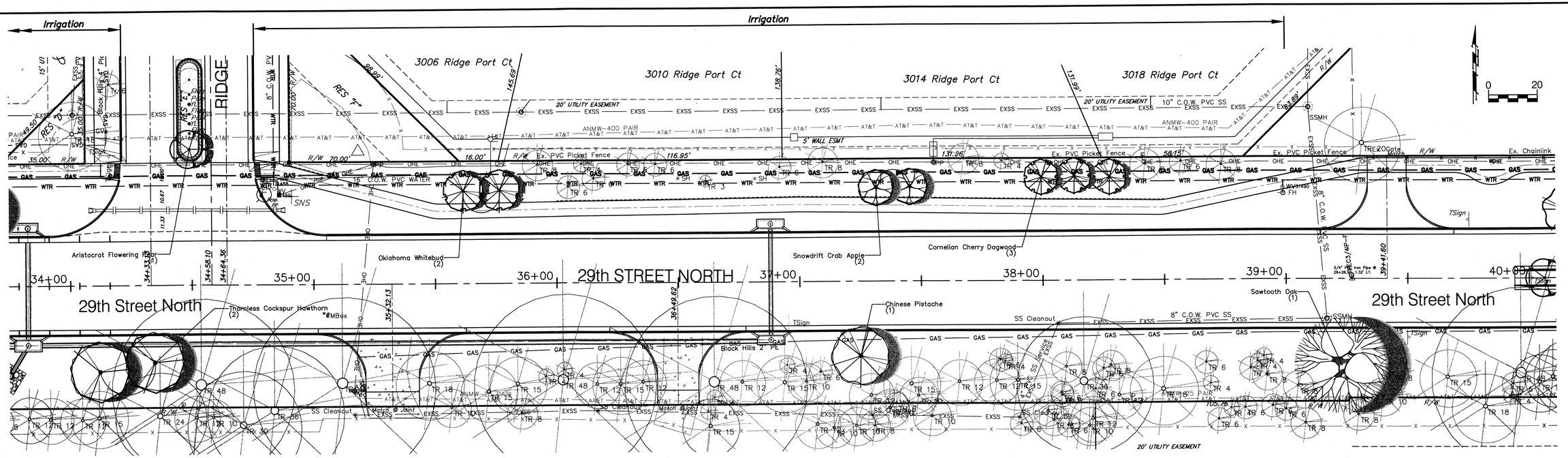


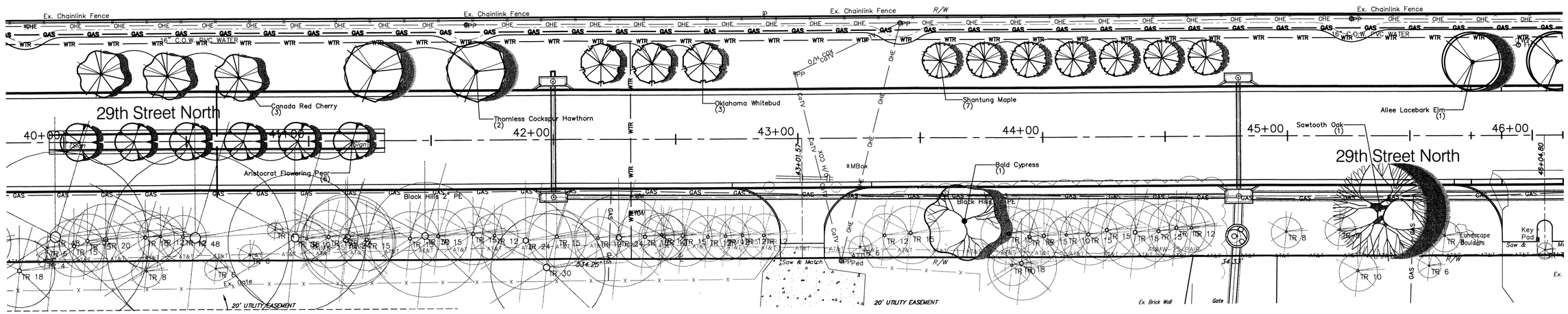
BRANDON K. BOYDSTUN
LICENSED
12-Dec-13
797
KANSAS
LANDSCAPE ARCHITECT

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg — November 2013

Design: KEK	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT	SHEET 80 OF 177
Drawn: JDM	29TH STREET NORTH LANDSCAPE		
Approved: JFB	Sta. 22+00.00 - Sta. 34+00.00		
Scale: Noted	29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD		

Baughman Company, P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
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BRANDON K. BOYDSTUN
LICENSED
797
12/4/13
KANSAS
LANDSCAPE ARCHITECT

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg

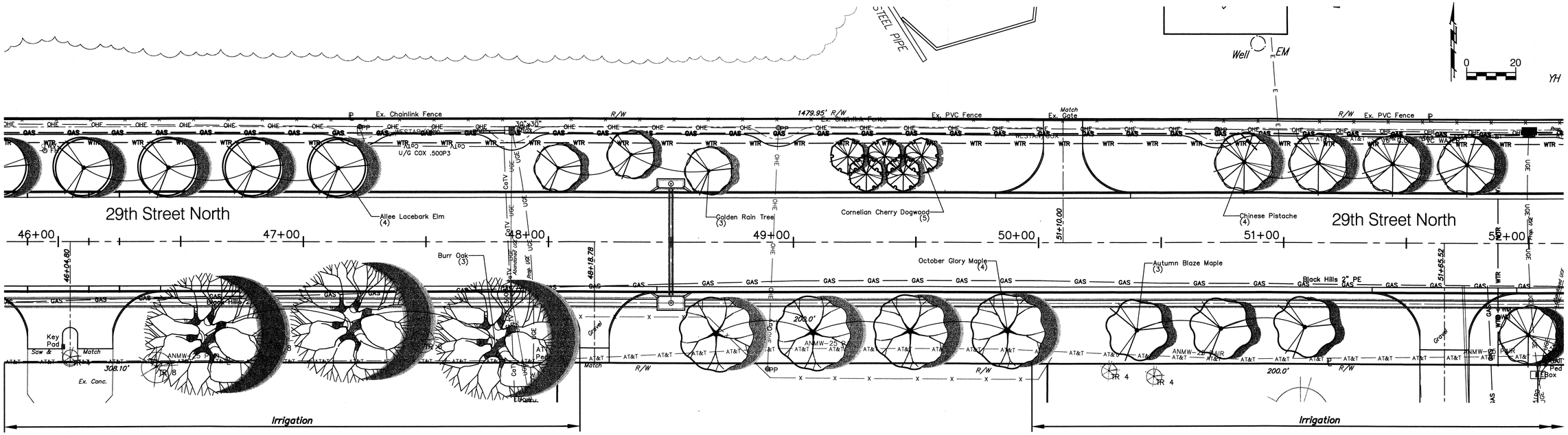
November 2013

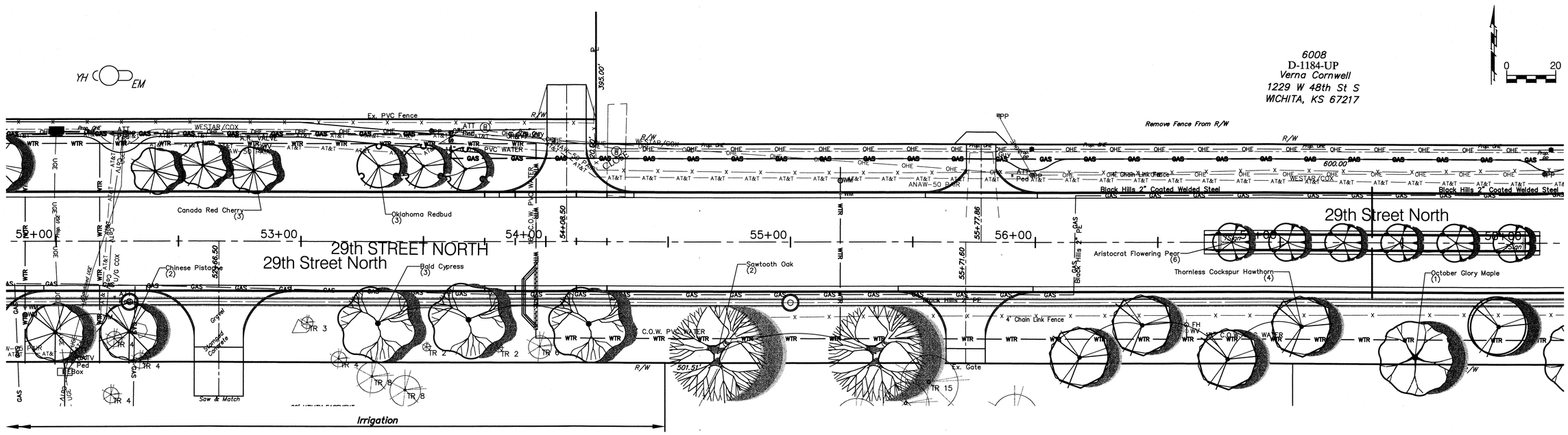
Design: KEK	Project No. 09-09-E382
Drawn: JDM	CAPITAL IMPROVEMENT PROJECT
Approved: JFB	29TH STREET NORTH LANDSCAPE
Scale: Noted	Sta. 34+00.00 - Sta. 46+00.00
	29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company, P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 81 OF 177

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BRANDON K. BOYDSTON
LICENSED
797
10/11/13
KANSAS
LANDSCAPE ARCHITECT

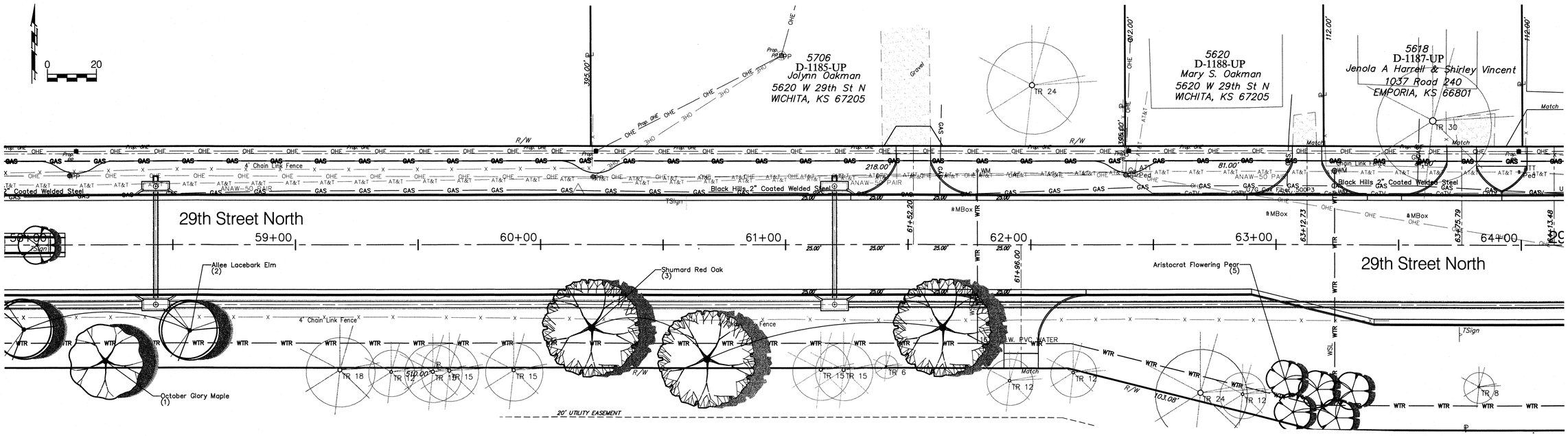
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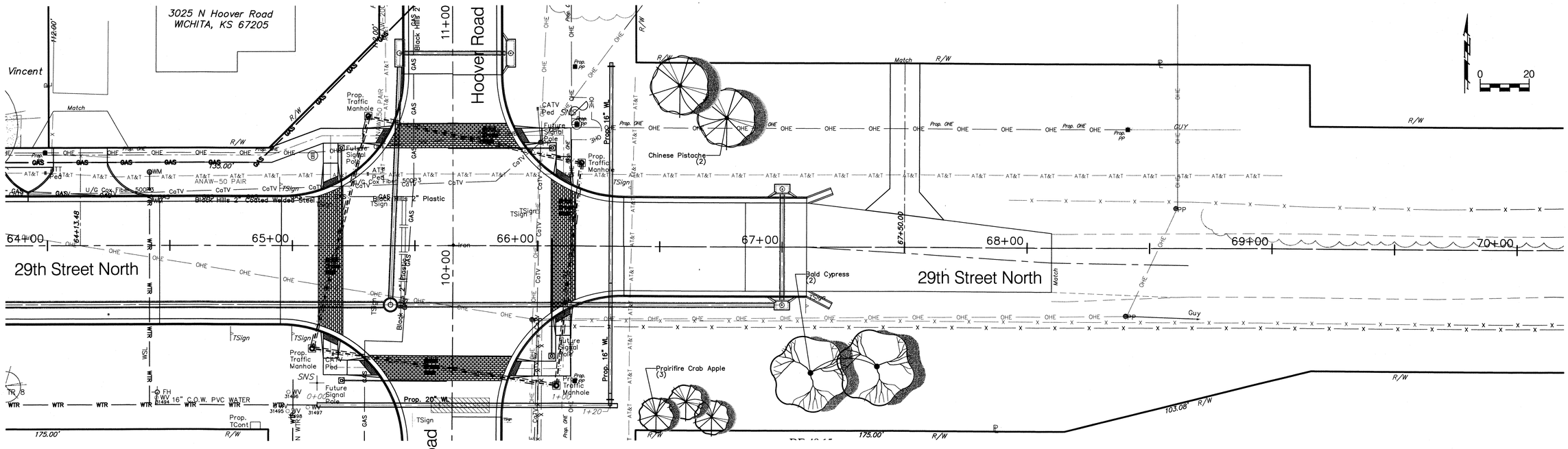
Design:	KEK
Drawn:	JDM
Approved:	JFB
Scale:	Noted

Project No. 09-09-E382 — CAPITAL IMPROVEMENT PROJECT

29TH STREET NORTH LANDSCAPE
Sta. 46+00.00 - Sta. 58+00.00
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
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BRANDON K. BOYSTUN
LICENSED
797
12/11/13
KANSAS
LANDSCAPE ARCHITECT

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg

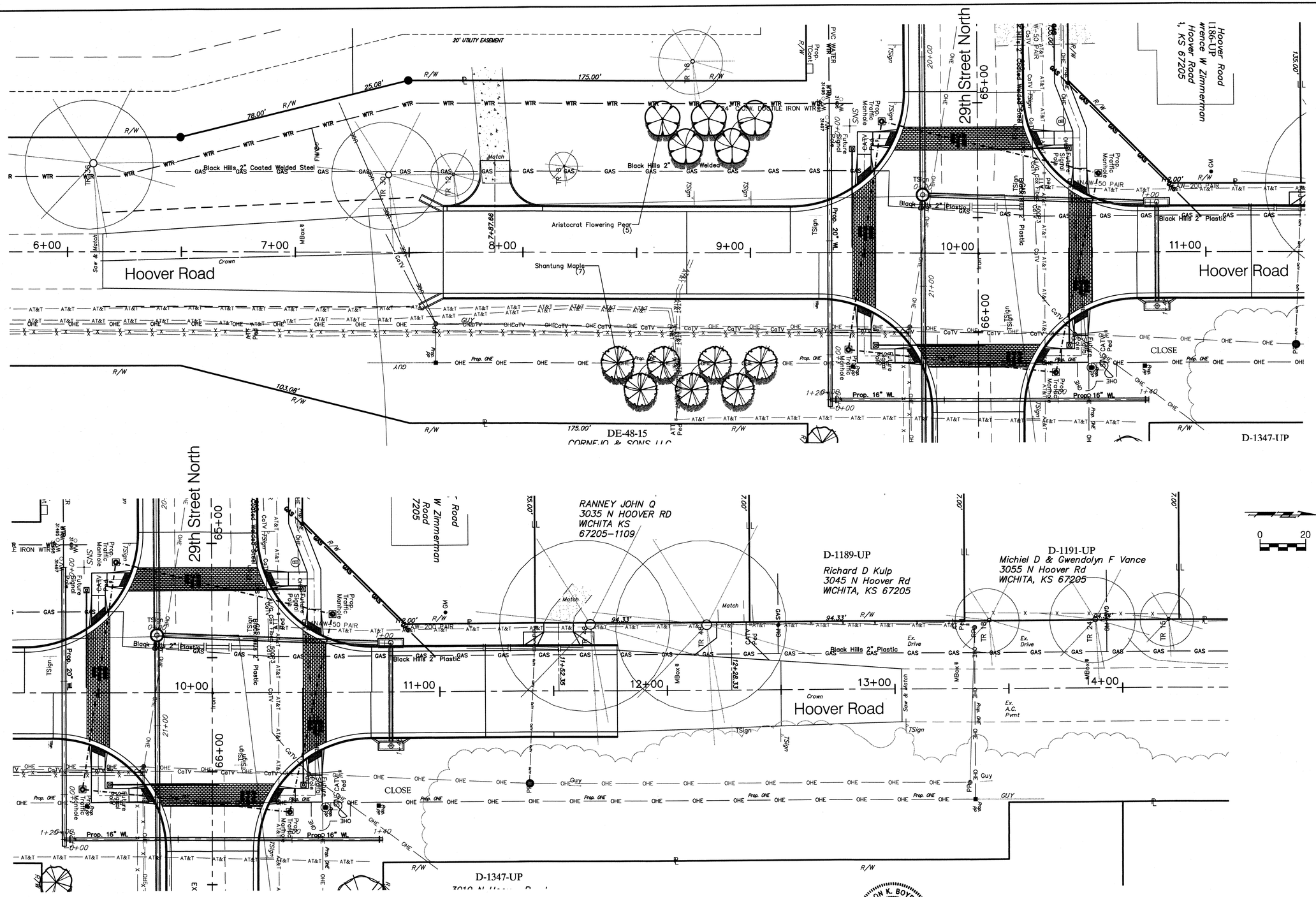
November 2013

Design:	KEK
Drawn:	JDM
Approved:	JFB
Scale:	Noted

CAPITAL IMPROVEMENT PROJECT
Project No. 09-09-E382
29TH STREET NORTH LANDSCAPE
Sta. 58+00.00 - Sta. 69+00.00
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

I:\Projects\29th Ridge to Hoover\Landscape\29th landscape.dwg, 12/11/2013 3:56:06 PM, 3:2nds,


Hoover Road
29th Street North
Hoover Road
Hoover Road
Hoover Road

Code No	Bid Item	Approximate Quantities	Unit
	LUMP SUM BID ITEMS - PAVING		
1113000	Field Office & Laboratory (Type A)	1	LS
1114000	Mobilization	1	LS
1211000	Site Clearing	1	LS
1212000	Site Restoration	1	LS
1201000	Removal of Existing Structures	1	LS
1230000	Excavation	20,023	cy
1221000	Fill, Compacted (95% Density)	509	cy
1290000	Pavement Removed (Incld. CC & G)	10,021	sy
1294000	Sidewalk, Drive &/or Pkg Lot Removed	1,485	sy
1202000	Transportation of Salvaged Materials	1	LS
2342007	AC Pavement 7" (5" Bit Base)	20,568	sy
2430009	Concrete Pavement 9" (Reinf)	3,474	sy
2440008	Concrete Pavement (VG) 8" (Reinf)	254	sy
	Concrete Pavement 8" (Reinf)	182	sy
2241000	Concrete Approach 10", Railroad	218	sy
2241000	Concrete Approach 10" (Var), Bridge	245	sy
	Concrete Apron 6" (Reinf)	184	sy
2263008	Crushed Rock Base 8", Reinforced	24,655	sy
2263007	Crushed Rock Base 7", Reinforced	1,017	sy
2263006	Crushed Rock Base 6", Reinforced	3,930	sy
2246100	Concrete C & G, Type 1 (6" & 1-1/2")	10,940	lf
2246300	Concrete C & G, Type 3 (8" & 1-1/2") Median	597	lf
2247200	Concrete Curb, Mono Edge (6" & 1-1/2")	230	lf
	Transition Rail (11" Wide) (6" to 27")	141	lf
2253000	Concrete Ramp Nose Section (Median)	4	ea
2256000	Wheelchair Ramp w/ Detectable Warnings	18	ea
5501000	Inlet Hookups	26	ea
2220000	Brick Pavers (Crosswalk)	509	sy
9011006	Sleeves, 6" PVC	80	lf
7530100	Valve Box Adjusted	7	ea
6510500	MH Adjusted, SS	1	ea
	Cleanout Adjusted, SS (Incld. Conc. Slab and Frame & Cover)	1	ea
1512000	Concrete Flume	47	lf
	Pedestrian Bridge Furnished & Installed	1	LS
	LUMP SUM BID ITEMS - DRAINAGE		
5512013	Inlet, Curb (Type 1A) (L=5' W=3')	2	ea
5512023	Inlet, Curb (Type 1A) (L=10' W=3')	15	ea
5512024	Inlet, Curb (Type 1A) (L=10' W=4')	5	ea
5512025	Inlet, Curb (Type 1A) (L=10' W=5')	2	ea
5512033	Inlet, Curb (Type 1A) (L=15' W=3')	1	ea
5511023	Inlet,Curb (Type 1) (L=10' W=3')	1	ea
6561005	MH, Shallow SWS (5')	1	ea
6560005	MH, Standard SWS (5')	2	ea
6560006	MH, Standard SWS (6')	3	ea
	Sediment Separation Unit, 8'	1	ea
	Sediment Separation Unit, 6'	1	ea
	Sediment Separation Unit, 5'	1	ea
1560000	Rip-Rap, Light Stone	215	sy
4560036	Pipe, SWS, RCP 36"	495	lf
4560030	Pipe, SWS, RCP 30"	1,270	lf
4571024	Pipe, SWS, HERCP (19"x30") (24")	50	lf
4560024	Pipe, SWS, RCP 24"	1,661	lf
4560018	Pipe, SWS, RCP 18"	1,387	lf
4560015	Pipe, SWS, RCP 15"	380	lf
4560012	Pipe, SWS, DICL 12"	119	lf
4510015	Pipe Stub, 18" SWS, RCP	2	ea
4510015	Pipe Stub, 15" SWS, RCP	3	ea
4503036	Headwall RC 36"	1	ea
4540024	Pipe, End Section, RCP 24"	2	ea
4540015	Pipe, End Section, RCP 15"	1	ea
	LUMP SUM BID ITEMS - TRAFFIC		
8710000	Pavement Marking	1	LS
8820000	Signing	1	LS
8810000	Traffic Control	1	LS
8920000	Traffic Signalization Modifications, Ridge Road	1	LS
8920000	Traffic Signalization, Hoover	1	LS
	MEASURED QUANTITY BID ITEMS - PAVING		
2248308	Concrete Driveway 8" (Reinforced)	20,745	sf
2255004	Concrete Sidewalk, 4"	28,993	sf
2255006	Concrete Sidewalk, 6" (Reinforced)	400	sf
2255008	Concrete Sidewalk, 8" (Reinforced)	1,456	sf
1253000	Retaining Wall, Modular Block	330	sff
	Concrete Sidewalk Protection Curb	370	lf
	AC Driveway 5"	126	sy
	Electronic Message Board	50	day
9052000	Tree Removed (Large)	92	ea
9051000	Tree Removed (Small)	80	ea
	MEASURED QUANTITY BID ITEMS - DRAINAGE		
	Pipe, SWS PVC 4", Perforated (Underdrain)	550	lf
1228000	Fill, Sand (Flushed & Vibrated)	1,080	lf
	MEASURED QUANTITY BID ITEMS - EROSION CONTROL		
1612000	BMP, Curb Inlet Protection	26	ea
1614000	BMP, Ditch Check	9	ea
1610000	BMP, Back of Curb Protection	11,963	lf
1617000	BMP, Silt Fence	500	lf
1611000	BMP, Construction Entrance	2	ea
	LUMP SUM BID ITEM - LANDSCAPING		
	Landscaping	1	LS
1229000	Fill, Select Topsoil	68	cy
9020000	Seeding	1	LS
9040000	Sodding	1	LS
	MEASURED QUANTITY BID ITEMS - WATERLINE		
4580020	Pipe, WL 20"	140	lf
4580020	Pipe, WL DICL 20"	4	lf
4580016	Pipe, WL 16"	155	lf
4580016	Pipe, WL DICL 16"	11	lf
7534016	Valve Assembly, Anchored 16"	1	ea
7531100	Valve Assembly, Blowoff 2"	1	ea
7513000	Fire Hydrant Removal	1	ea
7510000	Fire Hydrant Assembly	1	ea
	Water Meter Relocated (incl Meter Box)	5	ea
	Water Meter Adjusted (incl Meter Box)	4	ea
7522001	Service Line, Long 1"	9	ea
	Air Release Adjusted	1	ea
	Water Valve Closed & Abandoned	1	ea
2237100	AC Pavement Removed & Replaced	15	sy
1228000	Fill, Sand (Flushed & Vibrated)	91	lf

EXISTING MAILBOX REPLACEMENTS

STA. TO STA. (BASELINE)	ROADWAY	SIDE	REMARKS
14+52	29th Street	Rt.	Relocate
21+36	29th Street	Rt.	Save & Protect
24+79	29th Street	Rt.	Save & Protect
35+06	29th Street	Rt.	Relocate
43+21	29th Street	Rt.	Relocate
46+23	29th Street	Rt.	Save & Protect
51+73	29th Street	Rt.	Relocate
52+98	29th Street	Rt.	Relocate
55+98	29th Street	Lt.	Do Not Replace
61+68	29th Street	Lt.	Relocate
62+98	29th Street	Lt.	Relocate
63+55	29th Street	Lt.	Relocate
7+05	Hoover	Lt.	Relocate
8+12	Hoover	Lt.	Relocate
12+04	Hoover	Lt.	Relocate

For Information Only. Existing mailboxes to be removed and relocated on non-hazardous support. Cost to be SUBSIDIARY to the Lump Sum Bid Item "Mailboxes Removed and Replaced".

REMOVAL OF EXISTING STRUCTURES

STATION (BASELINE)	ROADWAY	OFFSET	STRUCTURE
12+12	29th Street	40' Rt.	Pedestrian Signal Pole
13+32	29th Street	71' Lt.	SWS Manhole
21+18	29th Street	20 Rt.	Driveway Light
21+36	29th Street	20' Rt.	Driveway Light
24+63	29th Street	17' Rt.	24' Drive Culvert Pipe
26+19	29th Street	22' Rt.	31' Drive Culvert Pipe
26+55	29th Street	29' Lt	25' Drive Culvert Pipe
34+50	29th Street	31' Lt.	81' Cross-Road Culvert Pipe
35+06	29th Street	12' Rt.	2 Steel Guard Posts
35+38	29th Street	30' Rt.	Gate Control on Steel Post
43+03	29th Street	16' Rt.	24' Drive Culvert Pipe
57+10	29th Street	41' Rt.	Concrete Debris Pile
65+45	29th Street	Centerline	48' Cross-Road Culvert Pipe
11+38	Hoover	19' Lt.	51' Drive Culvert Pipe

FOR INFORMATION ONLY.

Removal of Manholes, Storm Sewer Pipe, Light Poles, and etc. shall be SUBSIDIARY to Bid Item "Removal of Existing Structures."

FILL, SELECT TOPSOIL

STATION TO STATION (BASELINE)		ROADWAY	LOOSE FILL (Cu. Yds.)	REMARKS
40+06	41+25	29th Street	33.1	Landscaped Median
56+75	58+00	29th Street	34.7	Landscaped Median
TOTAL			67.8	

A.C. PAVEMENT 7" (5" BIT BASE)

STA. TO STA. (BASELINE)		ROADWAY	AREA (Sq. Yds.)
14+25	18+30	29th Street	1,627
19+10	29+51	29th Street	4,005
31+63.5	64+45.8	29th Street	12,926
67+10	68+10	29th Street	433
6+15	8+72	Hoover	928
11+20	13+03	Hoover	649
TOTAL			20,568

CONCRETE PAVEMENT 9" (REINF)

STA. TO STA. (BASELINE)		ROADWAY	AREA (Sq. Yds.)
12+00	14+25	29th Street	1,188
64+45.8	67+10	29th Street	2,286
TOTAL			3,474

CONCRETE PAVEMENT (VG) 8" (REINF)

STA. TO STA. (BASELINE)		ROADWAY	AREA (Sq. Yds.)
33+91.22	35+05.3	Ridge Port	254
TOTAL			254

CONCRETE PAVEMENT 8" (REINF)

STA. TO STA. (BASELINE)		ROADWAY	AREA (Sq. Yds.)
33+91.22	35+05.3	Ridge Port	182
TOTAL			182

CONC. APPROACH 10" (Var), RAILROAD

STA. TO STA. (BASELINE)		ROADWAY	AREA (Sq. Yds.)
18+30	19+10	29th Street	218
TOTAL			218

CONCRETE APPROACH 10" (Var), BRIDGE

STA. TO STA. (BASELINE)		ROADWAY	AREA (Sq. Yds.)
29+51	31+63.5	29th Street	245
TOTAL			245

CONCRETE C&G, TYPE I (6" & 1-1/2")

STA. TO STA. (BASELINE)		ROADWAY	LENGTH (ft.)
12+00	18+30	29th Street	1,193
19+10	29+51	29th Street	2,082
31+63.5	67+10	29th Street	7,131
7+65	9+30.16	Hoover	318
10+69.64	11+78	Hoover	216
TOTAL			10,940

CONCRETE CURB, MONO EDGE (6" & 1-1/2")

STA. TO STA. (BASELINE)		ROADWAY	LOCATION	LENGTH (ft.)
18+30	19+10	29th Street	RR Approach	135.0
33+91.22	35+05.30	Ridge Port	Return	95
TOTAL				230

TRANSITION RAIL (11" Wide) (6" to 27")

STA. TO STA. (BASELINE)		ROADWAY	LOCATION	LENGTH (ft.)
29+51	31+63.5	29th Street	Bridge Approach	141
TOTAL				141

CRUSHED ROCK BASE 8", REINFORCED

STA. TO STA. (BASELINE)		ROADWAY	AREA (Sq. Yds.)
14+25	18+30	29th Street	1,942
19+10	29+51	29th Street	4,815
31+63.5	64+45.8	29th Street	15,740
67+10	68+10	29th Street	453
6+15	8+72	Hoover	1,011
11+20	13+03	Hoover	694
TOTAL			24,655

CRUSHED ROCK BASE 7", REINFORCED

STA. TO STA. (BASELINE)		ROADWAY	AREA (Sq. Yds.)
18+30	19+10	29th Street	233
29+51	31+63.5	29th Street	260
33+91.2	35+05.3	Ridge Port	524
TOTAL			1,017

CRUSHED ROCK BASE 6", REINFORCED

STA. TO STA. (BASELINE)		ROADWAY	AREA (Sq. Yds.)
12+00	14+25	29th Street	1,386
64+45.8	66+85	29th Street	2,544
TOTAL			3,930

CONCRETE SIDEWALK PROTECTION CURB

STA. TO STA. (BASELINE)		ROADWAY	LENGTH (ft.)
33+84	34+04	29th Street	60.0
34+90	35+10	29th Street	60.0
36+00	38+50	29th Street	250.0
TOTAL			370.0

CONCRETE SIDEWALK 4"

STA. TO STA. (BASELINE)		ROADWAY	AREA (Sq. Ft.)
12+32	12+63.5	29th Street	503
13+24.5	17+73.3	29th Street	2,825
19+77.1	29+8602	29th Street	5,729
31+39.6	34+12.5	29th Street	1,797
34+84	65+45.1	29th Street	17,923
65+85.7	66+11	29th Street	216
TOTAL			28,993

CONCRETE SIDEWALK 8" (REINF)

STA. TO STA. (BASELINE)		ROADWAY	AREA (Sq. Ft.)
17+73.3	19+77.1	29th Street	1,456
TOTAL			1,456

CONCRETE APRON 6" (REINF)

STA. TO STA. (BASELINE)		ROADWAY	LENGTH (Sq. Yd.)
12+34.7	13+51.5	29th Street	133
65+18.6	66+07.6	29th Street	51
TOTAL			184

CONCRETE C&G, TYPE 3 (8" & 1-1/2")

STA. TO STA. (BASELINE)		ROADWAY	LENGTH (ft.)
34+44.1	34+54.8		109
40+06	41+25		238
56+75	58+00		250
TOTAL			597

SLEEVES, 6" PVC

STATION (BASELINE)	SIDE	ROADWAY	SIZE	LENGTH (ft.)
40+62.5	Rt.	29th Street	6"	20.0 ft.
40+62.5	Lt.	29th Street	6"	20.0 ft.
57+38	Rt.	29th Street	6"	20.0 ft.
57+38	Lt.	29th Street	6"	20.0 ft.
TOTAL				80.0 ft.

BRICK PAVERS, CROSSWALK*

STA. TO STA. (BASELINE)		ROADWAY	AREA (Sq. Yds.)	Pattern
12+27	13+60	29th Street	279	Holland Stone (Red)
65+10.6	66+15.6	29th Street	230	Holland Stone (Red)
TOTAL			509	

*Includes Sand Base

VALVE BOX ADJUSTMENT TABLE

STATION (BASELINE)	ROADWAY	OFFSET	VALVE #	EXIST. ELEVATION	NEW ELEVATION
13+31	29th Street	57.5' Lt.	33503	1327.60	1327.05
13+32	29th Street	56' Rt.	29984	1326.65	1326.25
13+36	29th Street	21' Lt.	29985	1326.71	1326.56
16+50	29th Street	22' Lt.	31485	1326.95	1327.20
34+83	29th Street	43' Lt.	31488	1327.43	1326.32
34+85	29th Street	40' Lt.	31489	1327.21	1326.40
45+96**	29th Street	39' Lt.	--	1328.31	1328.31

** Install new Valve Box over existing valve and adjust to new grade.

MANHOLES & CLEANOUTS ADJUSTED, SS

STATION (BASELINE)	ROADWAY	OFFSET	STRUCTURE	EXIST. ELEVATION	NEW ELEVATION
38+06	29th Street	18' Rt.	Cleanout*	1328.29	1327.08
39+17	29th Street	16' Rt.	Manhole	1328.62	1327.58

* See Detail for full job description

See Sheet 78 for Landscaping Bill of Materials

EARTHWORK

STA. TO STA. (BASELINE)		SOURCE	EXCAVATION (cu. yd.)	EXCAVATION NOTE	COMPACTION UNDER SIDEWALK 95% DENSITY**** (cu. yd.)	LOOSE FILL (cu. yd.)	WASTE *** (cu. yd.)	REMARKS
13+22.00	68+10.00	29th Street	19,808.11		508.75	1,963.60		See Cross-Sections
6+15.50	13+03.00	Hoover	215.14		0.00	219.87		See Cross-Sections
TOTALS			20,023.25		508.75	2,183.47	--	
					--	--	--	
BID TOTALS			20,023		--	--	--	

****For Information only. Comp Fill under sidewalk to be incidental to cost of Concrete Sidewalk construction

Drawing File: E:\Projects\29th Street Ridge to Hoover\Details\Summary of Quantities.dwg

NOVEMBER , 2013

Design: KEK
Drawn: KEK
Approved: MWS
Scale: None

Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT

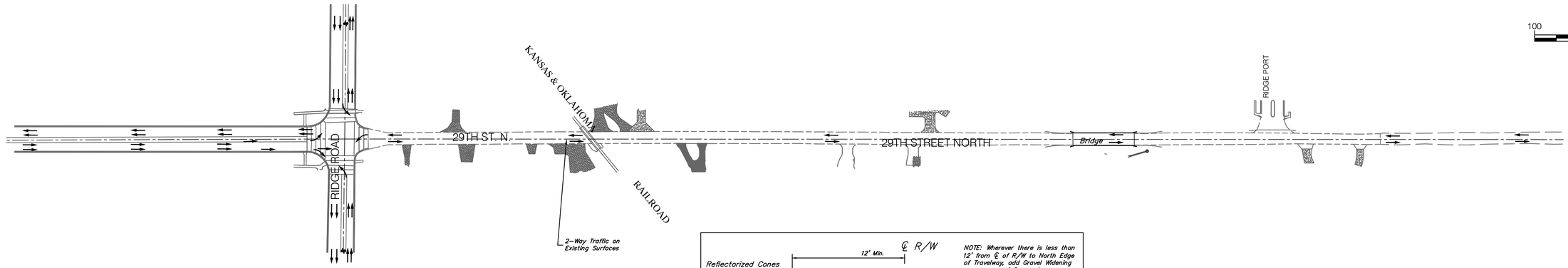
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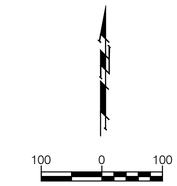
29TH STREET NORTH RIDGE ROAD TO HOOVER

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315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

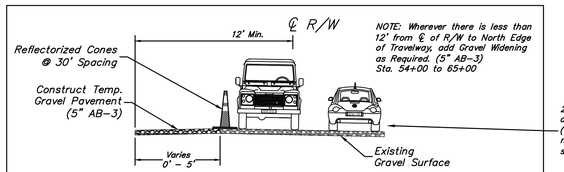
29th STREET NORTH

STREET & SWS IMPROVEMENTS

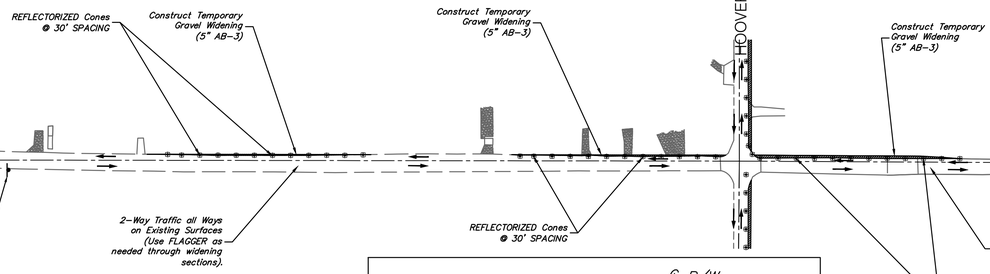




NOTE: Allow Left Turns From East–Bound 29th Street to North–Bound Ridge Road at all Times

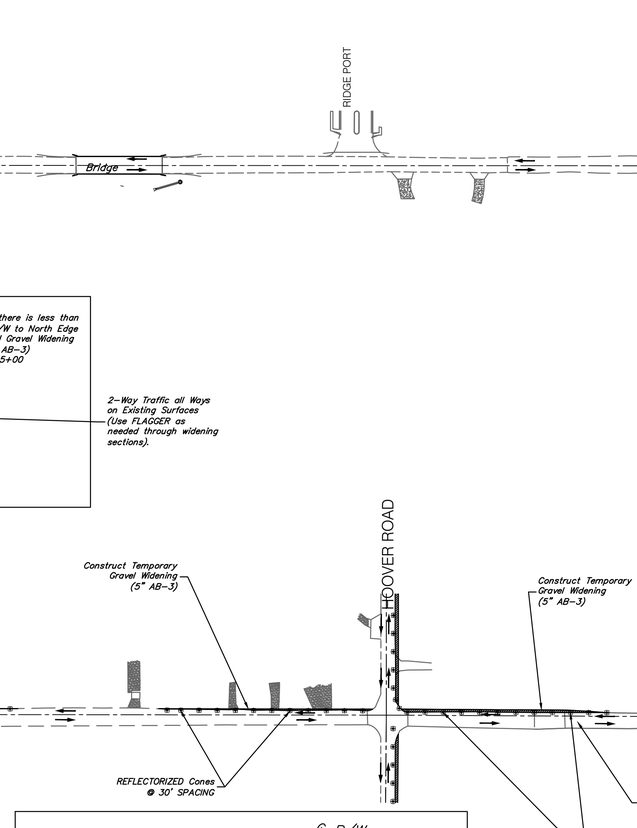


Phase 1
29th Street West of Hoover Looking East



See Detail Sheet for Typical Flagger Control during Construction.

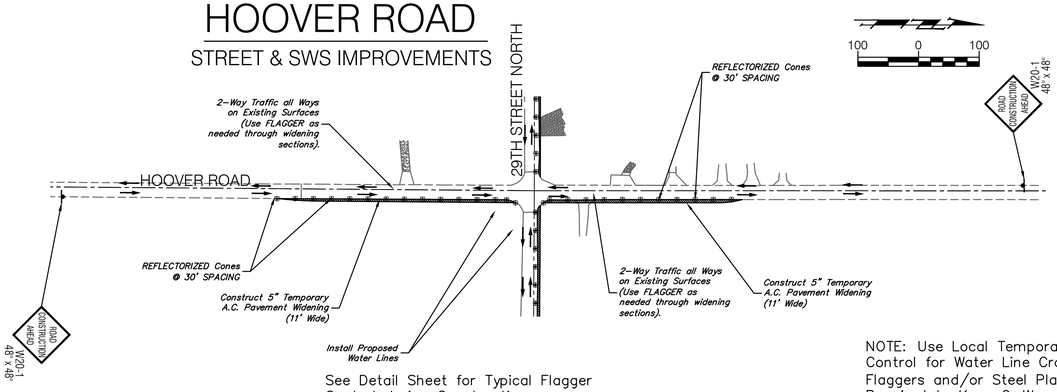
See Detail Sheet for Typical Flagger Control during Construction.



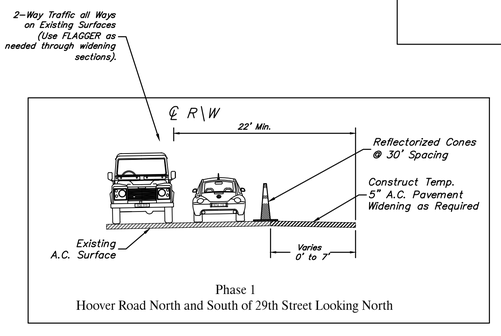
Phase 1
29th Street East of Hoover Looking East

HOOVER ROAD

STREET & SWS IMPROVEMENTS



See Detail Sheet for Typical Flagger Control during Construction.



Phase 1
Hoover Road North and South of 29th Street Looking North

NOTE: Use Local Temporary Traffic Control for Water Line Crossings. Use Flaggers and/or Steel Plates as Required to Keep 2–Way Traffic on Hoover and 29th.

Phase 1

Install New Water Lines across Hoover Road, South of 29th Street and across 29th Street East of Hoover Road. Construct Temporary 5" A.C. Pavement on East side of Hoover Road, North and South of 29th Street. Construct Temporary 5" Gravel Widening on North Side of 29th Street from Sta. 58+00 to Sta. 69+00 (Each Side of Hoover Road)
2-Way Traffic on Existing Road Surfaces until Temporary PavementWidening Surfaces are installed, then use Flagger through Temporary Pavement Widening Sections.

TRAFFIC CONTROL PLAN LEGEND

- DENOTES WORK ZONE
- DENOTES TRAFFIC FLOW
- DENOTES REFLECTORIZED CONES
- DENOTES TUBULAR MARKERS
- DENOTES TYPE III BARRACADE
- DENOTES TRAFFIC SIGN

NO SCALE

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg
NOVEMBER, 2013

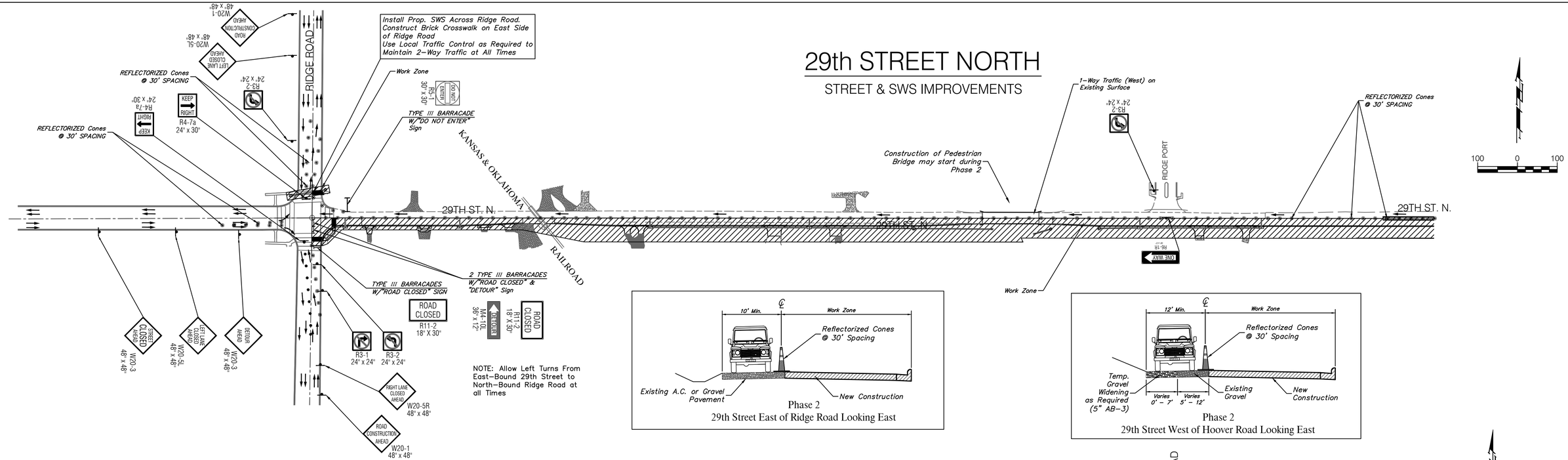
Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

Project No. 09-29-E382
CAPITAL IMPROVEMENT PROJECT
29th St. N. Ridge to Hoover
CONSTRUCTION SEQUENCE Phase 1
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

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ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

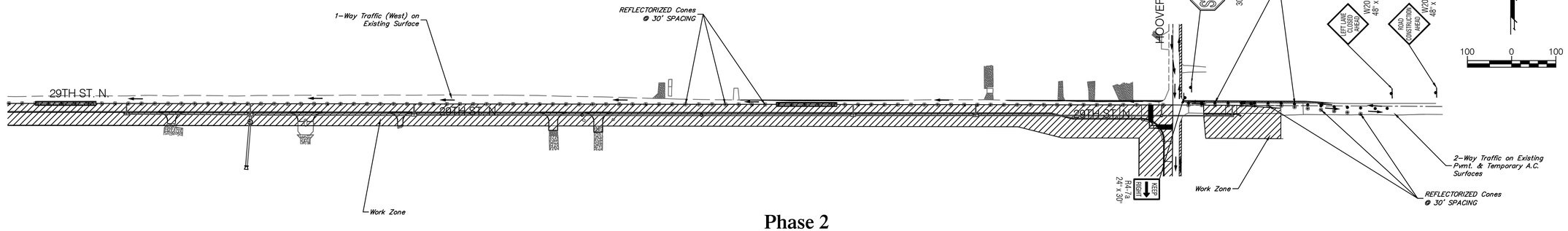
29th STREET NORTH

STREET & SWS IMPROVEMENTS



Phase 2
29th Street East of Ridge Road Looking East

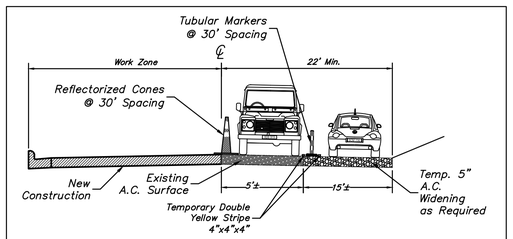
Phase 2
29th Street West of Hoover Road Looking East



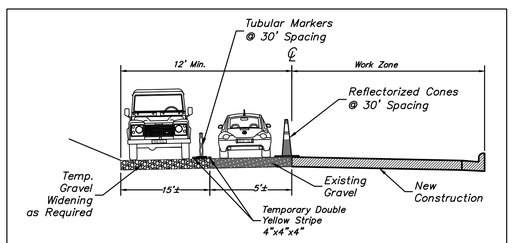
Phase 2

Construct Paving and Storm Sewer on South Half of 29th Street North From Center of Ridge Road to the Center of Hoover Road, and from the East Side of Hoover Road East. Construct Paving and Storm Sewer on West Half of Hoover Road, South of the Center of 29th Street. Install New Storm Sewer Line Across Ridge Road North of 29th Street. Construct Brick Crosswalk Across East Half of Ridge Road on North Side of 29th Street. Construct Brick Crosswalk on East Half of Ridge Road on South Side of 29th Street. Continue Construction on Pedestrian Bridge Abutments.

One-Way Traffic (West) on North Side of 29th Street North. Detour East-Bound Traffic on Ridge Road, 37th Street North and Hoover Road. East-Bound Traffic on Inside Lane of 29th Street North to be Forced into Left Turn Lane, West of Ridge Road. Traffic to be Carried on Existing or Temporary Surfaces.



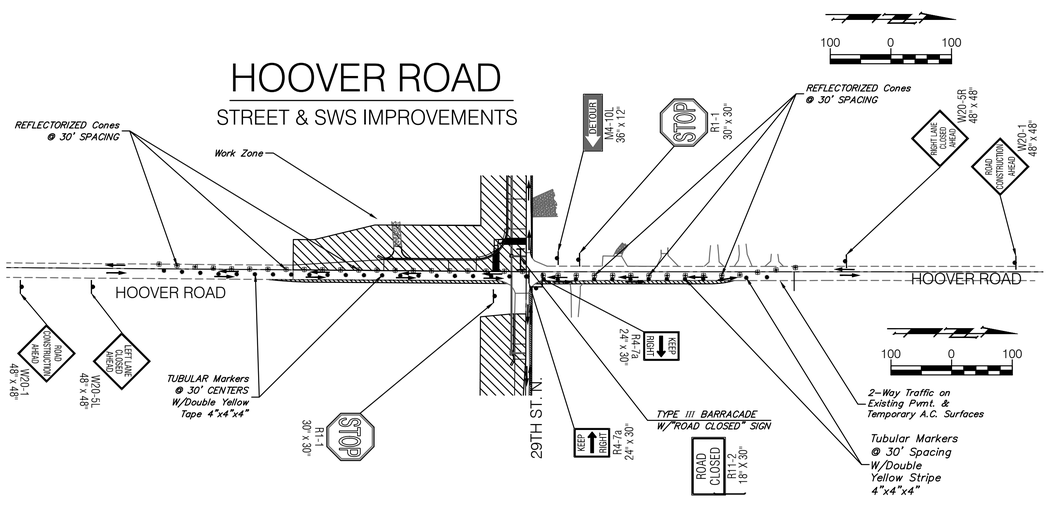
Phase 2
Hoover Road South of 29th Street Looking North



Phase 2
29st Street East of Hoover Looking East

HOOVER ROAD

STREET & SWS IMPROVEMENTS



NOTE: Left Turns Allowed at 29th/Hoover Road Intersection

TRAFFIC CONTROL PLAN LEGEND

- DENOTES WORK ZONE
- DENOTES TRAFFIC FLOW
- DENOTES REFLECTORIZED CONES
- DENOTES TUBULAR MARKERS
- DENOTES TYPE III BARRACADE
- DENOTES TRAFFIC SIGN

NO SCALE

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg

NOVEMBER, 2013

Design: KEK	Project No. 09-09-E382
Drawn: JDM	CAPITAL IMPROVEMENT PROJECT
Approved: MWS	29th St. N. Ridge to Hoover
Scale: Noted	CONSTRUCTION SEQUENCE Phase 2
	29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

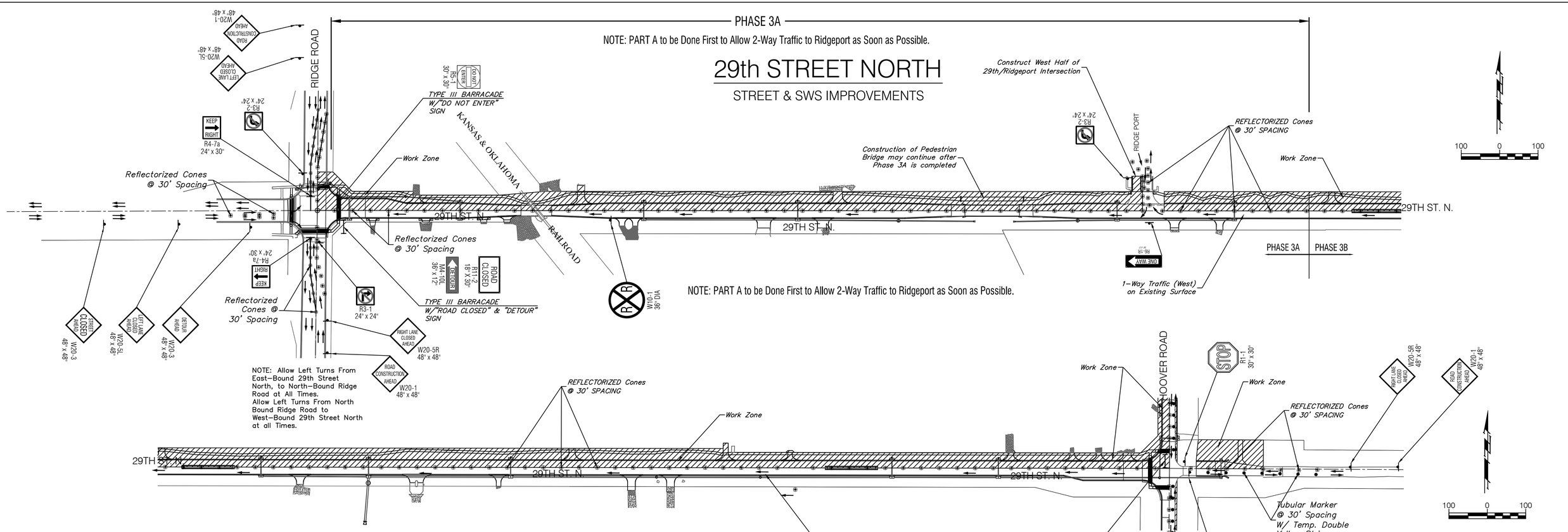
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PHASE 3A

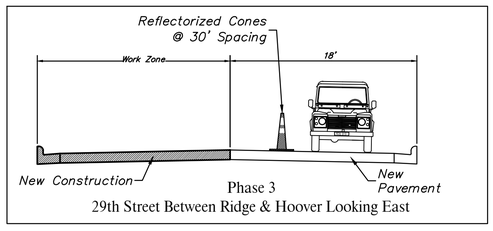
NOTE: PART A to be Done First to Allow 2-Way Traffic to Ridgeport as Soon as Possible.

29th STREET NORTH

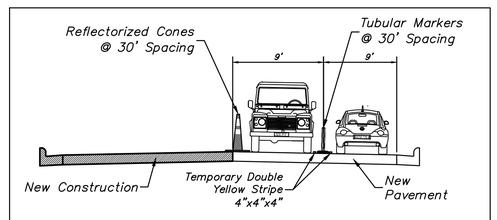
STREET & SWS IMPROVEMENTS



NOTE: PART A to be Done First to Allow 2-Way Traffic to Ridgeport as Soon as Possible.



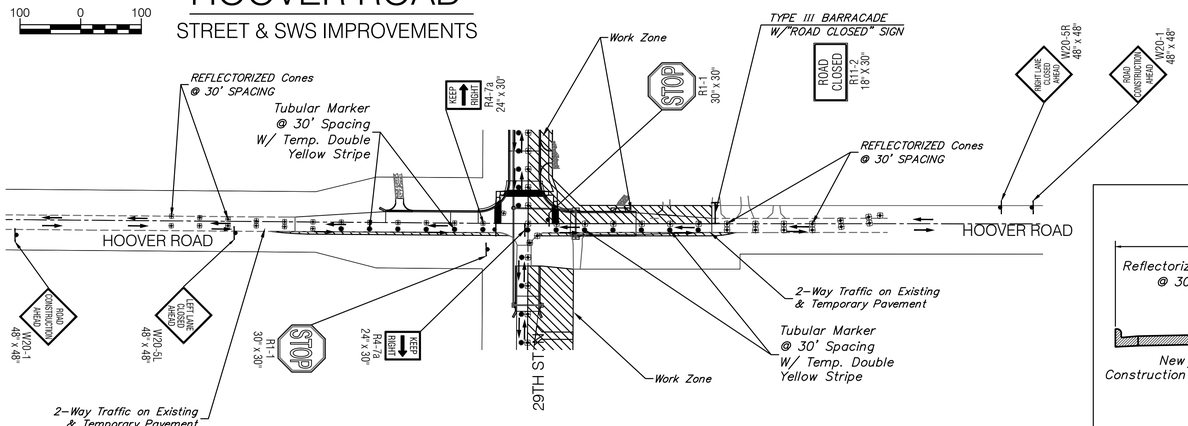
Phase 3
29th Street Between Ridge & Hoover Looking East

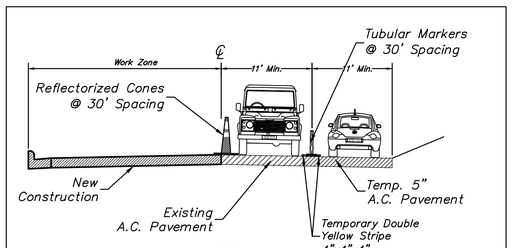


Phase 3A
29th Street East of Hoover Road Looking East

HOOVER ROAD

STREET & SWS IMPROVEMENTS





Phase 3A
HOOVER ROAD North of 29th Street Looking North

Phase 3A

Construct Paving and Storm Water Sewer and Sidewalk on North Side of 29th Street from East Side of Ridge Road to Center of Hoover Road, and from the East Side of Hoover to the East. Construct Paving and Storm Sewer on the West Half of Hoover Road North of the Center of 29th Street. Construct Paving on West Half of Ridge Port. Install Pedestrian Bridge. Part A to be done as Soon as Possible to Allow 2-Way Traffic between Ridge Road and Ridgeport.

One-Way Traffic (West) on South Side of 29th Street. Detour East-Bound Traffic on Ridge Road, 37th Street N. and Hoover. Two-Way Traffic to be Carried on Hoover Road, 29th Street East of Hoover, 29th Street West of Ridge Road and Ridge Road at All Times.East-Bound Traffic on Inside Lane of 29th Street West of Ridge Roadto be Forced into Left Lane. Traffic to be Carried on New, Existing and Temporary Surfaces.

TRAFFIC CONTROL PLAN LEGEND

- DENOTES WORK ZONE
- DENOTES TRAFFIC FLOW
- DENOTES REFLECTORIZED CONES
- DENOTES TUBULAR MARKERS
- DENOTES TYPE III BARRACADE
- DENOTES TRAFFIC SIGN

NO SCALE

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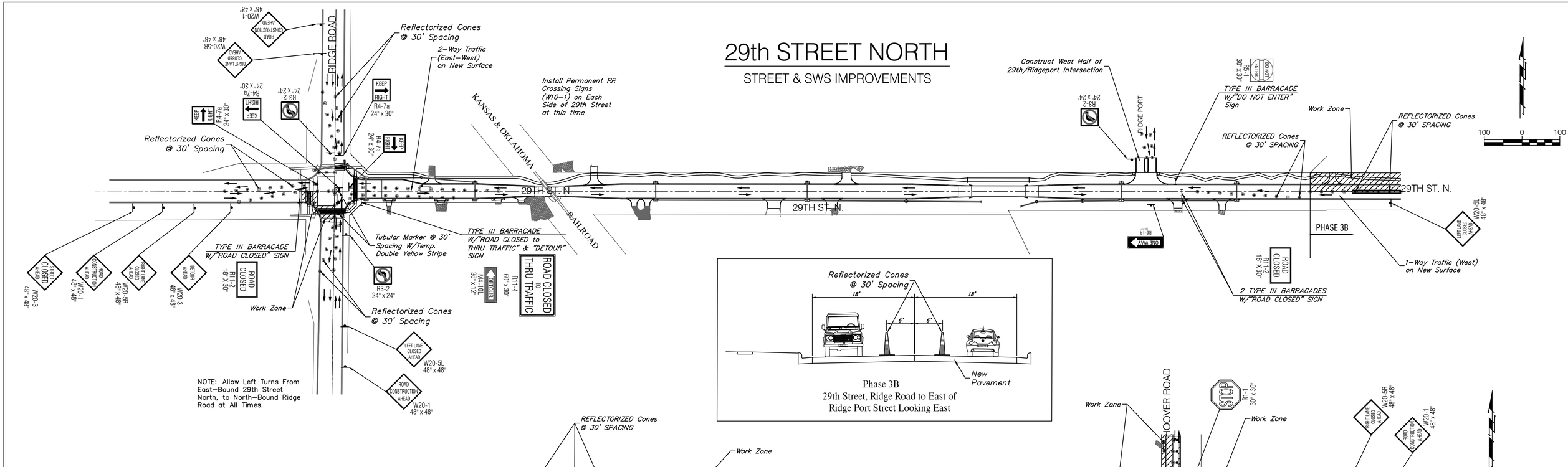
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. N. Ridge to Hoover CONSTRUCTION SEQUENCE Phase 3A 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

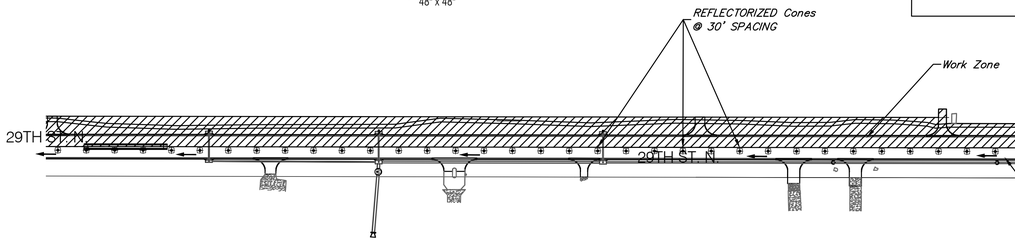
SHEET 88 OF 177

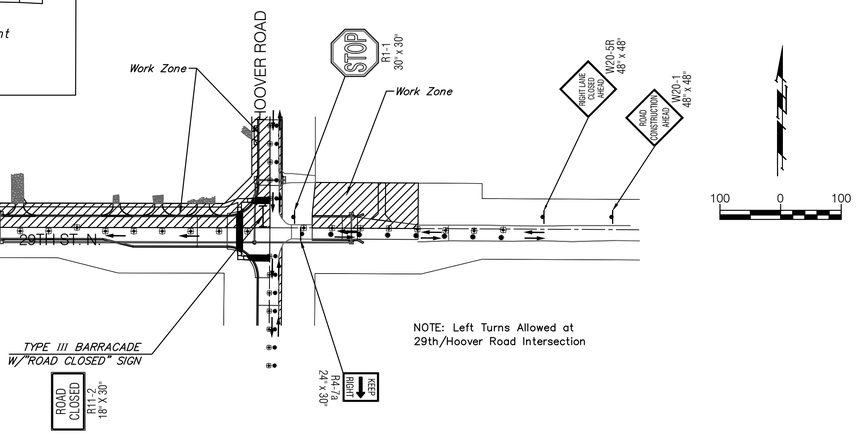
29th STREET NORTH

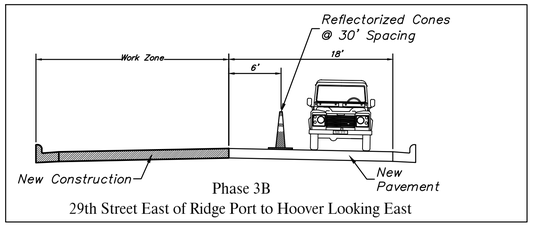
STREET & SWS IMPROVEMENTS



Phase 3B
29th Street, Ridge Road to East of Ridge Port Street Looking East



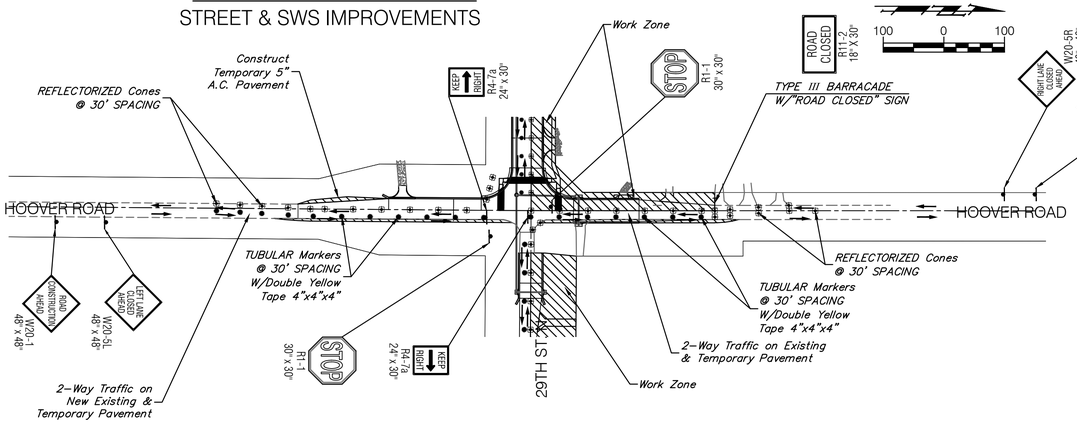


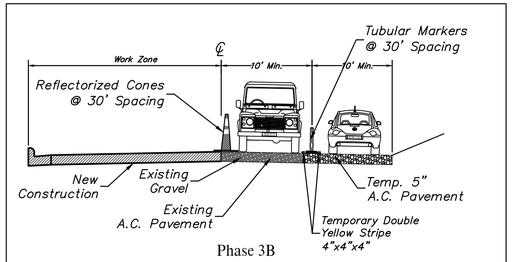


Phase 3B
29th Street East of Ridge Port to Hoover Looking East

HOOVER ROAD

STREET & SWS IMPROVEMENTS





Phase 3B
HOOVER ROAD North of 29th Street Looking North

Phase 3B

Continue Construction of Paving, Storm Sewer and Sidewalk on the North Half of 29th Street North from East of Ridge Port Street to the Center of Hoover Road and from the East Side of Hoover Road East. Construct Paving at the South-West Corner of 29th Street North and Ridge Road. Construct Paving on West Half of Ridge Port Street.

Continue Construction of Paving and Storm Sewer on the West Half of Hoover Road from the Center of 29th Street North.

Two-Way Traffic on 29th Street North on New Pavement from Ridge Road to Ridge Port Street. One-Way Traffic (West) on South Side of 29th Street from Ridge Port Street to Hoover on New Pavement.

Detour East-Bound Through Traffic on Ridge Road, 37th Street N. and Hoover Road.

Two-Way Traffic on 29th Street on Hoover and 29th Street East of Hoover Road at all Times on Existing, New & Temporary Pavement.

TRAFFIC CONTROL PLAN LEGEND

- DENOTES WORK ZONE
- DENOTES TRAFFIC FLOW
- DENOTES REFLECTORIZED CONES
- DENOTES TUBULAR MARKERS
- DENOTES TYPE III BARRACADE
- DENOTES TRAFFIC SIGN

NO SCALE

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg — NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

Project No. 09-09-E382

CAPITAL IMPROVEMENT PROJECT

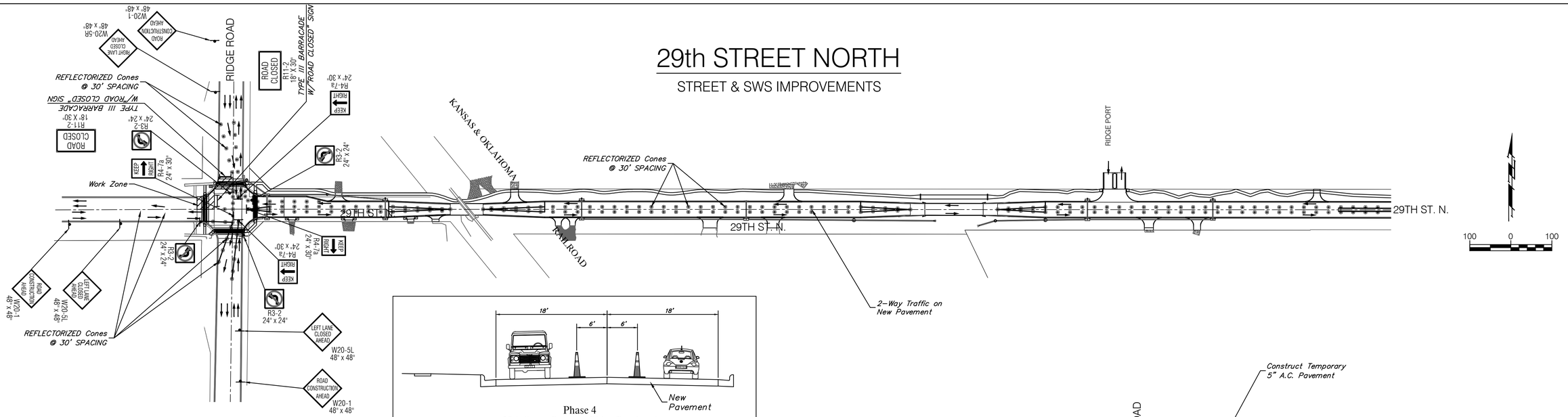
29th St. N. Ridge to Hoover
CONSTRUCTION SEQUENCE Phase 3B
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

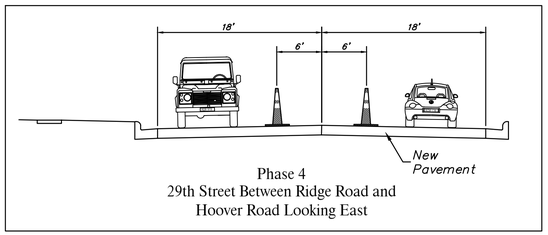
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ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 89 OF 177

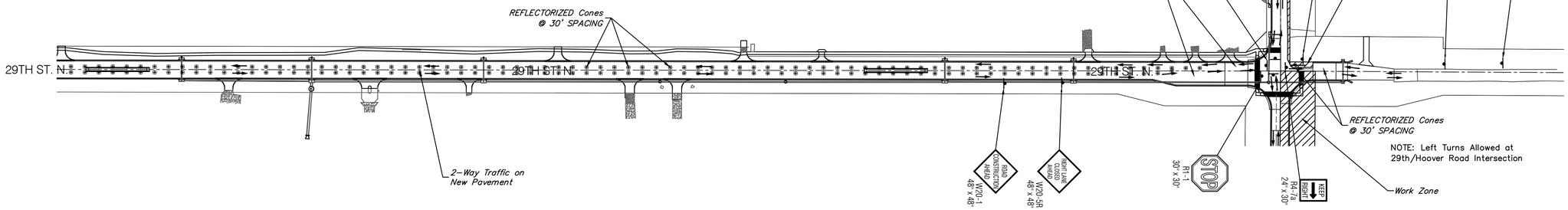
29th STREET NORTH

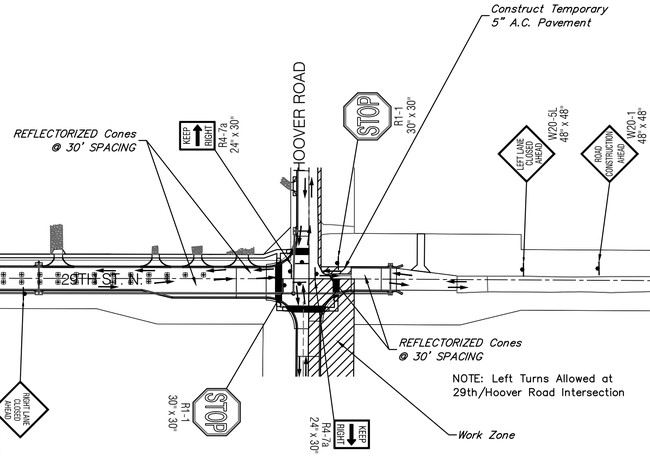
STREET & SWS IMPROVEMENTS





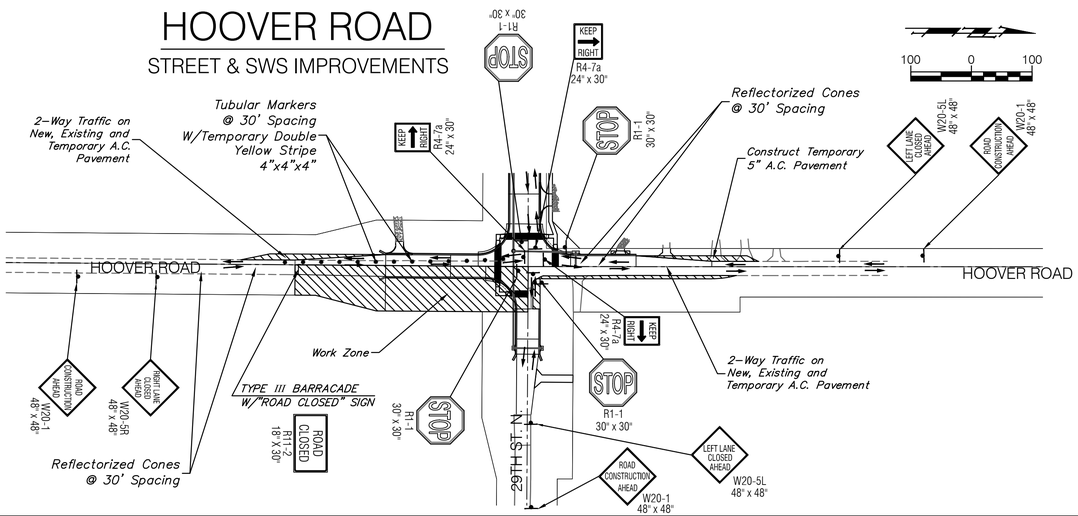
Phase 4
29th Street Between Ridge Road and
Hoover Road Looking East

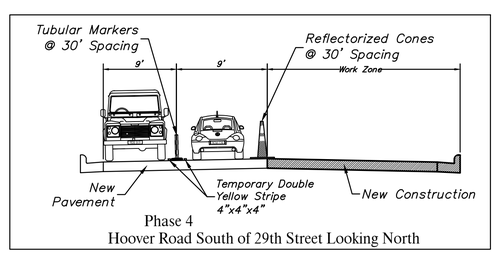




HOOVER ROAD

STREET & SWS IMPROVEMENTS





Phase 4
Hoover Road South of 29th Street Looking North

Phase 4

Construct Paving at Northwest Corner of 29th Street North and Ridge Road.

Construct Paving on East Half of Hoover Road South of Center of 29th Street. Continue Sidewalk Construction on North Side of 29th Street. Begin Surfacing, Signilization, Signing and Marking Work.

Construct Temporary 5" A.C. Pavement on West Side of Hoover Road, North of 29th Street.

Two-Way Traffic all Directions on New, Existing and Temporary Pavement.

No Detours

TRAFFIC CONTROL PLAN LEGEND

- DENOTES WORK ZONE
- DENOTES TRAFFIC FLOW
- DENOTES REFLECTORIZED CONES
- DENOTES TUBULAR MARKERS
- DENOTES TYPE III BARRACADE
- DENOTES TRAFFIC SIGN

NO SCALE

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT

29th St. N. Ridge to Hoover

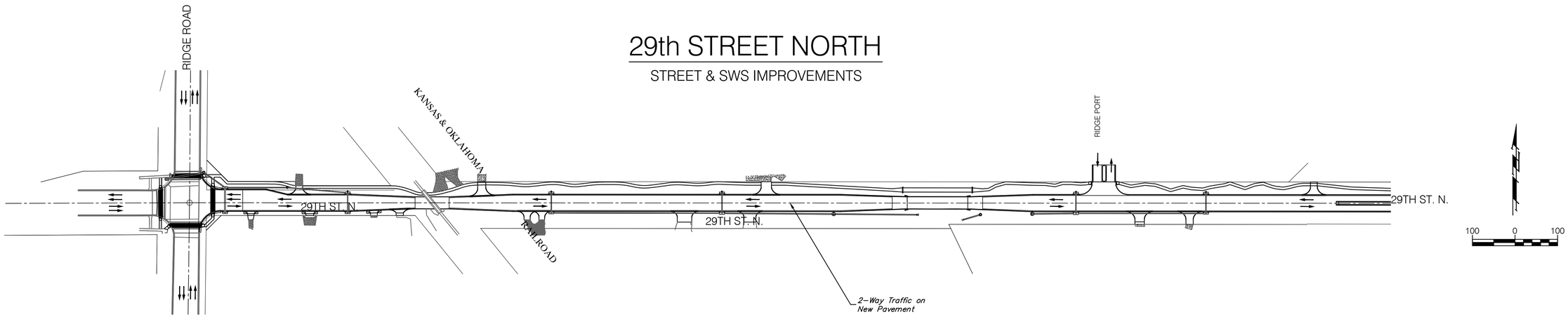
CONSTRUCTION SEQUENCE Phase 4

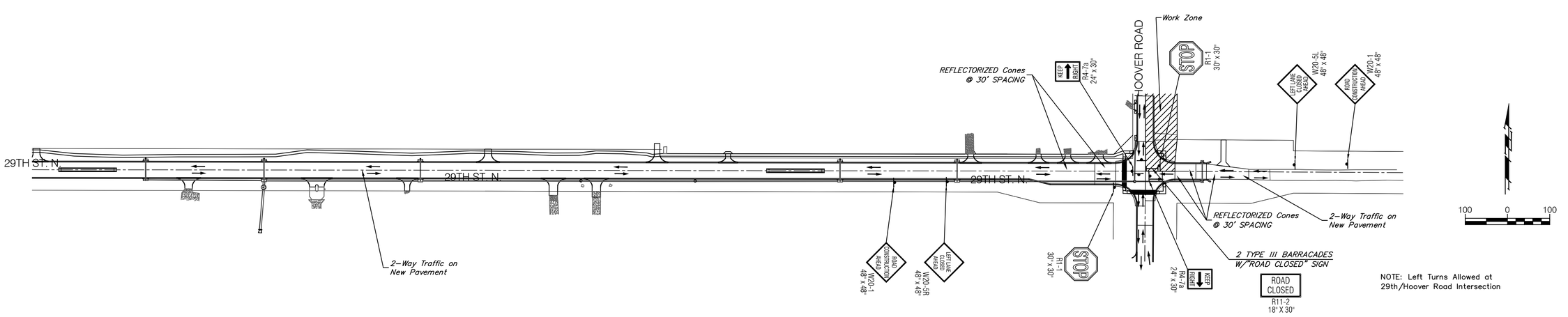
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

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29th STREET NORTH

STREET & SWS IMPROVEMENTS

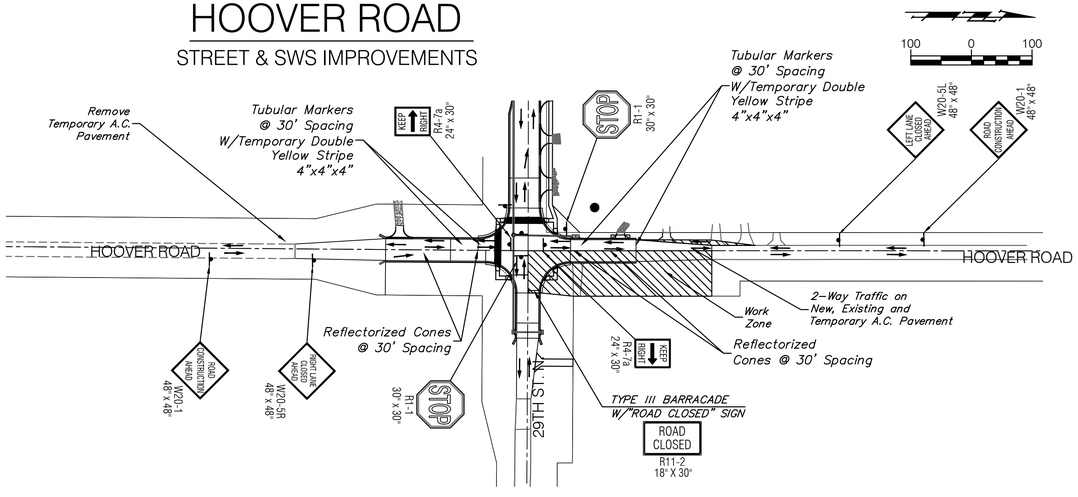


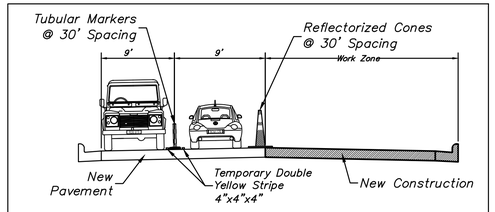


NOTE: Left Turns Allowed at 29th/Hoover Road Intersection

HOOVER ROAD

STREET & SWS IMPROVEMENTS





Phase 5 - Hoover Road North of 29th Street Looking North

Phase 5

Construct Paving on East Half of Hoover Road From Center of 29th Street, North.

Remove Temporary A.C. Pavement from West Side of Hoover Road, South of 29th Street.

Continuing Surfacing, Signalization, Seeding, Signing and Marking Work.

Two-Way Traffic in all Directions on New and Temporary A.C. Pavement.

No Detours.

TRAFFIC CONTROL PLAN LEGEND

- DENOTES WORK ZONE
- DENOTES TRAFFIC FLOW
- DENOTES REFLECTORIZED CONES
- DENOTES TUBULAR MARKERS
- DENOTES TYPE III BARRACADE
- DENOTES TRAFFIC SIGN

NO SCALE

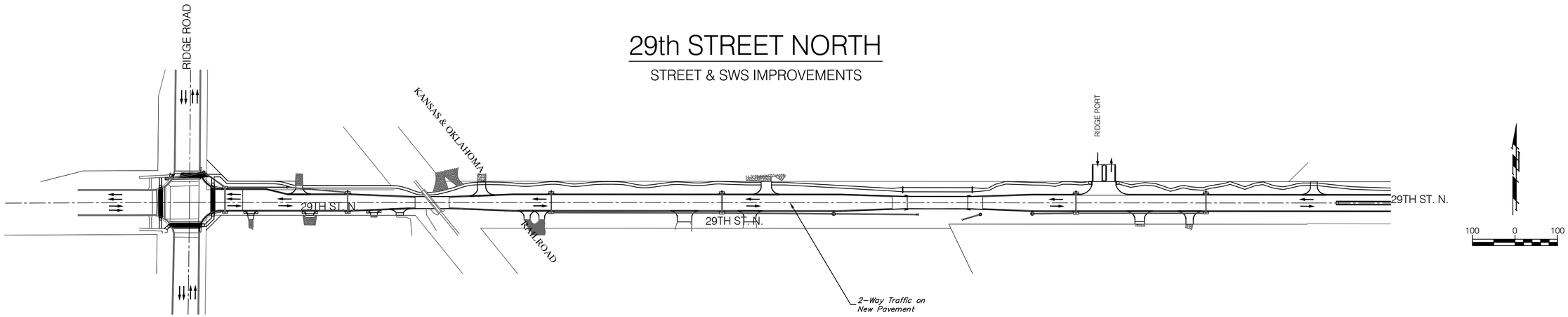
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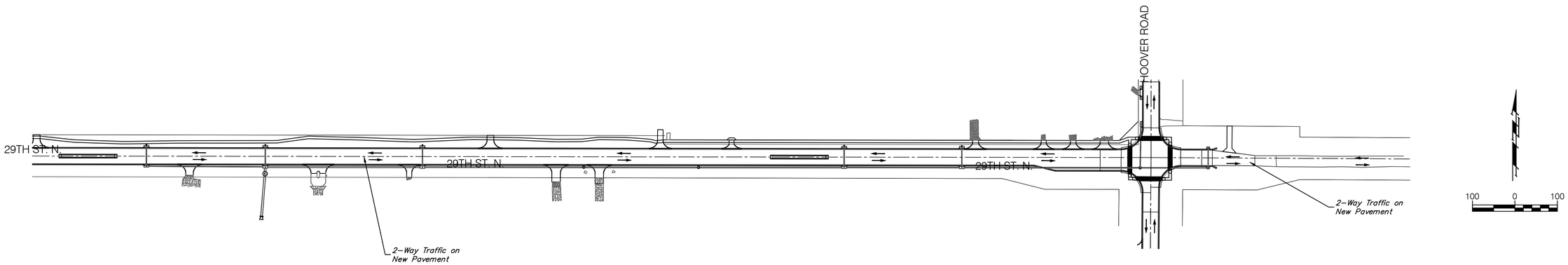
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT 29th St. N. Ridge to Hoover CONSTRUCTION SEQUENCE Phase 5 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE	SHEET 91 OF 177

29th STREET NORTH

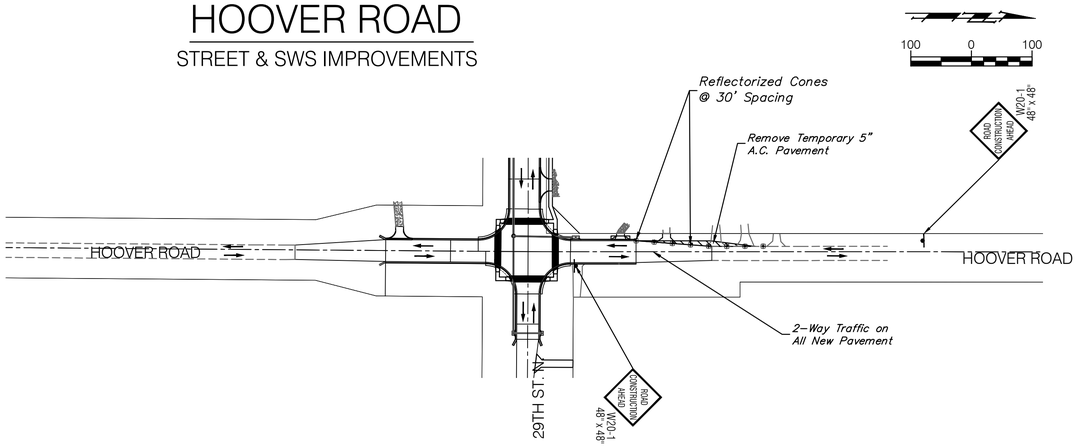
STREET & SWS IMPROVEMENTS





HOOVER ROAD

STREET & SWS IMPROVEMENTS



Phase 6

Remove Temporary A.C. Pavement From West Side of Hoover Road North of 29th Street.

Complete Surfacing, Signalization, Seeding, Signing and Marking.

Two-Way Traffic on New Surfaces in All Directions.

No Detours.

TRAFFIC CONTROL PLAN LEGEND

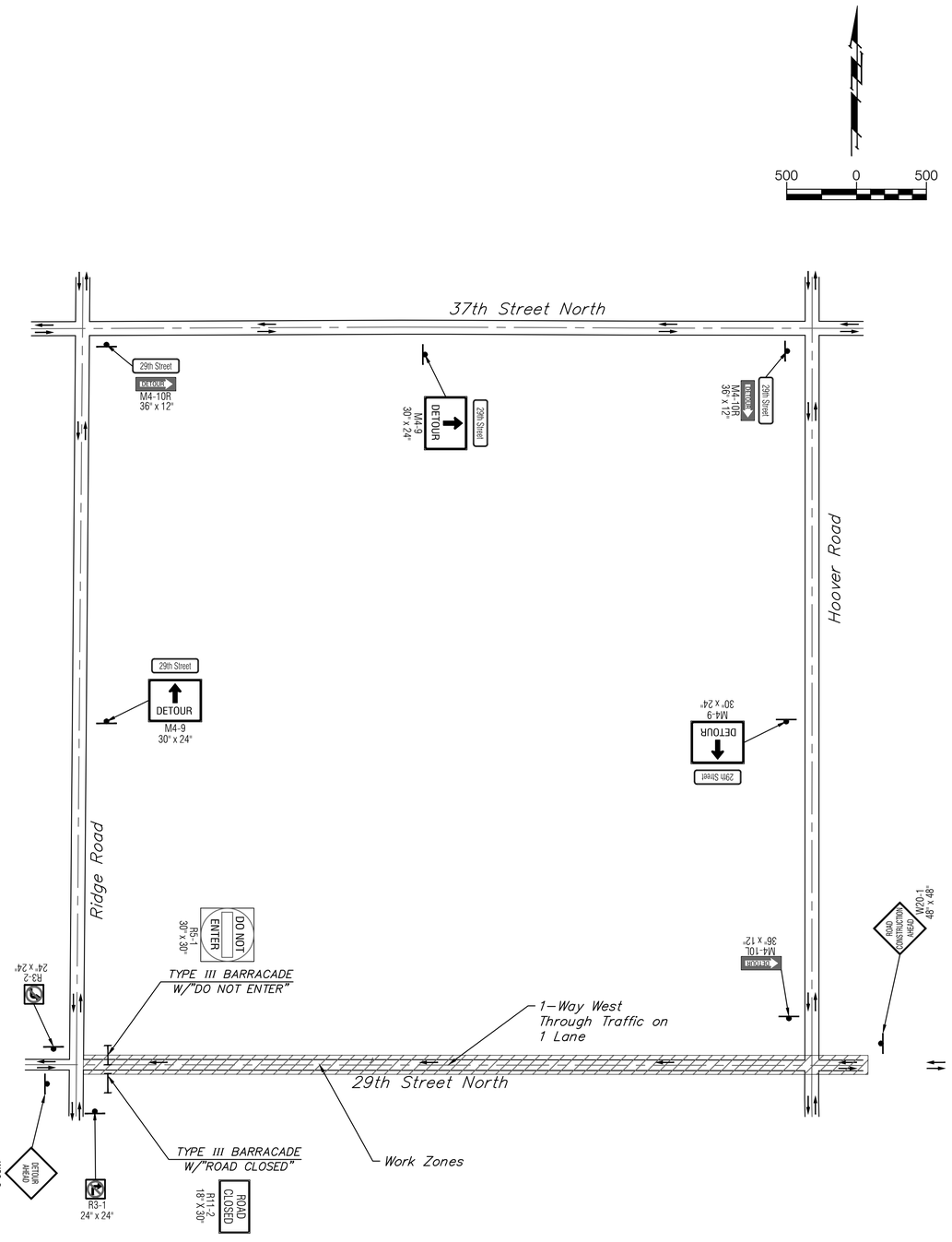
- DENOTES WORK ZONE
- DENOTES TRAFFIC FLOW
- DENOTES REFLECTORIZED CONES
- DENOTES TUBULAR MARKERS
- DENOTES TYPE III BARRACADE
- DENOTES TRAFFIC SIGN

NO SCALE

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg

NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT 29th St. N. Ridge to Hoover CONSTRUCTION SEQUENCE Phase 6 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE



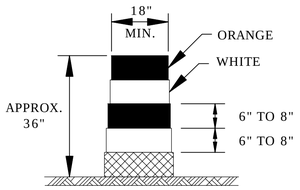
PHASE 2-3B DETOUR

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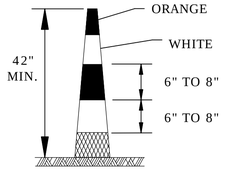
NOVEMBER, 2013

Design: KEK	Project No. 09-09-E382
Drawn: JDM	CAPITAL IMPROVEMENT PROJECT
Approved: MWS	29th St. N. Ridge to Hoover
Scale: Noted	DETOUR MAP
	29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

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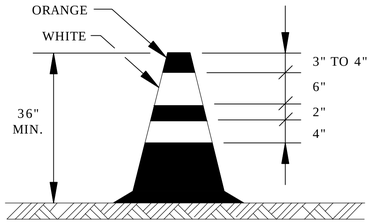
DRUM



CONICAL DELINEATOR

DRUMS AND CONICAL DELINEATORS SHALL HAVE AT LEAST TWO ORANGE AND TWO WHITE 6" TO 8" WIDE RETROREFLECTIVE STRIPES. ADDITIONAL STRIPES MAY BE NON-RETROREFLECTIVE. IF THERE ARE NON-RETROREFLECTIVE SPACES BETWEEN ADJACENT STRIPES, THEY SHALL BE NO MORE THAN 3" WIDE.

ALL RETROREFLECTIVE STRIPES ON DRUMS SHALL BE ASTM TYPE III SHEETING. THE WHITE STRIPES ON CONICAL DELINEATORS SHALL BE ASTM TYPE III SHEETING. ORANGE STRIPES ON ALL CONICAL DELINEATORS SHALL BE FLUORESCENT ORANGE ASTM TYPE IV SHEETING.



TRAFFIC CONE

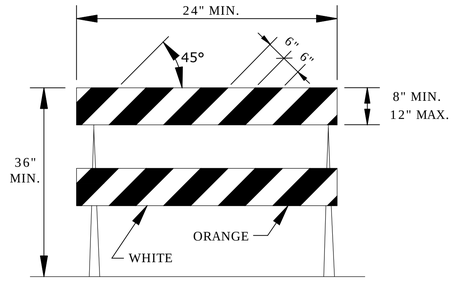
TRAFFIC CONES MAY BE USED AS CHANNELIZING DEVICES FOR DAYTIME OPERATIONS ONLY. THEY WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE SUBSIDIARY TO OTHER TRAFFIC CONTROL BID ITEMS. THE ENGINEER MAY REQUIRE THAT TRAFFIC CONES BE SUPPLEMENTED BY OTHER TRAFFIC CONTROL DEVICES IN CERTAIN SITUATIONS.

ITEM / LOCATION		CROSS-OVERS	SHOOFLY DIVERSIONS	TANGENTS	TAPERS	RAMPS	HEAD TO HEAD	OBJECT IDENTIFIER
PORTABLE								
	DRUMS	YES	YES	YES	YES	YES	(1)	YES
	CONICAL DELINEATORS	YES	YES	YES	YES	YES	(1)	YES
	VERTICAL PANELS	(2)	(2)	(2)	(2)	(2)	(1,2)	YES
	DIRECTION INDICATOR BARRICADE	NO	NO	NO	YES	NO	NO	NO
	TYPE II BARRICADE	(2)	(2)	(2)	(2)	NO	NO	YES
FIXED								
	TUBULAR MARKERS	(3)	(3)	(3)	NO	(3)	YES	NO
	VERTICAL PANELS	(3)	(3)	(3)	(3)	(3)	(3)	YES

(1) NOT ALLOWED ON CENTERLINE DELINEATION ALONG FREEWAYS OR EXPRESSWAYS.

(2) THE STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.

(3) MAY BE USED UPON THE APPROVAL OF THE ENGINEER.

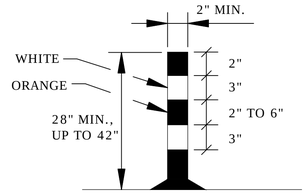


TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES MAY BE USED.

THE ENTIRE AREA OF BARRICADE RAILS, BOTH FRONT AND BACK, SHALL BE ASTM TYPE III SHEETING.

THE STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TUBULAR MARKER

THE TWO WHITE RETROREFLECTIVE STRIPES SHALL BE ASTM TYPE III SHEETING.

TAPER FORMULAS:

L = WS FOR SPEEDS OF 45 MPH OR MORE

L = WS /60^2 FOR SPEEDS OF 40 MPH OR LESS

WHERE: L =MINIMUM LENGTH OF TAPER IN FEET
S =NUMERICAL VALUE OF POSTED SPEED PRIOR TO WORK STARTING IN MPH
W =WIDTH OF OFFSET IN FEET

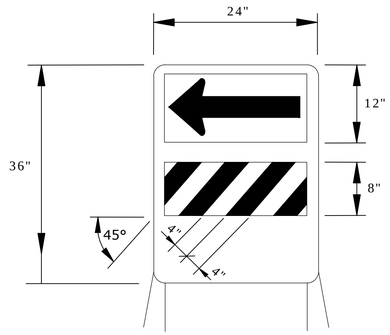
⇨CHANNELIZER PLACEMENT:

(A) THE SPACING BETWEEN DEVICES IN TRANSITION AREA (TAPER) SHOULD NOT EXCEED A DISTANCE IN FEET EQUAL TO 1/2 THE POSTED SPEED LIMIT IN MPH PRIOR TO WORK STARTING.

(B) THE SPACING BETWEEN DEVICES IN THE ADVANCED WARNING AREA AND THE ACTIVITY AREA SHOULD NOT EXCEED A DISTANCE IN FEET EQUAL TO TWO TIMES THE POSTED SPEED LIMIT IN MPH PRIOR TO WORK STARTING.

(C) CHANNELIZING DEVICES SHALL BE PLACED FOR OPTIMUM VISIBILITY, NORMALLY AT RIGHT ANGLES TO THE TRAFFIC FLOW.

(D) CHANNELIZING DEVICES PLACED ALONG SHOULDER EDGES OR IN DROPOFFS SHALL HAVE A MINIMUM OF 24" FROM THE TOP OF THE CHANNELIZING DEVICE TO THE TOP OF THE PAVEMENT.

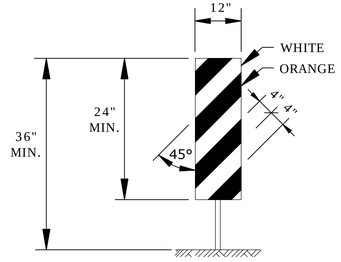


DIRECTION INDICATOR BARRICADE

THE ARROW PANEL SHALL BE BLACK ON FLUORESCENT ORANGE ASTM TYPE IV SHEETING. THE STRIPES SHALL BE ORANGE AND WHITE ASTM TYPE III SHEETING SLOPING DOWNWARD IN THE DIRECTION TRAFFIC IS TO PASS.

THE DIRECTION INDICATOR BARRICADE SHALL BE USED IN SERIES TO DIRECT THE MOTORIST INTO THE INTENDED LANE OF TRAVEL.

THE ARROW PANEL SHOULD NOT BE VISIBLE TO OPPOSING TRAFFIC.



VERTICAL PANEL

THE ENTIRE AREA OF VERTICAL PANELS, BOTH FRONT AND BACK, SHALL HAVE ASTM TYPE III SHEETING. THE STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.

NO.	DATE	REVISIONS	BY	APP'D
3	10/4/11	Added Dimension to Tubular Marker Detial	J.A.M.	K.P.
2	4/20/09	Channelizer Placement & Traffic Cone Detail	J.A.M.	A.A.A.
1	8/8/07	Trimline Changed to Conical Delineator	M.B.	A.A.A.

KANSAS DEPARTMENT OF TRANSPORTATION

CHANNELIZING DEVICES

TE702 94 of 177 9/1/00

FHWA APPROVAL	10/4/11	APP'D Kristina Pyle	
DESIGNED L.E.R.	DETAILED B.A.H.	QUANTITIES	TRACED
DESIGN CK.	DETAIL CK.	QUAN. CK.	TRACE CK.

GENERAL NOTES

1. MAINTENANCE:

THE CONTRACTOR SHALL MAINTAIN ALL SIGNS AND DEVICES IN AN UPRIGHT POSITION. THE CONTRACTOR SHALL CLEAN OR REPLACE ANY DAMAGED OR ILLEGIBLE SIGN OR DEVICE AS DIRECTED BY THE ENGINEER.

2. EXISTING SIGNS:

IF EXISTING SIGNS THAT ARE TO REMAIN (WHETHER DENOTED ON THE PLANS OR NOT) INTERFERE WITH CONSTRUCTION WORK, THE CONTRACTOR SHALL REMOVE, STORE, AND RESET THE SIGNS. THIS SHALL BE SUBSIDIARY TO OTHER TRAFFIC CONTROL BID ITEMS. SIGNING DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

3. CONFLICTING SIGNS, SIGNS NOT IN USE, AND TRAFFIC SIGNALS:

SIGNS AND TRAFFIC SIGNALS THAT ARE IN CONFLICT WITH THE TRAFFIC CONTROL PLAN OR DO NOT APPLY TO THE TRAFFIC OPERATIONS SHALL BE IMMEDIATELY REMOVED, TURNED SO NOT VISIBLE TO TRAFFIC FROM ANY DIRECTION, OR COMPLETELY COVERED WITH ADEQUATE OPAQUE BREATHABLE MATERIAL. TAPE SHALL NOT BE APPLIED TO THE FACE OF THE SIGN.

4. PORTABLE AND POST MOUNTED SIGNS:

TEMPORARY TRAFFIC CONTROL SIGNS THAT ARE ANTICIPATED TO REMAIN IN PLACE FOR 3 DAYS OR LESS ARE CONSIDERED "PORTABLE." PORTABLE SIGNS SHALL BE MOUNTED ON AN APPROVED SUPPORT AT A MINIMUM HEIGHT OF 12" ABOVE THE TRAVELED WAY. TRAFFIC CONTROL SIGNS IN PLACE FOR OVER 3 DAYS ARE REQUIRED TO BE MOUNTED ON APPROVED POSTS. A MINIMUM OF 42" OF THE APPROVED POST MUST BE BELOW THE GROUND SURFACE WITH ADEQUATE BACKFILL AND COMPACTION. ALL POSTS AT MINIMUM SHALL EXTEND TO THE TOP EDGE OF THE SIGN AND NO GREATER THAN 6" ABOVE THE SIGN.

WHEN THE SIGN WIDTH IS EQUAL TO OR GREATER THAN 9', THREE OR MORE WOOD POSTS MAY BE USED WITH A MINIMUM OF 4' BETWEEN THE CENTERLINE OF EACH POST. ALL SIGNS LESS THAN 9' IN WIDTH SHALL USE A MAXIMUM OF TWO WOOD POSTS.

"ROLL-UP" SIGNS MAY BE USED FOR PORTABLE WARNING SIGNS. THEY MUST BE FLUORESCENT ORANGE ASTM TYPE IV SIGNS OF OPAQUE MATERIAL. MESH SIGNSARE NOT ALLOWED.

5. SHEETING:

ALL ORANGE SIGNS SHALL HAVE FLUORESCENT ORANGE ASTM TYPE IV SHEETING. ALL OTHER SIGNS SHALL HAVE ASTM TYPE III SHEETING OF STANDARD COLORS.

6. SIGNS INVOLVING SPEEDS:

THE W3-5 (SPEED REDUCTION) SHOULD BE USED ONLY IF THE ENGINEER DETERMINES THAT A REDUCED SPEED IS REQUIRED ON THE PROJECT. THE KM4-20 (WORK ZONE) PLAQUE SHALL BE PLACED ABOVE ALL SPEED LIMITSIGNS, (R2-1), EXISTING AND TEMPORARY. MOUNT THE WORK ZONE PLAQUESTO THE POST. DO NOT OVERLAP THE R2-1 AND KM4-20 SIGNS.

FOR SPEEDS OF 30 MPH OR LESS, THE W1-1(TURN) OR W1-3(REVERSE TURN) SHOULD BE USED. FOR SPEEDS OF 35 MPH OR MORE, THE W1-2(CURVE) OR W1-4(REVERSE CURVE) SHOULD BE USED. THE W13-1(MPH) IS TO BE ELIMINATED IF THE ADVISORY SPEED IS WITHIN 5 MPH OF THE SPEED LIMIT.

7. SIGNS CONTROLLING WORK ZONE:

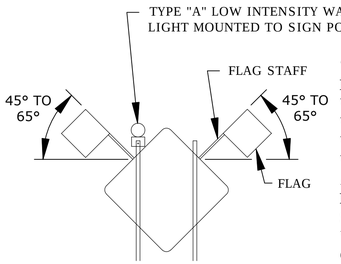
THE KG20-2(END ROAD WORK) SHOULD BE PLACED 5OO' FROM THE END OF THE ACTUAL WORK SPACE, NOT NECESSARILY AT THE EXTREME LIMITS OF THE PROJECT. THE KG20-2 SHOULD BE MOUNTED ON TWO POSTS. THE KG20-2 MAY BE MOUNTED ON ONE POST IF IN URBAN AREAS WHERE UTILITIES ARE A PROBLEM AND WIND LOADS ARE NOT AN ISSUE.

WHERE TWO WORK ZONES ARE LESS THAN 1 MILE APART IN RURAL AREAS OR ¼ MILE APART IN URBAN AREAS, THE KG20-2(END ROAD WORK) FOR THE FIRST WORK ZONE AND THE W20-1(ROAD WORK) FOR THE SECOND WORK ZONE SHOULD BE ELIMINATED.

8. WARNING LIGHTS ON SIGNS:

TYPE "A" LOW INTENSITY WARNING LIGHTS SHOULD BE USED WITH ALL CONSTRUCTION ACTION WARNING SIGNS AND SHALL NOT BE USED ON SIGNS MOUNTED LESS THAN 5' HIGH ON TEMPORARY SUPPORTS. ON ALL OTHER CONSTRUCTION WARNING SIGNS, TYPE "A" LOW INTENSITY WARNING LIGHTS ARE TO BE USED AS DIRECTED BY THE ENGINEER.

TYPE "A" LOW INTENSITY WARNING LIGHTS SHALL BE MAINTAINED SO AS TO BE CAPABLE OF BEING VISIBLE ON A CLEAR NIGHT FROM A DISTANCE OF 3000 FT. IF A TYPE "A" LOW INTENSITY WARNING LIGHT HAS A SEPARATE BATTERY CASE, THE BATTERY CASE SHALL BE MOUNTED NO HIGHER THAN 12" ABOVE THE GROUND AND MOUNTED BEHIND THE SIGN POST. A TYPE "A" LOW INTENSITY WARNING LIGHT WHERE THE LENS AND BATTERY ARE ONE UNIT SHALL BE MOUNTED ON THE TEMPORARY SIGN POST NEAREST TO THE TRAVELED WAY. FLAGS SHALL NOT INTERFERE WITH THE VISABILITY OF THE TYPE "A" LOW INTENSITY WARNING LIGHT.



TWO (2) 18" x 18" FLUORESCENT RED-ORANGE FLAGS SHALL BE ATTACHED (IN THE POSITION SHOWN) ON THE W20-2(DETOUR),W1-1(TURN), W1-2(CURVE), W1-3(REVERSE TURN), W1-4(REVERSECURVE), W3-3(SIGNAL AHEAD), W4-2(LANE REDUCTION), W20-4(ONELANE ROAD), W20-5(LANE CLOSED), W20-7A(FLAGGER), AND W3-4(BE PREPARED TO STOP) SIGNS AND ANY OTHER ACTION SIGNS ASSHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER. THE FLAGSAND STAFFS ARE TO BE ATTACHED IN SUCH A MANNER THAT THE SIGNWILL NOT BE OBSCURED. THE FLAGS MAY BE EITHER A CLOTH OR VINYL MATERIAL. THE FLAGS SHALL BE SUBSIDIARY TO THE CONSTRUCTION SIGN BID ITEMS.

9. AUTOMATED FLAGGER ASSISTANCE DEVICE REQUIREMENTS:

STOP/SLOW AUTOMATED FLAGGER ASSISTANCE DEVICE:

THE AFAD'S STOP/SLOW SIGN SHALL HAVE AN OCTAGONAL SHAPE, SHALL BE FABRICATED OF RIGID MATERIAL, AND SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGN A MINIMUM OF 6'ABOVE THE PAVEMENT ON AN APPROPRIATE SUPPORT. THE SIZE OF THE STOP/SLOW SIGN SHALLBE AT LEAST 30"X30" WITH LETTER AT LEAST 10" HIGH. THE BACKGROUND OF THE STOP FACE SHALL BE RED WITH WHITE LETTER AND BORDERS. THE BACKGROUND OF THE SLOW FACE SHALLBE DIAMOND SHAPED AND ORANGE WITH BLACK LETTERS AND BORDER. BOTH FACES OF THE STOP/SLOW SIGN SHALL BE RETROREFLECTORIZED. THE AFAD'S STOP/SLOW SIGN SHALL HAVE A MEANS TO POSITIVELY LOCK, ENGAGE, OR OTHERWISE MAINTAIN THE SIGN ASSEMBLY IN A STABLE CONDITION WHEN SET IN THE STOP OR SLOW POSITION.

THE AFAD'S STOP/SLOW SIGN SHALL BE SUPPLEMENTED WITH ACTIVE CONSPICUITY DEVICES BYINCORPORATING

1. WHITE OR RED FLASHING LIGHTS WITHIN THE STOP FACE AND WHITE OR YELLOW FLASHING LIGHTS WITHIN THE SLOW FACE.
2. A STOP BEACON MOUNTED NO MORE THAN 24" ABOVE THE STOP FACE AND A WARNING BEACON MOUNTED NO MORE THAN 24" ABOVE, BELOW, OR TO THE SIDE OF THE SLOW FACE.THE STOP BEACON SHALL NOT BE FLASHED OR ILLUMINATED WHEN THE SLOW FACE IS DISPLAYED, AND THE WARNING BEACON SHALL NOT BE FLASHED OR ILLUMINATED WHEN THE STOP FACE IS DISPLAYED.

RED/YELLOW LENS AUTOMATED FLAGGER ASSISTANCE DEVICE:

RED/YELLOW LENS AUTOMATED FLAGGER ASSISTANCE DEVICE SHALL ALTERNATELY DISPLAY A STEADILY ILLUMINATED CIRCULAR RED LENS AND A FLASHING CIRCULAR YELLOW LENS TO CONTROLTRAFFIC WITHOUT THE NEED FOR A FLAGGER IN THE IMMEDIATE VICINITY OF THE AFAD OR ON THEROADWAY. THE STEADILY ILLUMINATED CIRCULAR YELLOW CHANGE INTERVAL SHOULD HAVE DURATIONOF AT LEAST 5 SECONDS, UNLESS A DIFFERENT DURATION, WITHIN THE RANGE OF DURATIONS IS JUSTIFIED BY AN ENGINEERING JUDGMENT. RED/YELLOW LENS AFAD'S SHALL HAVE AT LEAST ONE SET OF CIRCULAR RED AND CIRCULAR YELLOW LENSES THAT ARE 12" IN DIAMETER. CIRCULAR REDON TOP AND CIRCULAR YELLOW BELOW, SHALL CONFORM TO AND BE OPERATED ACCORDING TO THEREQUIREMENTS OF THE LATEST VERSION OF THE MUTCD ADOPTED BY THE SECRETARY. IF THE SETOF LENSES IS POST- MOUNTED, THE BOTTOM OF THE HOUSING (INCLUDING BRACKETS) SHALL BE 7'ABOVE THE PAVEMENT. IF THE SET OF LENSES IS LOCATED OVER ANY PORTION OF THE HIGHWAY THAT CAN BE USED BY MOTOR VEHICLES, THE BOTTOM OF THE HOUSING (INCLUDING BRACKETS)SHALL BE AT LEAST 15' ABOVE THE PAVEMENT.

ALL AFAD'S SHALL INCLUDE A GATE ARM THAT DESCENDS TO A DOWN POSITION ACROSS THE APPROACH LANE OF TRAFFIC WHEN THE STOP FACE IS DISPLAYED AND THEN ASCENDS TO AN UPRIGHT POSITION WHEN THE SLOW FACE IS DISPLAYED. THE GATE ARM SHALL BE COVERED WITH ALTERNATING RED AND WHITE ASTM TYPE IV RETROREFLECTIVE STRIPES AT 6" INTERVALS MEASUREDHORIZONTALLY. WHEN THE ARM IS IN THE DOWN POSITION BLOCKING THE APPROACH LANE THE MINIMUM VERTICAL ASPECT OF THE ARM AND SHEETING SHALL BE 2". THE STRIPES SHALL SLOPE DOWNWARD ATAN ANGLE OF 45 DEGREES FROM THE UPPER RIGHT TO THE LOWER LEFT ON THE SIDE OF THE ARMFACING STOPPED TRAFFIC, AND FROM THE UPPER LEFT TO THE LOWER RIGHT ON THE SIDE OF THE ARM FACING MOVING TRAFFIC IN THE ONCOMING DIRECTION. THE END OF THE ARM SHALL REACH ATLEAST TO THE CENTER OF THE LANE BEING CONTROLLED. ALL AFAD'S SHALL HAVE A PILOT LIGHTMOUNTED BEHIND EACH UNIT SO A SINGLE OPERATOR, OPERATING TWO UNITS, CAN VERIFY WHICHCOLOR IS BEING DISPLAYED.

SIGN LAYOUT INFORMATION



KG20-2
(BLACK ON ORANGE)

STD. SIZE	EXPWY/FREEWAY
6" C	
48"x 24"	

LETTER SIZES FOR BLACK ON ORANGE "DESTINATION" SIGNS

STD. SIZE	EXPWY/FREEWAY
6" C	10" D



KM4-2O
(BLACK ON ORANGE)

STD. SIZE	EXPWY/FREEWAY
3" C	6" C
24"x 6"	48"x 12"



W7-3a

COLORS:
LEGEND - BLACK (NON-REFLECTIVE)
BACKGROUND - ORANGE (REFLECTIVE)

MILEAGE TO BE DETERMINEDBY THE ENGINEER.

NOTE:
TEXT DIMENSIONS ARE IN INCHES.
BORDER IS BLACK NON-REFLECTIVE.
SEE STD. TE730 OR TE731 FOR KG20-5 SIGN LAYOUT.



W8-11

COLORS:
LEGEND - BLACK (NON-REFLECTIVE)
BACKGROUND - ORANGE (REFLECTIVE)



W8-9a

COLORS:
LEGEND - BLACK (NON-REFLECTIVE)
BACKGROUND - ORANGE (REFLECTIVE)

THIS SIGN IS TO BE INSTALLED FOR CONDITIONS OF HEIGHT DIFFERENTIAL BETWEEN ADJACENT LANES OVER ONE (1) INCH. IT IS TO BE PLACED AT EACH INTERSECTING CROSSROAD, MAJOR TRAFFIC GENERATOR, OR AT APPROXIMATELY ONE-HALF (1/2) MILE INTERVALS. THE SIGNS ARE TO BE REMOVED OR COVERED WHEN NOT APPLICABLE.

MINIMUM ADVANCE WARNING SIGN SPACING (IN FEET):

	A	B	C
URBAN (40 MPH OR LOWER)	100	100	100
URBAN (45 MPH OR HIGHER)	350	350	350
RURAL (55 MPH OR LOWER)	500	500	500
RURAL (60 MPH OR HIGHER)	750	750	750
EXPRESSWAY/FREEWAY	1000	1500	2640

THE MINIMUM SPACING BETWEEN SIGNS SHALL BE NO LESS THAN 1OO', UNLESS DIRECTED BY THE ENGINEER.

THE SPACING BETWEEN ANY SIGNS MAY BE INCREASED BEYOND THE MINIMUM VALUES IN THE TABLE ABOVE AS APPROVED BY THE ENGINEER IN ORDER TO MAXIMIZE VISIBILITY.

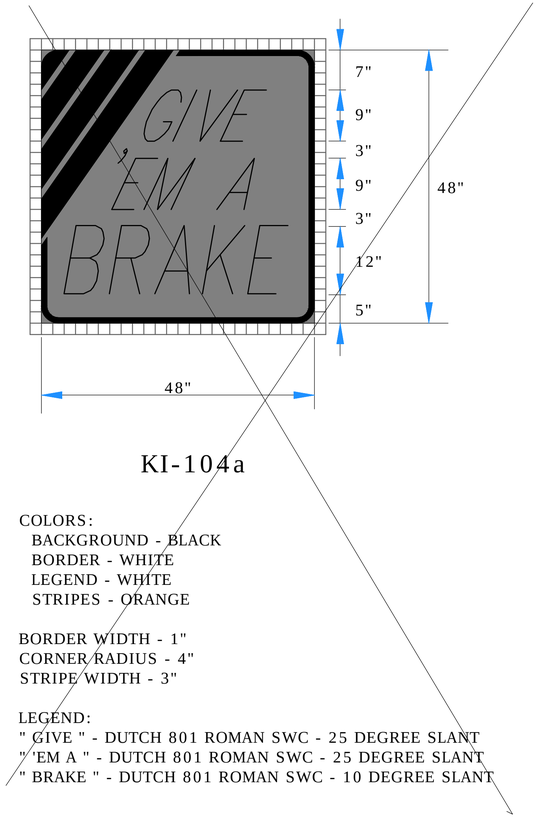
NO.	DATE	REVISIONS	BY	APP'D
3	10/4/11	Modified Note 3	J.A.M.	K.P.
2	2/24/10	Modified AFAD Note	J.A.M.	A.A.A.
1	10/28/09	Modified AFAD Note	J.A.M.	A.A.A.

KANSAS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SIGNS

TE710 95 of 177 9/1/00

FHWA APPROVAL		10/4/11	APP'D.	Kristina Pyle	
DESIGNED	B.A.H.	DETAILED	B.A.H.	QUANTITIES	TRACED
DESIGN CK.		DETAIL CK.		QUAN. CK.	TRACE CK.

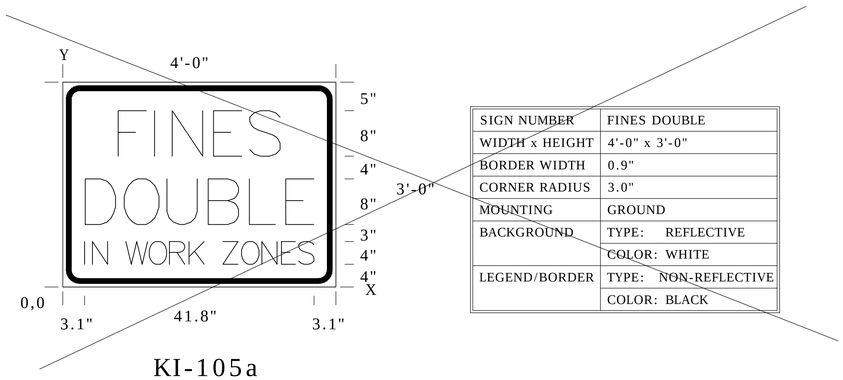


KI-104a

COLORS:
- BACKGROUND - BLACK
- BORDER - WHITE
- LEGEND - WHITE
- STRIPES - ORANGE

BORDER WIDTH - 1"
CORNER RADIUS - 4"
STRIPE WIDTH - 3"

LEGEND:
" GIVE " - DUTCH 801 ROMAN SWC - 25 DEGREE SLANT
" 'EM A " - DUTCH 801 ROMAN SWC - 25 DEGREE SLANT
" BRAKE " - DUTCH 801 ROMAN SWC - 10 DEGREE SLANT



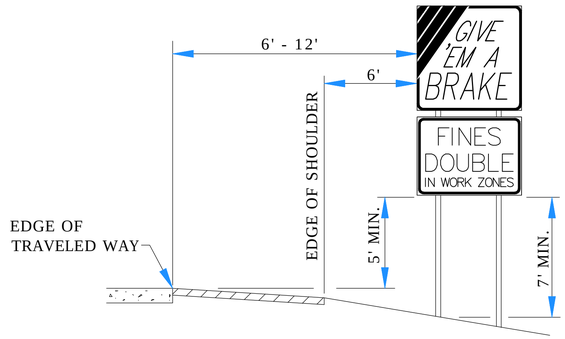
KI-105a

SIGN NUMBER	FINES DOUBLE
WIDTH x HEIGHT	4'-0" x 3'-0"
BORDER WIDTH	0.9"
CORNER RADIUS	3.0"
MOUNTING	GROUND
BACKGROUND	TYPE: REFLECTIVE
	COLOR: WHITE
LEGEND/BORDER	TYPE: NON-REFLECTIVE
	COLOR: BLACK

DIMENSIONS IN INCHES — SPACINGS ARE TO START OF NEXT LETTER

LETTER SPACINGS

Y FONT																							HT LEN
23.0 D		F	I	N	E	S																	8.0
	9.7	6.4	3.2	7.3	6.4	5.4	9.7																28.6
11.0 D		D	O	U	B	L	E																8.0
	3.9	6.9	7.5	7.3	7.3	6.4	4.9	3.9															40.3
4.0 D		I	N		W	O	R	K		Z	O	N	E	S									4.0
	3.1	1.6	2.7	3.2	4.3	3.8	3.6	2.8	3.2	3.4	3.8	3.6	3.2	2.7	3.1								41.8

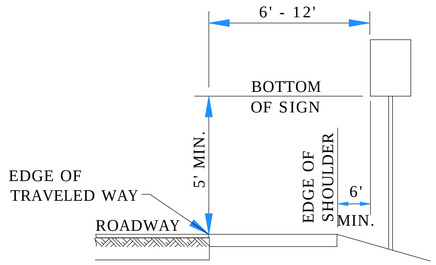


HEIGHT AND LATERAL PLACEMENT

NOTE:
IF THERE IS NO SHOULDER, THE SIGN SHALL BE PLACED 6'- 12' FROM THE EDGE OF TRAVELED WAY AND NOT LESS THAN 6' FROM THE EDGE OF PAVED SHOULDER. SIGNS SHALL NOT OVERLAP EACH OTHER.

NOTES:
THE SIGN BLANK MATERIAL SHALL BE ALUMINUM, WOOD,OR FIBERGLASS REINFORCED PLASTIC. THE ORANGE PORTION OF THE KI-104a SIGN SHALL BEASTM TYPE IV SHEETING. THE WHITE PORTION SHALLBE ASTM TYPE III SHEETING. THE KI-105a SIGN FACE SHALL BE COVERED WITH ASTMTYPE III SHEETING.THE SIGNS ARE TO BE MOUNTED ON CRASHWORTHY SUPPORTS,BRACING, GUY WIRES AND TIE-DOWNS ARE NOT ALLOWED. TYPICALLY, THERE ARE TWO SETS OF INFORMATIONALSIGNS INSTALLED PER PROJECT: ONE FOR EACH DIRECTION OF TRAFFIC. INSTALL SIGNS A MINIMUM OF 250' IN ADVANCE OF THE ROADWORK AHEAD SIGN. THE ENGINEER MAY DESIGNATE A MOREAPPROPRIATE LOCATION IF CONDITIONS DICTATE. THE INFORMATIONAL SIGNS ARE NOT TO INTERFERE WITHTHE TRAFFIC CONTROL SIGNS FOR THE PROJECT.

HEIGHT AND LATERAL DIMENSIONS FOR GROUND MOUNTED SIGNS (SIGNS LEFT IN PLACE OVER 3 DAYS)



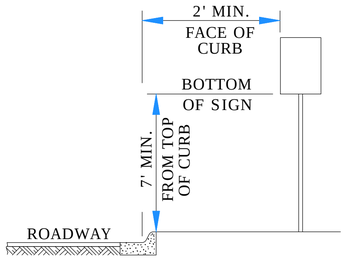
RURAL DISTRICT

RURAL:
1) GROUND-MOUNTED SIGNS SHALL BE MOUNTED AT A MINIMUM HEIGHT OF 5' MEASURED FROM THE BOTTOM OF SIGN TO THE NEAR EDGE OF THE PAVEMENT.

2) LARGE SIGNS HAVING AN AREA EXCEEDING 50 SQUARE FEET INSTALLED ON MULTIPLE BREAKAWAY POSTS SHALL BE MOUNTED A MINIMUM OF 7' ABOVE THE GROUND.

* 3) THE HEIGHT FROM THE BOTTOM OF THE SECONDARY SIGN MOUNTED BELOW ANOTHER SIGN MAY BE 4' MEASURED FROM THE BOTTOM OF THE SIGN TO THE NEAR EDGE OF THE PAVEMENT. SIGNS SHALL NOT OVERLAP EACH OTHER.

4) SIGN SUPPORTS SHALL BE CRASHWORTHY.



URBAN DISTRICT

URBAN:
1) SIGNS SHALL BE MOUNTED AT A MINIMUM HEIGHT OF 7' MEASURED FROM THE BOTTOM OF SIGN TO THE NEAR EDGE OF THE PAVEMENT.

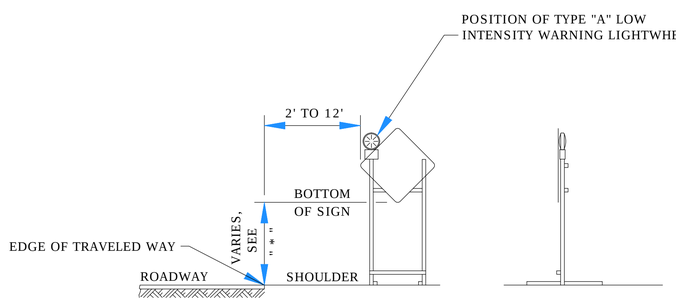
2) NEITHER PORTABLE NOR PERMANENT SIGN SUPPORTS SHOULD BE LOCATED ON SIDEWALKS OR AREAS DESIGNATED FOR PEDESTSRIAN OR BICYCLE TRAFFIC.

3) SIGNS MOUNTED LOWER THAN 7' SHOULD NOT PROJECT MORE THAN 4" INTO PEDESTRIAN FACILITIES.

* 4) THE HEIGHT FROM BOTTOM OF THE SECONDARY SIGN MOUNTED BELOW ANOTHER SIGN MAY BE 6' MEASURED FROM THE BOTTOM OF SIGN TO THE NEAR EDGE OF THE PAVEMENT. SIGNS SHALL NOT OVERLAP EACH OTHER.

5) LARGE SIGNS HAVING AN AREA EXCEEDING 50 SQUARE FEET INSTALLED ON MULTIPLE BREAKAWAY POSTS SHALL BE MOUNTED A MINIMUM OF 7' ABOVE THE GROUND.

6) SIGN SUPPORTS SHALL BE CRASHWORTHY.



(SEE NOTE 4 ON TE710 FOR "ROLL-UP" SIGNS OPTION)

HEIGHT AND LATERAL DIMENSIONS FOR SIGNS MOUNTED ON SKIDS OR OTHER SUPPORTS ON PAVEMENT

NO.	DATE	REVISIONS	BY	APP'D
3	10/4/11	Modified Note on Skid Mounted Detail	J.A.M.	K.P.
2	6/1/10	Changed Type A Warning Light Note	J.A.M.	A.A.A.
1	4-20-09	Added Detail for Skid Mounted Signs	J.A.M.	A.A.A.

KANSAS DEPARTMENT OF TRANSPORTATION

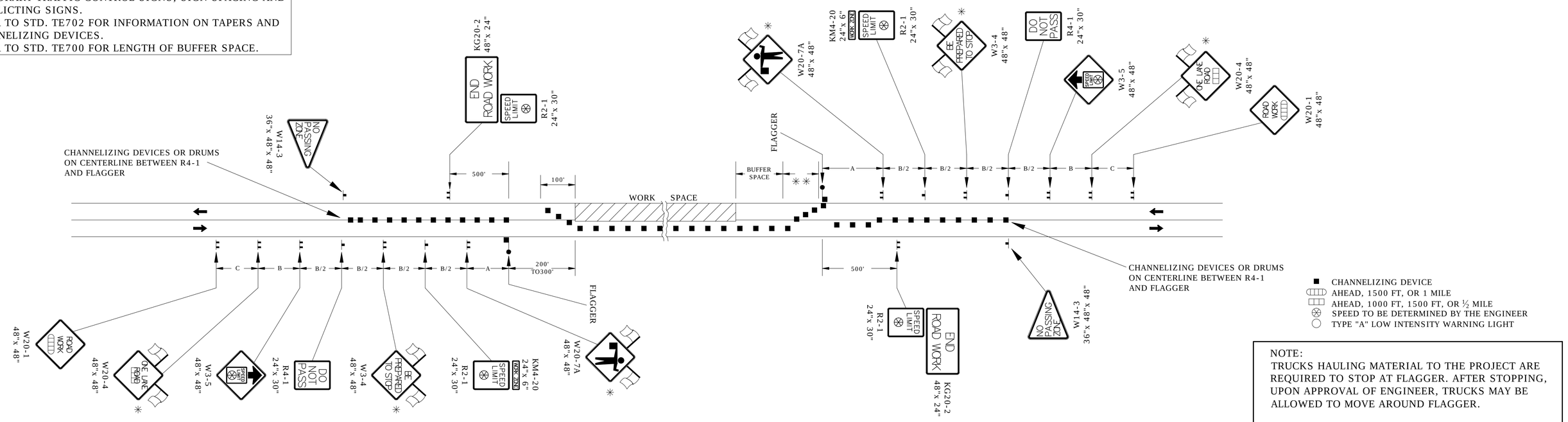
GROUND AND SKID MOUNTED DETAIL DETAILS FOR "GIVE 'EM A BRAKE" AND "FINES DOUBLE" SIGNS

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FHWA APPROVAL		10/4/11	APP'D	Kristina Pyle	
DESIGNED	B.A.H.	DETAILED	B.A.H.	QUANTITIES	TRACED
DESIGN CK.		DETAIL CK.		QUAN. CK.	TRACE CK.

REFER TO STD. TE710 FOR ADDITIONAL INFORMATION ON TEMPORARY TRAFFIC CONTROL SIGNS, SIGN SPACING AND CONFLICTING SIGNS.
REFER TO STD. TE702 FOR INFORMATION ON TAPERS AND CHANNELIZING DEVICES.
REFER TO STD. TE700 FOR LENGTH OF BUFFER SPACE.

FLAGGER

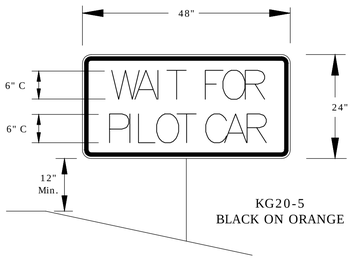


- ■ CHANNELIZING DEVICE
- AHEAD, 1500 FT, OR 1 MILE
- AHEAD, 1000 FT, 1500 FT, OR ½ MILE
- ⊗ SPEED TO BE DETERMINED BY THE ENGINEER
- ○ TYPE "A" LOW INTENSITY WARNING LIGHT

NOTE:
TRUCKS HAULING MATERIAL TO THE PROJECT ARE REQUIRED TO STOP AT FLAGGER. AFTER STOPPING, UPON APPROVAL OF ENGINEER, TRUCKS MAY BE ALLOWED TO MOVE AROUND FLAGGER.

✳ WHEN APPLICABLE, USE TYPE "A" LOW INTENSITY WARNING LIGHTS FOR NIGHTTIME OPERATIONS ONLY OR AS DIRECTED BY ENGINEER.

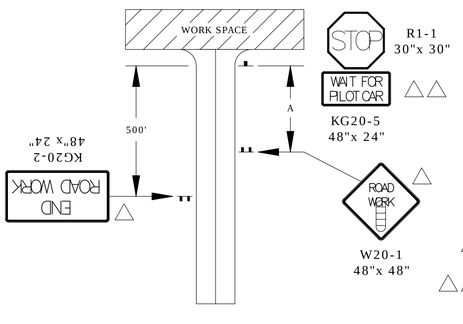
✳ ✳ THERE SHOULD BE A MINIMUM OF SIX (6) CHANNELIZERS SPACED AT 20' INTERVALS.



KG20-5
BLACK ON ORANGE

NOTE:
PLACE A FLAGGER AT ALL HIGHWAY AND MAJOR COLLECTOR INTERSECTIONS IN THE WORK SPACE. THE NEED FOR A FLAGGER AT A MINOR SIDE ROAD INTERSECTION SHALL BE DETERMINED BY THE ENGINEER. A SINGLE FLAGGER AT EACH INTERSECTION IS SUBSIDIARY TO OTHER ITEMS. IF REQUESTED BY THE ENGINEER, EACH ADDITIONAL FLAGGER WILL BE MEASURED AND PAID FOR EACH HOUR THEY ARE REQUIRED. PLACE A W20-7A (FLAGGER SYMBOL) SIGN ON EACH SIDE ROAD APPROACH THAT IS CONTROLLED BY A FLAGGER.

TYPICAL SIGNING FOR A MINOR SIDE ROAD APPROACH TO WORK SPACE

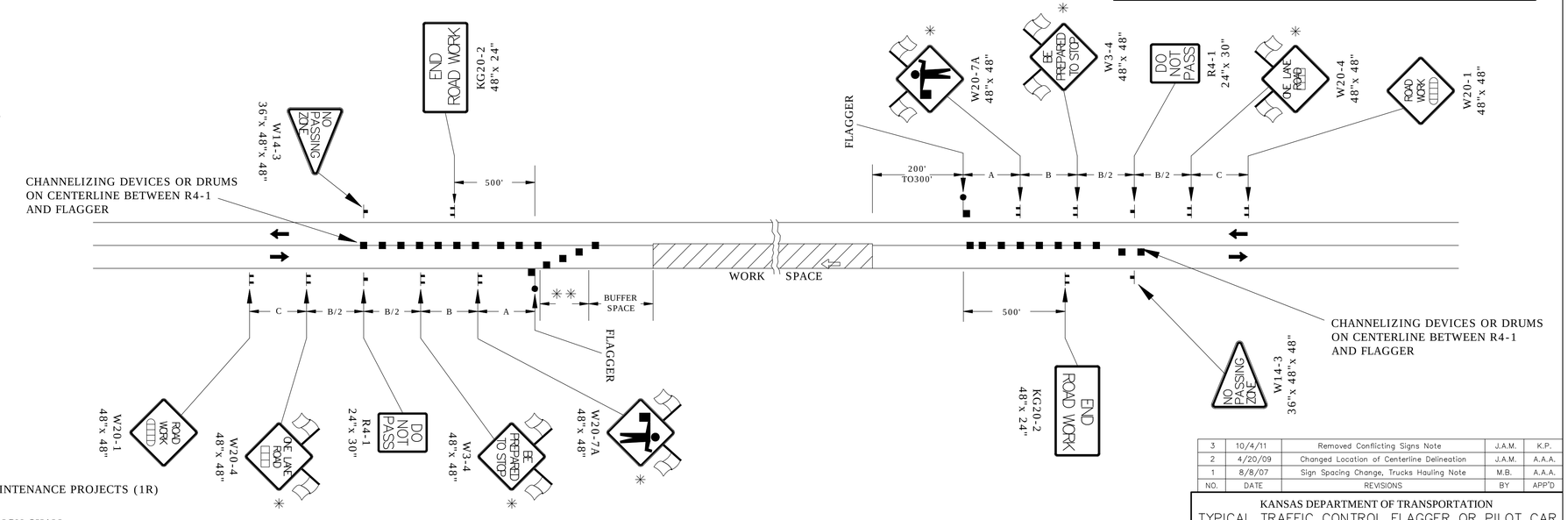


△ NOT REQUIRED ON SUBSTANTIAL MAINTENANCE PROJECTS (1R)

△△ THE KG20-5 (WAIT FOR PILOT CAR) SIGN SHALL BE MOUNTED ON AN APPROVED PORTABLE SUPPORT AND NOT ATTACHED TO THE EXISTING STOP SIGN POST.

THE KG20-5 SIGN SHALL BE PLACED IMMEDIATELY IN FRONT OF THE EXISTING STOP SIGN, A MINIMUM OF 6" BELOW THE BOTTOM OF THE STOP SIGN. THE SIGN SHOULD BE REMOVED OR COVERED WHEN THERE IS NO PILOT CAR.

FLAGGER AND PILOT CAR



NOTE:
EXISTING SIGNS SHALL NOT BE COVERED OR REMOVED BETWEEN FLAGGER STATIONS.

NO.	DATE	REVISIONS	BY	APP'D
3	10/4/11	Removed Conflicting Signs Note	J.A.M.	K.P.
2	4/20/09	Changed Location of Centerline Delineation	J.A.M.	A.A.A.
1	8/8/07	Sign Spacing Change, Trucks Hauling Note	M.B.	A.A.A.

KANSAS DEPARTMENT OF TRANSPORTATION

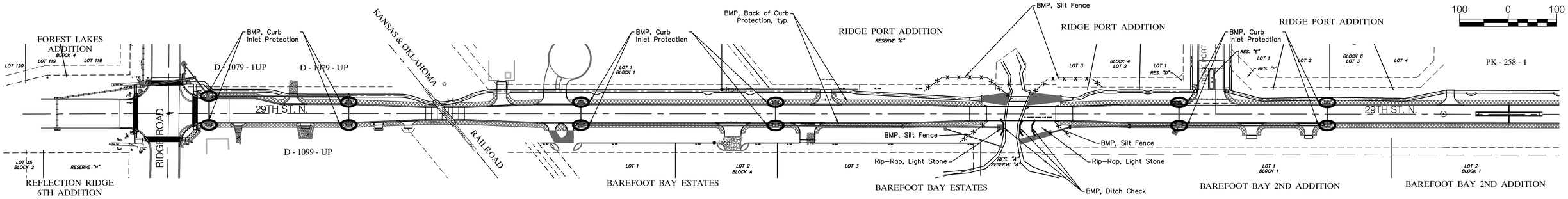
TYPICAL TRAFFIC CONTROL FLAGGER OR PILOT CAR TWO–LANE ONE LANE CLOSED EXCLUDING CONCRETE SHOULDERS EQUAL TO OR GREATER THAN 8 FT

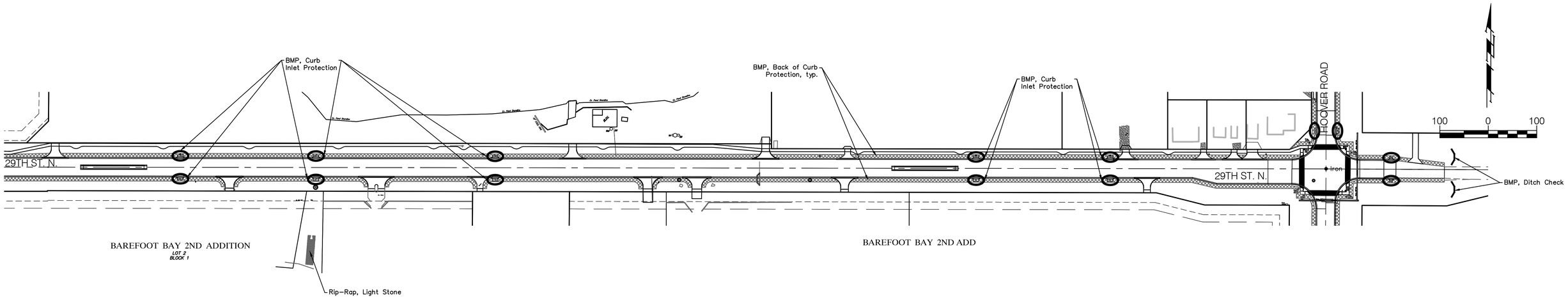
TE730 97 of 177 9/1/00

FHWA APPROVAL		10/4/11	APP'D	Kristina Pyle	
DESIGNED	B.A.H.	DETAILED	B.A.H.	QUANTITIES	TRACED
DESIGN CK.		DETAIL CK.		QUAN. CK.	TRACE CK.

29th STREET NORTH

STREET & SWS IMPROVEMENTS

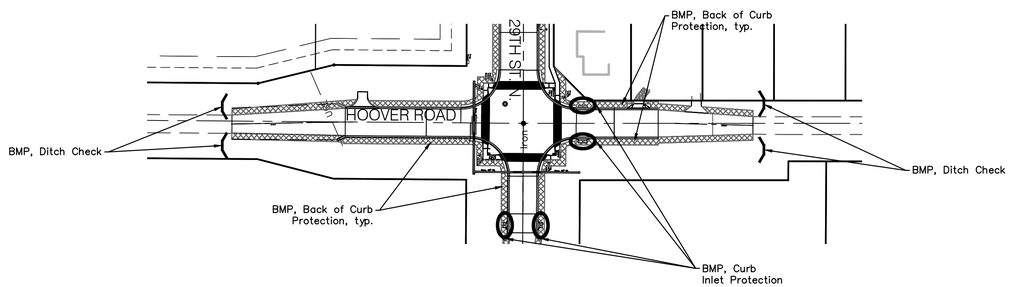




HOOVER ROAD

STREET & SWS IMPROVEMENTS

100 0 100



EROSION CONTROL QUANTITIES	
EROSION CONTROL MEASURE	QUANTITIES
BACK OF CURB PROTECTION (LF)	11,963
CONSTRUCTION ENTRANCE (EA)	2
CURB INLET PROTECTION (EA)	26
DITCH CHECKS (EA)	9
SILT FENCE (LF)	500
RIP-RAP (SY)	215
*6' WIDE CURLEX I EXCELSIOR BLANKET OR EQUAL INSTALL PER MANUFACTURER'S RECOMMENDATIONS INCLUDING STAPLES	

EROSION CONTROL PLAN LEGEND

(Installation Details Found in the BMP Details Sheets)

- *– BMP, CURB INLET PROTECTION*
- *– DITCH CHECK*
- *– SILT FENCE*
- *– BMP, BACK OF CURB PROTECTION*

NO SCALE

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg

NOVEMBER, 2013

Design: KEK
Drawn: JDM
Approved: MWS
Scale: Noted

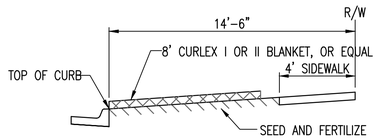
Project No. 09-09-E382

CAPITAL IMPROVEMENT PROJECT

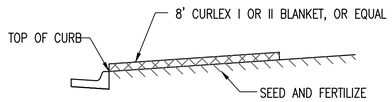
29th St. N. Ridge to Hoover
EROSION CONTROL PLAN

29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

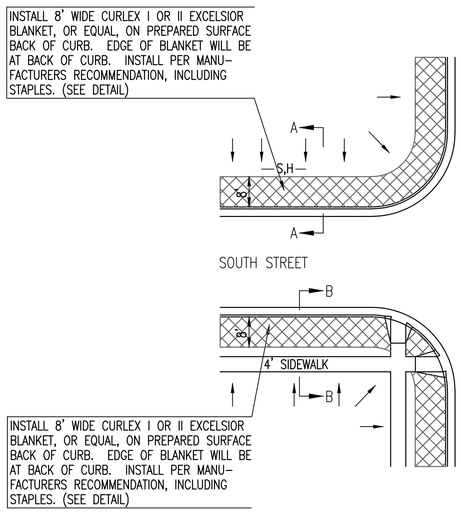
Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE



SECTION B-B



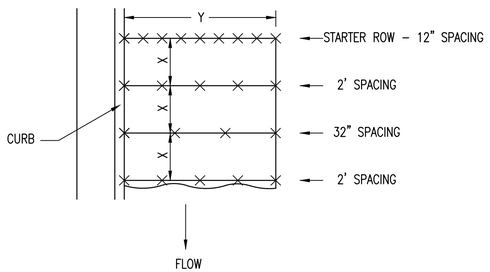
SECTION A-A



GENERAL NOTES

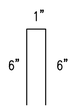
1. EXCELSIOR MAT TO BE INSTALLED WHEN SOD IS NOT SPECIFIED ON PROJECT.
2. EXCELSIOR BLANKET TO BE INSTALLED OVER SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
3. AFTER INSTALLATION OF EXCELSIOR BLANKET, AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB AND INTO THE GUTTER, SUPPLEMENTAL EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS NEEDED, TO FIX THE PROBLEM.

BACK OF CURB PROTECTION DETAIL



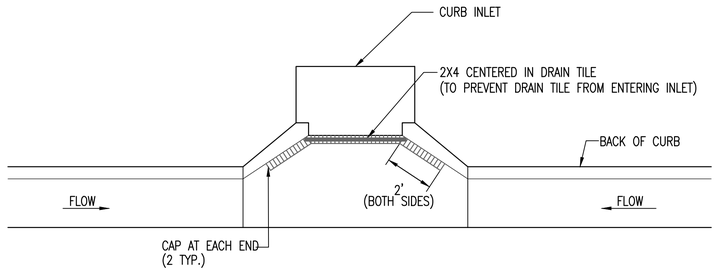
STAPLE PATTERN

NOTES: USE 6" SEAM OVERLAP
(X & Y = RECOMMENDED BY MANUFACTURE)



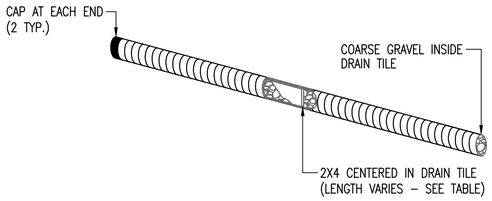
STAPLE

DETAILS FOR APPROVED EROSION CONTROL MAT



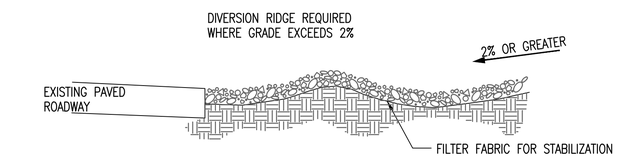
NOTE:
PLACE 4" PERFORATED PVC PIPE, FILLED WITH 1/2"-1" DIA. GRAVEL, IN FRONT OF CURB INLET AS SHOWN.

2X4 LENGTH	INLET TYPE	INLET OPENING
5'-6"	1-A	5'-0"
10'-6"	1-A	10'-0"
15'-6"	1-A	15'-0"

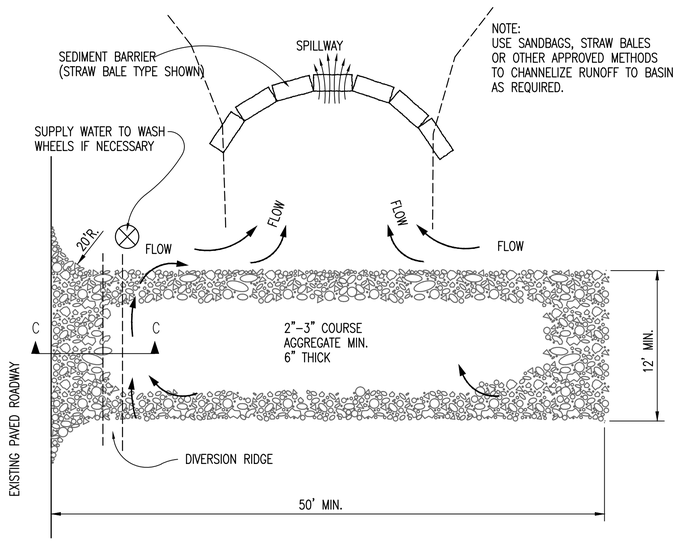


CURB INLET PROTECTION

4" PERFORATED PIPE W/ GRAVEL



SECTION C-C



STABILIZED CONSTRUCTION ENTRANCE

GENERAL NOTES

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN, AS SHOWN ABOVE.
4. DRIVE ENTRANCES ONTO RESIDENTIAL LOTS WILL NOT BE REQUIRED TO HAVE THE SEDIMENT BARRIER SHOWN, BUT WHEEL WASHING MAY BE REQUIRED IF STABILIZED ENTRANCE IS NOT SUFFICIENT TO KEEP MUD FROM BEING TRACKED ONTO ADJACENT STREET. ENTRANCE SHALL EXTEND FROM BACK OF CURB TO DWELLING.

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

BACK OF CURB PROTECTION, CURB INLET PROTECTION AND CONSTRUCTION ENTRANCE

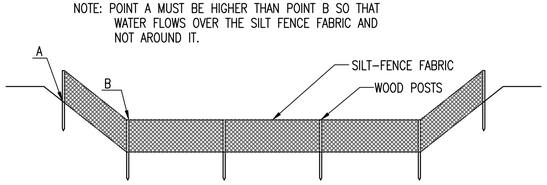
CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
472-84691	706989	8/2013

DESIGN	DRAWN

SHEET
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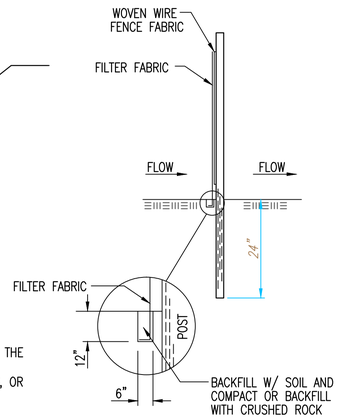
CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501



ELEVATION

SILT FENCE DITCH CHECKS

(STREAM PROTECTION)



ANCHOR TRENCH DETAIL

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED.
WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK, NOT OVER IT. SILT FENCE DITCH CHECKS OFTEN FAIL WHEN OVERTOPPED.
SILT FENCE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH.
THE SILT FENCE SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE TOP OF THE LOW POINT OF THE FENCE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK.
SILT FENCE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD.
SILT FENCE SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED.

THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

DITCH CHECK DITCH GRADE (%)	SPACING CHECK SPACING (FEET)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS AT LEAST 12" DEEP BY 6" WIDE.
EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK.
PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH FOR LATER USE.
ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSTREAM SIDE OF THE TRENCH.
PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSTREAM EDGE OF THE TRENCH.
LINE TWO SIDES OF THE TRENCH WITH THE FABRIC AS SHOWN ON DETAIL. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED.
LAY THE EXPOSED SILT FENCE ON THE UPSTREAM SIDE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSTREAM OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 24". PLACE POSTS NO MORE THAN 4' APART.
ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

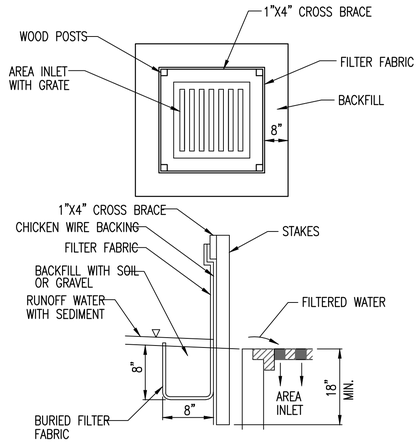
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK–NOT OVER IT. PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED. SILT FENCE INSTALLATIONS QUICKLY DETERIORATE WHEN WATER OVERTOPS THEM.
DO NOT PLACE SILT FENCE POSTS ON THE UPSTREAM SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL.
DO NOT PLACE A SILT FENCE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW.
DO NOT PLACE SILT FENCE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW.
FOLLOW PRESCRIBED DITCH CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS.
DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE LOW POINT ON THE TOP OF THE FENCE.
DO NOT PLACE SILT FENCE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.

INSPECTION AND MAINTENANCE:

SILT FENCE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW AROUND THE DITCH CHECK?
DOES WATER FLOW UNDER THE DITCH CHECK?
DOES THE SILT FENCE SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



SILT FENCE BARRIERS FOR AREA INLETS

(INLET PROTECTION)

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE WIRE OR POLYMERIC MESH BACKING USED TO HELP SUPPORT THE SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
THE MATERIAL USED TO FRAME THE TOPS OF THE POSTS SHOULD BE 1" BY 4" BOARDS.
SILT FENCE FABRIC AND SUPPORT BACKING SHOULD BE ATTACHED TO THE WOODEN POSTS AND FRAME WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

PLACE A SILT FENCE DROP INLET BARRIER IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED.
WATER SHOULD FLOW THROUGH SILT FENCE, NOT OVER IT. SILT FENCE BARRIERS FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED.
WHEN USED AS A BARRIER FOR AREA INLETS, SILT FENCE FABRIC AND POSTS MUST BE SUPPORTED AT THE TOP BY A WOODEN FRAME.
WHEN A SILT FENCE BARRIER FOR AREA INLETS IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRASTICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 8" DEEP BY 8" WIDE.
DRIVE POSTS TO A DEPTH OF AT LEAST 18" AROUND THE PERIMETER OF THE AREA INLET.
THE DISTANCE BETWEEN POSTS SHOULD BE 4' OR LESS. IF THE DISTANCE BETWEEN TWO ADJACENT CORNER POSTS IS MORE THAN 4', ADD ANOTHER POST(S) BETWEEN THEM.
CONNECT THE TOPS OF ALL THE POSTS WITH A WOODEN FRAME MADE OF 1" BY 4" BOARDS. USE NAILS OR SCREWS FOR FASTENING.
ATTACH THE WIRE OR POLYMERIC–MESH BACKING TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS.
ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC LONG ENOUGH TO WRAP AROUND THE PERIMETER OF THE AREA INLET. ADD MORE LENGTH FOR OVERLAPPING THE FABRIC JOINT. PLACE THE EDGE OF THE FABRIC IN THE TRENCH, STARTING AT THE OUTSIDE EDGE OF THE TRENCH. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED.
ATTACH THE SILT FENCE TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS. THE JOINT SHOULD BE OVERLAPPED TO THE NEXT POST.

NOTE: WHEN A SILT FENCE BARRIER FOR AREA INLET IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

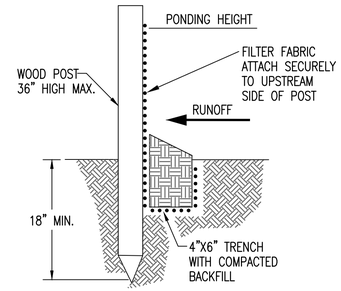
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WATER SHOULD FLOW THROUGH A SILT FENCE BARRIER FOR AREA INLET–NOT OVER IT. PLACE A SILT FENCE BARRIER FOR AREA INLET IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED. SILT FENCE BARRIER FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED.
DO NOT PLACE POSTS ON THE OUTSIDE OF THE SILT FENCE BARRIER FOR AREA INLET. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESISTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL.
DO NOT INSTALL SILT FENCE BARRIER FOR AREA INLETS WITHOUT FRAMING THE TOP OF THE POSTS. THE CORNER POSTS AROUND AREA INLETS ARE STRESSED IN TWO DIRECTIONS WHEREAS A NORMAL SILT FENCE IS ONLY STRESSED IN ONE DIRECTION. THIS ADDED STRESS REQUIRES MORE SUPPORT.

INSPECTION AND MAINTENANCE:

SILT FENCE BARRIER FOR AREA INLETS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW UNDER THE SILT FENCE?
DOES THE SILT FENCE SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



SILT FENCE BARRIERS

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT.
WHEN PRACTICABLE, SILT FENCE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW.
SILT FENCE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT–OF–WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 6" DEEP BY 4" WIDE.
MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE.
ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSLOPE SIDE OF THE TRENCH.
PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSLOPE EDGE. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT–FENCE FABRIC SHOULD REMAIN EXPOSED.
ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSLOPE SIDE OF THE TRENCH.
LAY THE EXPOSED SILT FENCE UPSLOPE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSLOPE OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 18".
PLACE POSTS NO MORE THAN 4' APART.
ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WHEN PRACTICABLE, DO NOT PLACE SILT FENCE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. WHEN THE FLOW CONCENTRATES, IT OVERTOPS THE BARRIER AND THE SILT FENCE SLOPE BARRIER QUICKLY DETERIORATES.
DO NOT PLACE SILT–FENCE POSTS ON THE UPSLOPE SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL.
DO NOT PLACE SILT FENCE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT SUFFICIENTLY ANCHORED, IT WILL WASH OUT.
SILT FENCE SLOPE BARRIERS MUST BE DUG INTO THE GROUND–SILT FENCE AT GROUND LEVEL DOES NOT WORK BECAUSE WATER WILL FLOW UNDERNEATH.

INSPECTION AND MAINTENANCE:

SILT FENCE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
DOES WATER FLOW UNDER THE SLOPE BARRIER?
DO THE SILT FENCES SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

SILT FENCE DITCH CHECK AND BARRIER DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

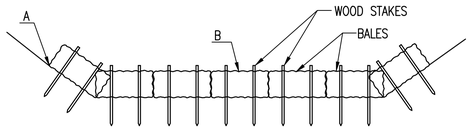
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CITY ENGINEER'S OFFICE
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WICHITA, KANSAS 67202-1620
(316) 268-4501

DESIGN | DRAWN

SHEET
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NOTE: POINT A MUST BE HIGHER THAN POINT B
SO THAT WATER FLOWS OVER THE BALES AND
NOT AROUND THEM.



STRAW BALE DITCH CHECKS

MATERIAL SPECIFICATION:

BALE DITCH CHECKS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE.
THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
OPTIONAL: THE DOWNSTREAM SCOUR APRON SHOULD BE CONSTRUCTED OF A DOUBLE-NETTED STRAW EROSION-CONTROL BLANKET AT LEAST 6' WIDE.
OPTIONAL: THE METAL LANDSCAPE STAPLES USED TO ANCHOR THE EROSION-CONTROL BLANKET SHOULD BE AT LEAST 8" LONG.

PLACEMENT:

BALE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH.
THE DITCH CHECK SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK.
STRAW BALE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD.
BALES SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED.
THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

DITCH GRADE (%)	CHECK SPACING (FEET)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK. PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH-IT WILL BE USED LATER.
OPTIONAL: ON THE DOWNSTREAM SIDE OF THE TRENCH, ROLL OUT A LENGTH OF EROSION-CONTROL BLANKET (SCOUR APRON) EQUAL TO THE LENGTH OF THE TRENCH. PLACE THE UPSTREAM EDGE OF THE EROSION-CONTROL BLANKET ALONG THE BOTTOM UPSTREAM EDGE OF THE TRENCH. THE EROSION CONTROL BLANKET SHOULD BE ANCHORED IN THE TRENCH WITH ONE ROW OF 8" LANDSCAPE STAPLES PLACED ON 18" CENTERS. THE REMAINDER OF THE EROSION-CONTROL BLANKET (THE PORTION THAT IS NOT LYING IN THE TRENCH) WILL SERVE AS THE DOWNSTREAM SCOUR APRON. THIS SECTION OF THE BLANKET SHOULD BE ANCHORED TO THE GROUND WITH 8" LANDSCAPE STAPLES PLACED AROUND THE PERIMETER OF THE BLANKET ON 18" CENTERS. THE REMAINDER OF THE BLANKET SHOULD BE ANCHORED USING TWO EVENLY SPACED ROWS OF 8" LANDSCAPE STAPLES ON 18" CENTERS PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH.
PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.
ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSTREAM SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP AND EXTEND UPSTREAM NO MORE THAN 24".

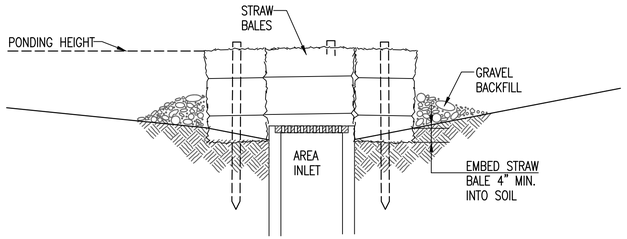
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

DO NOT PLACE A BALE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW.
DO NOT PLACE BALE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW.
FOLLOW PRESCRIBED DITCH-CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS.
DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE.
DO NOT PLACE BALE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.
BALE DITCH CHECKS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE CHECK.

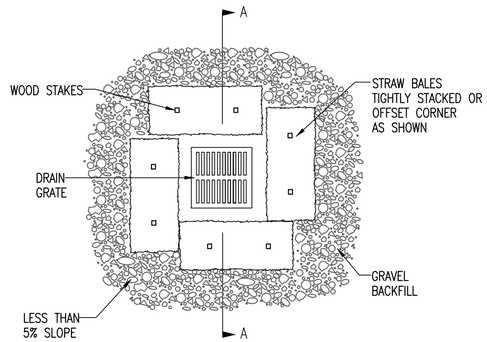
INSPECTION AND MAINTENANCE:

BALE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW AROUND THE DITCH CHECK?
DOES WATER FLOW UNDER THE DITCH CHECK?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES AND/OR SCOUR APRONS (OPTIONAL) DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



SECTION A-A



STRAW BALE BARRIERS FOR AREA INLETS

(INLET PROTECTION)

MATERIAL SPECIFICATION:

BALE AREA INLET BARRIERS SHOULD BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE.
THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

PLACEMENT:

BALE AREA INLET BARRIERS SHOULD BE PLACED DIRECTLY AROUND THE PERIMETER OF A DROP INLET.
WHEN A BALE AREA INLET BARRIER IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRASTICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 4" DEEP BY A BALE'S WIDTH WIDE.
PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. SOME BALES MAY NEED TO BE SHORTENED TO FIT INTO THE TRENCH AROUND THE AREA INLET. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS.
STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.
ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE RECEIVING SIDE OF THE BARRIER AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP.
NOTE: WHEN A BALE AREA INLET BARRIER IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

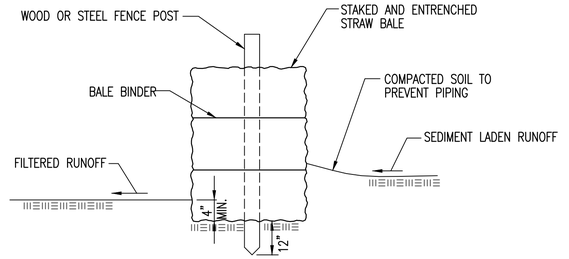
LIST OF COMMON PLACEMENT INSTALLATION MISTAKES TO AVOID:

BALES SHOULD BE PLACED DIRECTLY AGAINST THE PERIMETER OF THE AREA INLET. THIS ALLOWS OVERTOPPING WATER TO FLOW DIRECTLY INTO THE INLET INSTEAD OF ONTO NEARBY SOIL CAUSING SCOUR.
BALE AREA INLET BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

INSPECTION AND MAINTENANCE:

BALE AREA INLET BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW UNDER THE AREA INLET BARRIER?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



STRAW BALE BARRIERS

MATERIAL SPECIFICATION:

BALE SLOPE BARRIERS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE.
THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

PLACEMENT:

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT.
WHEN PRACTICABLE, BALE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW.
BALE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT-OF-WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE.
PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.
ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSLOPE SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WHEN PRACTICAL, DO NOT PLACE BALE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. CONCENTRATED FLOW OVER A SLOPE BARRIER CREATES A SCOUR HOLE ON THE DOWNSLOPE SIDE OF THE BARRIER. THE SCOUR HOLE EVENTUALLY UNDERMINES THE BALES AND THE BARRIER FAILS.
DO NOT PLACE BALE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.
BALE SLOPE BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

INSPECTION AND MAINTENANCE:

BALE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
DOES WATER FLOW UNDER THE SLOPE BARRIER?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STRAW BALE DITCH CHECK AND BARRIER DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
472-84691	706989	8/2013

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

DESIGN | DRAWN

SHEET
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GENERAL NOTES

1. THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPES OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.

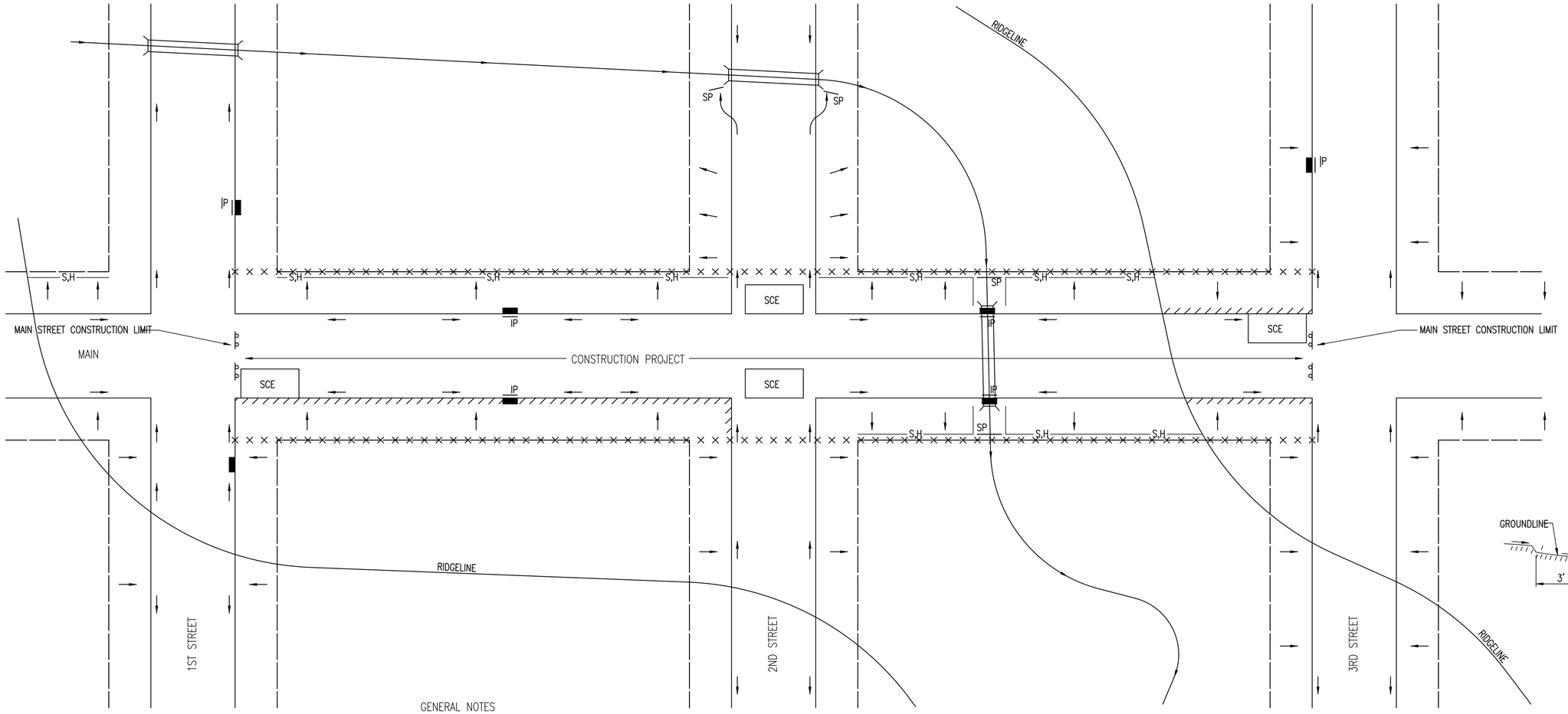
2. EROSION CONTROL DEVICES MUST BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS AND UNTIL THE DISTURBED EARTH IS RESTABILIZED.

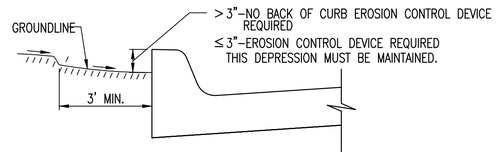
3. IF THE PROJECT WILL DISTURB 1 ACRE OR MORE, A FEDERAL/STATE NPDES STORMWATER PERMIT IS REQUIRED. A DETAILED STORMWATER POLLUTION PREVENTION PLAN, IS REQUIRED. THE EROSION CONTROL DEVICES SHOWN ON THIS SHEET ARE CONSIDERED TO BE THE MINIMUM TO BE SHOWN IN THE POLLUTION PREVENTION PLAN.

4. FOR PROJECTS DISTURBING LESS THAN 1 ACRE, CONTRACTORS ARE ENCOURAGED TO PREPARE STORMWATER POLLUTION PREVENTION PLANS PRIOR TO CONSTRUCTION. EROSION CONTROL DEVICES MUST BE USED ON ALL PROJECTS.

5. FAILURE TO USE AND MAINTAIN EROSION CONTROL DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE CONTRACTOR TO THE PENALTIES PROVIDED FOR THEREIN.

6. THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE A DIFFERENT DEVICE OTHER THAN THOSE SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED AS LONG AS THEY ARE EFFECTIVE AND MAINTAINED.





CURB BACKFILL DETAIL

THIS IS A TEMPORARY MEASURE ONLY, WHEN APPROVED BY THE PROJECT ENGINEER. THE DIRT GRADE BEHIND THE CURB SHALL BE BROUGHT TO THE TOP OF CURB, WITH TEMPORARY EROSION CONTROL MAT OR PERMANENT VEGETATION PLACED, PRIOR TO THE COMPLETION OF ALL PROJECTS.

LEGEND

- R–O–W LIMITS
- DRAINAGE FLOW PATH
- R/W LIMIT WITHIN CONSTRUCTION LIMIT
- STORM WATER INLETS
- IP — INLET PROTECTION
- S,H — SILT FENCE OR HAY BALE BARRIER
- SP — STREAM PROTECTION
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- BACK OF CURB PROTECTION

GENERAL NOTES

1. THE INTENT OF ALL EROSION CONTROL DEVICES IS TO KEEP ALL SEDIMENT CONFINED TO THE CONSTRUCTION SITE, AND OUT OF ALL UNDERGROUND PIPES, DITCHES, LAKES, AND OTHER DRAINAGE FACILITIES, AND OFF OF STREETS.

2. THE POINT OF COMPLIANCE IS GENERALLY THE RIGHT–OF–WAY LINES WITHIN THE LIMITS OF CONSTRUCTION.

3. EROSION CONTROL DEVICES WILL BE REQUIRED AT ALL POINTS ALONG THE PROJECT WHERE DISTURBED EARTH CAN DRAIN ONTO PRIVATE PROPERTY.

4. INLET PROTECTION DEVICES WILL BE REQUIRED WHEREVER WATER CAN DRAIN OFF THE PROJECT SITE INTO AN INLET, INCLUDING ANY SIDE STREET INLETS.

5. EROSION CONTROL DEVICES SHALL BE INSTALLED AT CREEK CROSSINGS SO AS TO PREVENT SEDIMENT FROM ENTERING THEREIN.

6. STABILIZED CONSTRUCTION ENTRANCES SHALL BE PROVIDED, AS NEEDED, TO PREVENT MUD FROM TRACKING ONTO STREETS NOT UNDER CONSTRUCTION AND ON STREETS WITHIN THE PROJECT LIMITS IF TRAFFIC IS BEING MAINTAINED THROUGH THE PROJECT.

7. ANY MUD TRACKED ONTO STREETS MUST BE REMOVED AT THE END OF EACH WORK DAY.

8. THE CONTACTOR WILL BE REQUIRED TO PLACE EROSION CONTROL DEVICES BACK OF CURB, WHENEVER WATER CAN DRAIN OVER CURB, TO KEEP ERODED SOIL OUT OF THE GUTTERLINES, IN ACCORDANCE WITH THE FOLLOWING:
   A. THE DEVICE REQUIRED WILL BE APPROVED EROSION CONTROL MAT LISTED ON THE CITY'S APPROVED MATERIAL LIST. SAID BLANKET SHALL BE PLACED OVER THE APPROPRIATE SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS. (SEE SOIL EROSION BMPs – BACK OF CURB SEDIMENT BARRIER DETAILS)
   B. THIS DEVICE SHALL BE INSTALLED IMMEDIATELY WHENEVER THE CURB IS BACKFILLED TO WITHIN 3" OF THE TOP OF CURB. (SEE CURB BACKFILL DETAIL) OTHER BMP'S MAY BE REQUIRED AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB.
   C. ADDITIONALLY, OTHER EROSION CONTROL DEVICES (HAY BALES, SILT FENCE, ETC.) WILL BE INSTALLED AT LOCATIONS OF CONCENTRATED FLOW RESULTING IN SEDIMENT OVERRUNNING THE MAT.
   D. SHOULD THE PROJECT PLANS SPECIFY THAT THE RIGHT–OF–WAY IS TO BE SODDED, THE EXCELSIOR MAT WILL NOT BE REQUIRED SO LONG AS THE SOD IS PLACED WITHIN 48 HOURS AFTER CURB BACKFILL REACHES A HEIGHT OF 3" OR LESS FROM TOP OF CURB. (SEE CURB BACKFILL DETAIL)

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STREET IMPROVEMENT PROJECTS

CITY ENGINEER
GARY JANZEN, P.E.

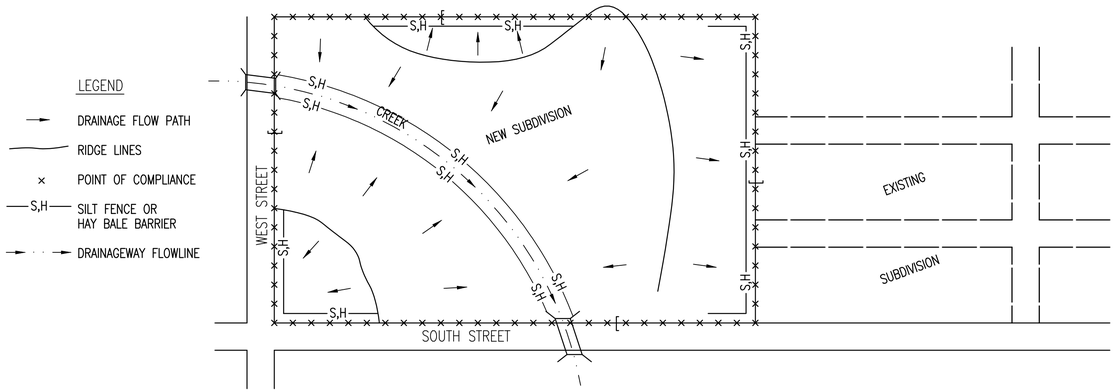
PROJECT NUMBER	OCA NUMBER	DATE
472-84691	706989	8/2013

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

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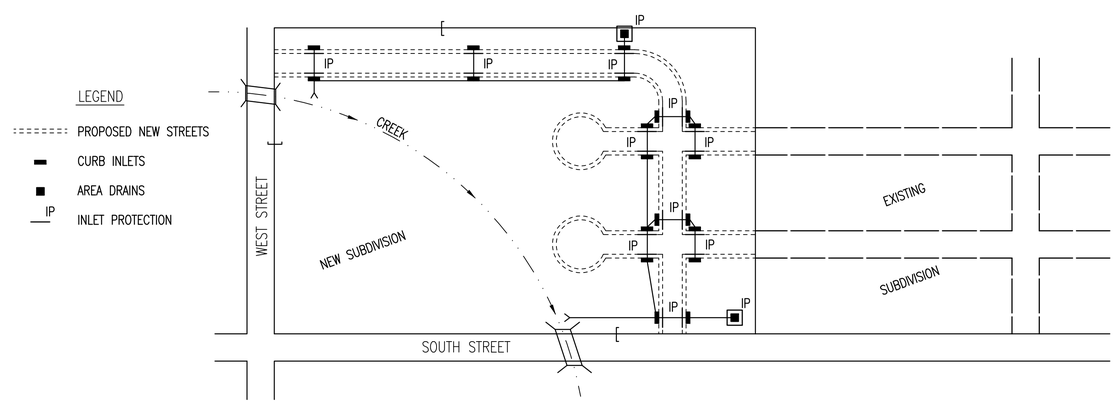
SHEET
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PHASE 1 – INITIAL EARTHWORK AND UTILITIES (EXCEPT STORM SEWER)



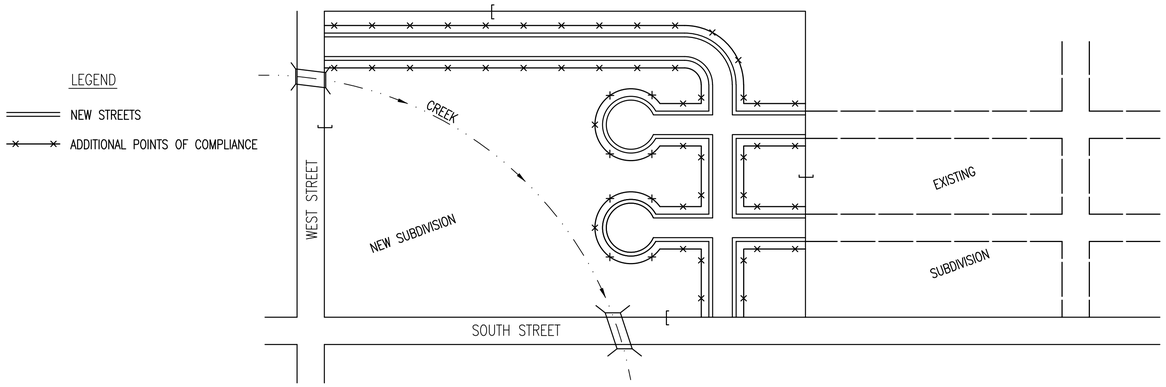
1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
2. HAY BALES OR SILT FENCE MUST BE CONSTRUCTED ALONG THE PROPERTY LINE WHERE ON SITE WATER CAN DRAIN OFF THE PROPERTY. THESE EROSION CONTROL DEVICES WILL ALSO BE INSTALLED ALONG ANY DRAINAGE DITCH OR LAKE THAT CAN DISCHARGE.
3. SHOULD SILT OR SEDIMENT ENTER THE DITCHES OR STREETS ON THE ADJACENT BOUNDARY STREETS, APPROPRIATE EROSION CONTROL DEVICES WILL BE PLACED WITHIN THE SUBDIVISION TO PREVENT THIS.
4. ANY MUD TRACKED ONTO ADJACENT STREETS WILL BE REMOVED WITHIN 48 HOURS OR BY FRIDAY AT 6:00 PM, WHICHEVER IS EARLIER.
5. CONTRACTORS WORKING WITHIN THE SITE WILL NOT BE REQUIRED TO USE INDIVIDUAL EROSION CONTROL DEVICES AS LONG AS THOSE SPECIFIED ABOVE ARE IN PLACE AND EFFECTIVE. CONTRACTORS WORKING ON THE BOUNDARY LINE STREETS OR ON ADJACENT PROPERTIES TO EXTEND UTILITIES ARE EXPECTED TO USE EROSION CONTROL DEVICES AT THEIR WORK LOCATIONS, AS NEEDED.
6. UTILIZE STABILIZED CONSTRUCTION ENTRANCE AT ENTRANCE AND EXIT ONTO ANY EXISTING PUBLIC STREETS.
7. IF THE INITIAL EARTH WORK AND UTILITIES ARE DONE AS PART OF A PUBLIC IMPROVEMENT PROJECT, THESE EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS SPECIFIED IN THE INDIVIDUAL PROJECT CONTRACTS. THE CONTRACTOR WILL MAINTAIN THE DEVICES UNTIL COMPLETION OF THE CONTRACT, AT WHICH TIME THE DEVELOPER WILL ASSUME MAINTENANCE RESPONSIBILITIES. IF THESE CONTRACTS ARE NOT PUBLIC IMPROVEMENT PROJECTS, THE DEVELOPER WILL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THESE DEVICES.
8. WITHIN 14 DAYS OF COMPLETION OF EARTHWORK ACTIVITIES IN ANY GIVEN AREA, THAT AREA SHALL BE TEMPORARILY OR PERMANENTLY SEEDED AND MULCHED.

PHASE 2 – INSTALLATION OF STORM SEWER



1. DURING THIS PHASE OF SUBDIVISION DEVELOPMENT, ALL EROSION CONTROL DEVICES REQUIRED IN PHASE 1 SHALL REMAIN IN PLACE AND BE MAINTAINED.
2. AS NEW STORM SEWERS, WITH INLETS, ARE INSTALLED, THE STORM SEWERS MUST NOW BE PROTECTED SO ALL NEW INLETS BECOME POINTS OF COMPLIANCE.
3. AREA DRAINS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, HAY BALE OR SILT FENCE PROTECTION WILL BE INSTALLED AROUND THEM.
4. CURB OPENING INLETS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, INLET PROTECTION DEVICES MUST BE INSTALLED. IF WATER CANNOT FLOW INTO CURB INLETS UNTIL STREET CONSTRUCTION IS COMPLETE, THEN STREET CONTRACTOR WILL INSTALL INLET PROTECTION. SEE PHASE 3 – STREET CONSTRUCTION.
5. THE STORM SEWER CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING THESE DEVICES.
6. THE SUBDIVISION DEVELOPER WILL MAINTAIN THESE EROSION CONTROL DEVICES ONCE INSTALLED.
7. ALL DISTURBED GROUND WILL BE FINAL GRADED AND TEMPORARILY OR PERMANENTLY SEEDED WITHIN 14 DAYS IF COMPLETION OF WORK IN ANY GIVEN PART OF THE SUBDIVISION.
8. ONCE ALL DISTURBED GROUND DRAINING TO AN INLET HAS BEEN RESTABILIZED WITH GRASS OR SOD, THE SUBDIVISION DEVELOPER WILL BE RESPONSIBLE FOR PERMANENTLY REMOVING THE INLET PROTECTION.

PHASE 3 – STREET CONSTRUCTION

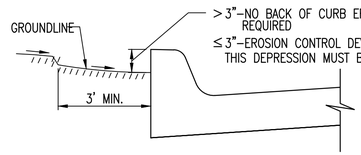


1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, NEW STREETS ARE INSTALLED. ALL EROSION CONTROL DEVICES INSTALLED DURING PHASE 1 AND 2 MUST STILL BE MAINTAINED. THE POINT OF COMPLIANCE NOW SHIFTS TO THE BACK OF CURB ALONG EACH STREET.
2. CURB OPENING INLET PROTECTION:
   A. SUMP AREAS – INLET PROTECTION SHALL BE PROVIDED WHEN STREET SUBGRADE WORK IS COMPLETED.
   B. NON–SUMP LOCATIONS – PROVIDE INLET PROTECTION AS SOON AS BASE COURSE ASPHALT IS INSTALLED, BEFORE THE SURFACE COURSE LIFT.
3. EROSION CONTROL DEVICES WILL BE REQUIRED BACK OF CURB WHEREVER WATER CAN FLOW OVER THE CURB AND THE CURB HAS BEEN BACKFILLED TO WITHIN 3" OR LESS OF THE TOP OF CURB (SEE CURB BACKFILL DETAIL). FOR CURBS NOT YET ENTIRELY BACKFILLED (3" OR MORE BELOW TOP OF CURB), ADDITIONAL DEVICES WILL BE REQUIRED AT POINTS WHERE WATER BREAKS OVER CURB WHICH COULD RESULT IN THE PLACEMENT OF SEDIMENT IN THE GUTTER.
4. SEE DETAIL SHEET FOR BACK OF CURB PROTECTION.
5. THE BACK OF CURB PROTECTION SPECIFIED ON THIS PLAN MAY HAVE TO BE SUPPLEMENTED WITH HAY BALE OR SILT FENCE EROSION CONTROL DEVICES AT LOCATIONS WHERE CONCENTRATED FLOW RESULTS IN SEDIMENT BEING CARRIED OVER THE EXCELSIOR MATS.
6. THE STREET CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING BACK OF CURB EROSION CONTROL DEVICES.
7. THE INDIVIDUAL LOT OWNERS WILL BE RESPONSIBLE FOR MAINTAINING THE BACK OF CURB EROSION CONTROL DEVICES IN FRONT OF THEIR LOTS UNTIL SUCH TIME AS ADJACENT DISTURBED EARTH IS STABILIZED WITH GRASS OR SOD.

GENERAL NOTES

1. THE INTENT OF ALL EROSION CONTROL DEVICES IS TO PREVENT ERODED SOIL FROM ENTERING DITCHES, STORM SEWERS, LAKES, STREETS OR ANY OTHER OTHER DRAINAGE FEATURE.
2. THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPE OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
3. EROSION CONTROL DEVICES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS TO REMAIN EFFECTIVE. MAINTENANCE SHALL BE AS INDICATED ON SOIL EROSION BMP'S DETAIL SHEETS.
4. PERSONS DESTROYING EROSION CONTROL DEVICES SHALL BE RESPONSIBLE FOR IMMEDIATELY REPAIRING THEM OR INSTALLING SUITABLE REPLACEMENT DEVICES.
5. THE DEVELOPMENT OF ANY SUBDIVISION THAT DISTURBS 1 ACRE OR MORE WILL REQUIRE A FEDERAL/STATE NPDES STORMWATER PERMIT. THE PREPARATION OF A STORMWATER POLLUTION PREVENTION PLAN IS REQUIRED. EROSION CONTROL DEVICES ARE REQUIRED. THE DETAILS SHOWN ON THIS SHEET ARE THE MINIMUM STANDARDS TO BE SHOWN ON POLLUTION PREVENTION PLANS.
6. FOR SUBDIVISIONS SMALLER THAN 1 ACRE, SOIL EROSION DEVICES ARE REQUIRED. ALSO, DEVELOPERS AND CONTRACTORS ARE ENCOURAGED TO DEVELOP POLLUTION PREVENTION PLANS FOR EACH PROJECT PRIOR TO CONSTRUCTION.
7. FAILURE TO USE AND MAINTAIN SOIL EROSION DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE SUBDIVISION DEVELOPER AND CONTRACTORS TO THE PENALTIES PROVIDED THEREIN.
8. THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE DEVICES OTHER THAN THAT SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED SO LONG AS THEY ARE EFFECTIVE AND MAINTAINED.
9. A STABILIZED EARTH SURFACE IS DEFINED AS ONE THAT IS HARD SURFACED WITH CONCRETE, ASPHALT, OR THE LIKE, OR ONE ON WHICH 70% OF THE GRASS HAS GERMINATED ON THE ENTIRE SURFACE.

SEE DETAIL SHEET FOR BACK OF CURB PROTECTION DETAIL



CURB BACKFILL DETAIL (STREET CONSTRUCTION ONLY)

THIS IS A TEMPORARY MEASURE ONLY, WHEN APPROVED BY THE PROJECT ENGINEER. THE DIRT GRADE BEHIND THE CURB SHALL BE BROUGHT TO THE TOP OF CURB, WITH TEMPORARY EROSION CONTROL MAT OR PERMANENT VEGETATION PLACED, PRIOR TO THE COMPLETION OF ALL PROJECTS.

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

SUBDIVISION DEVELOPMENT PROCESS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
472-84691	706989	8/2013

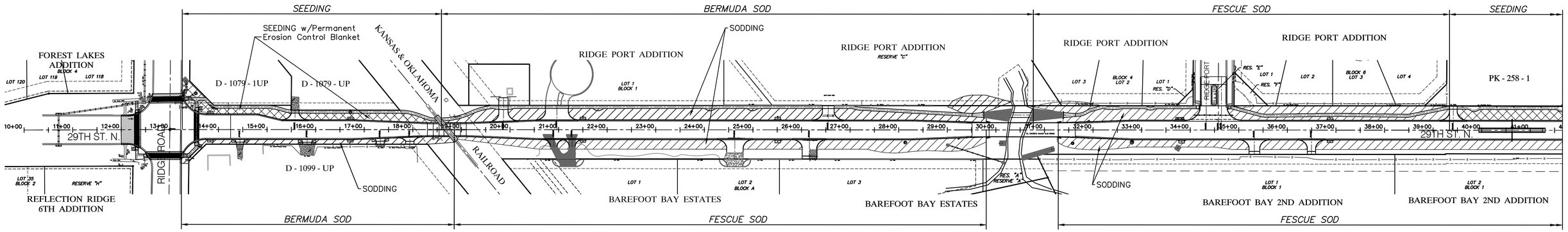
CITY ENGINEER'S OFFICE
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(316) 268-4501

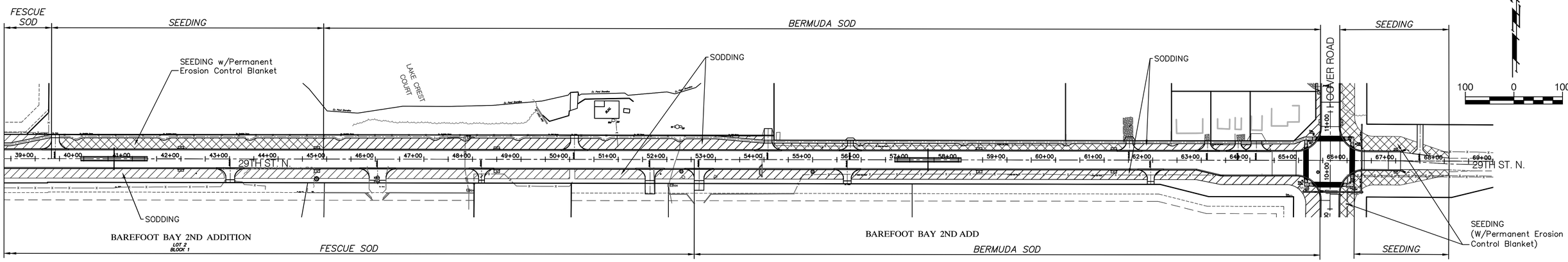
DESIGN | DRAWN

SHEET
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29th STREET NORTH

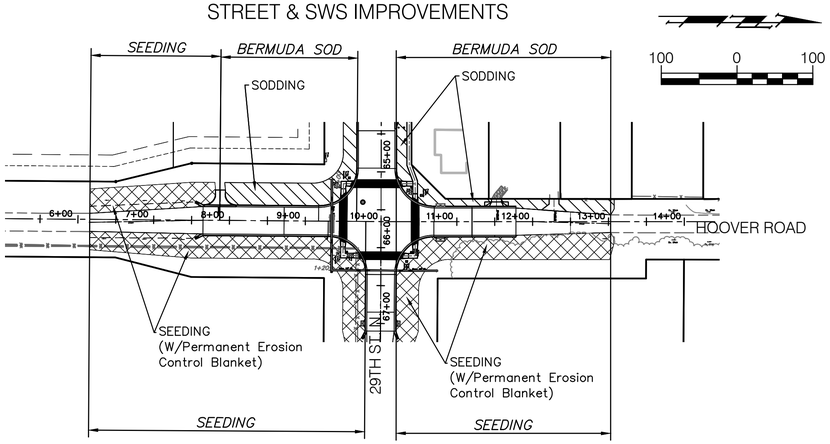
STREET & SWS IMPROVEMENTS





HOOVER ROAD

STREET & SWS IMPROVEMENTS



NOTE: All Areas Disturbed by Construction That are Adjacent to Developed Property Shall be Restored With Either Bermuda or Fescue Sod to Match the Existing Turf Type. Restoration of Disturbed Areas Shall Include, but Not be Limited to, Top Soil Preparation, Fertilization and Sod Installation in Accordance with City of Wichita Specifications and the Latest Version of Administrative Regulation Number AR 6.5. When the Weather/Season Prevents the Installation of Sod, the Contractor Shall be Responsible for Installing Approved Erosion Control Blanket at the Back of Curb (8' Minimum Width). See Erosion Control Plan Sheet. All Costs for Sod Installation, Including Removal of Temporary Erosion Control Blanket, Shall be Included in the Lump Sum Bid Item "Sodding". All Areas Disturbed by Construction That are Adjacent to Non-Developed Properties Shall be Restored by Seeding with a Mixture of Ryegrass (Applied at a Rate of 50 lb per acre) and Buffalo Grass (Applied at a Rate of 200 lb per acre). Restoration shall Include, Seeding with Permanent Erosion Control Blanket in Accordance with City of Wichita Specifications and the Latest Version of Administrative Regulation Number AR 6.5. When the Weather/Season Prevents the Placement of Seed the Contractor Shall be Responsible for Installation of Temporary Erosion Control Blanket at the Back of Curb (8' Minimum Width). See Erosion Control Plan Sheet. All Costs for Seeding With Permanent Erosion Control Blanket, Including Removal of Temporary Erosion Control Blanket Shall be Included in the Lump Sum Bid Item "Seeding".

NOTE: Restoration Limits Shown on This Sheet are Not Considered to be Exact. Modify as Needed to Match Existing Conditions or as Directed by the Engineer.

NOTE: Permanent Erosion Control Blanket Placed over Seeding Shall be Curlex 1 Excelsior Blanket or Approved Equal Installed per Manufacturers Recommendations.

– Denotes Sodding

– Denotes Seeding

GRASS REPLACEMENT QUANTITIES	
For Information Only	
BERMUDA SODDING	1.90 Acres
FESCUE SODDING	1.70 Acres
SEEDING	1.43 Acres
TOTAL	5.03 Acres

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\base.dwg

NOVEMBER, 2013

Design: KEK
Drawn: JDM
Approved: MWS
Scale: Noted

Project No. 09-09-E382

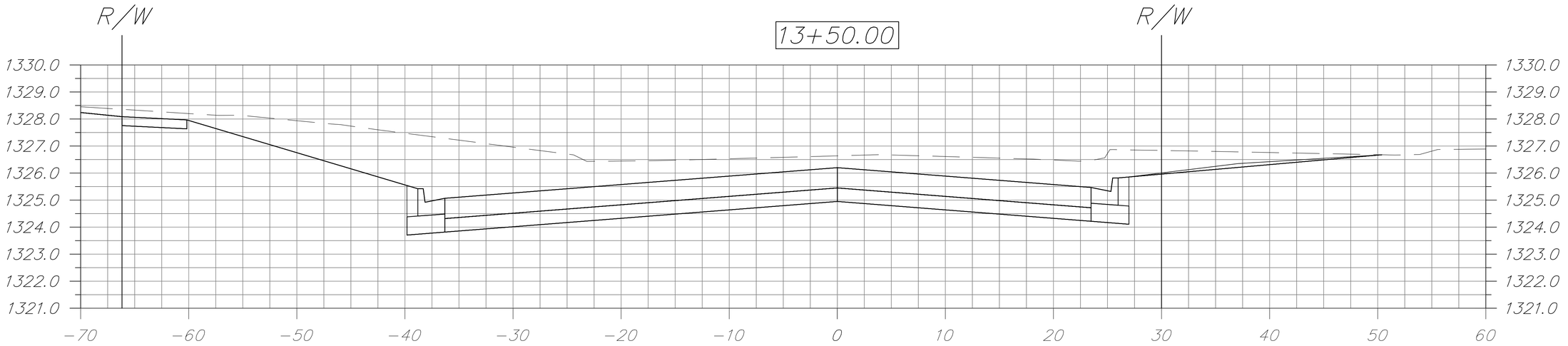
CAPITAL IMPROVEMENT PROJECT

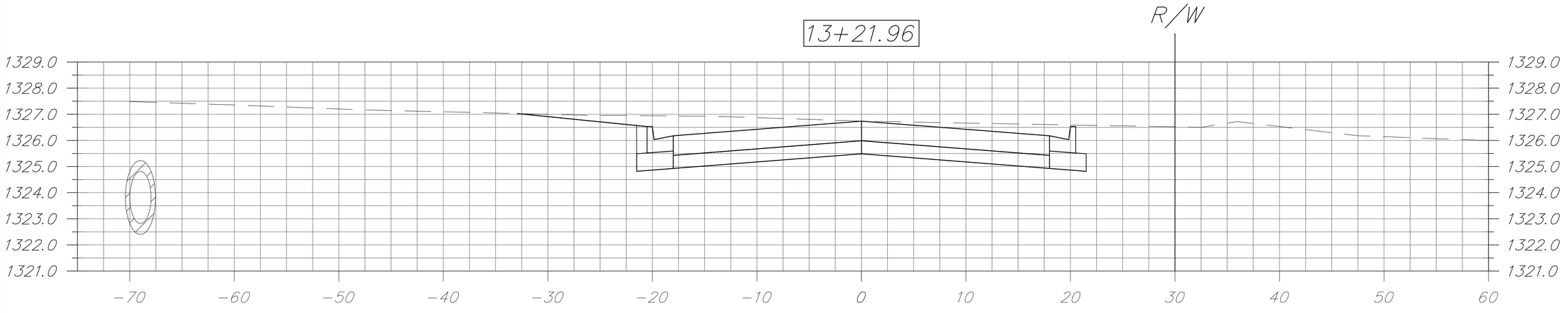
29th St. North - RIDGE to HOOVER
SEEDING & SODDING PLAN
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company, P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 104 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





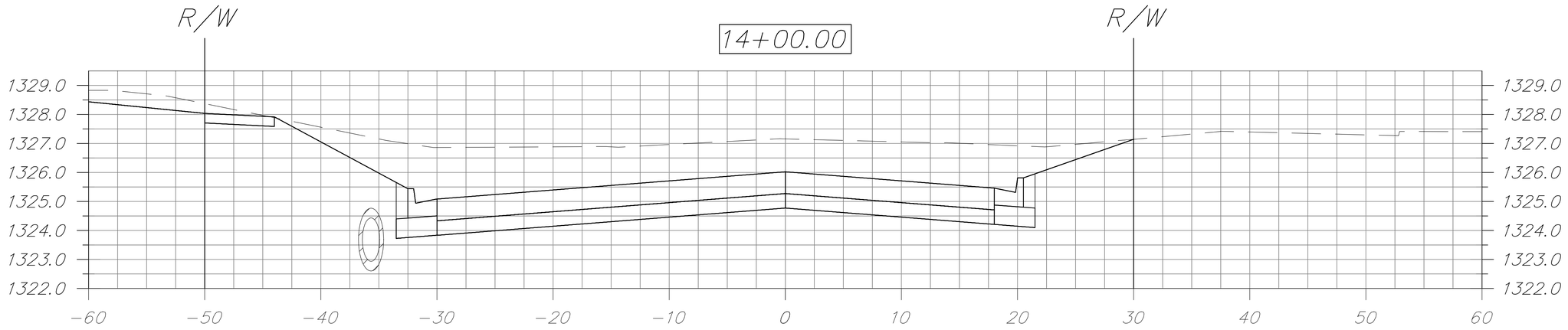
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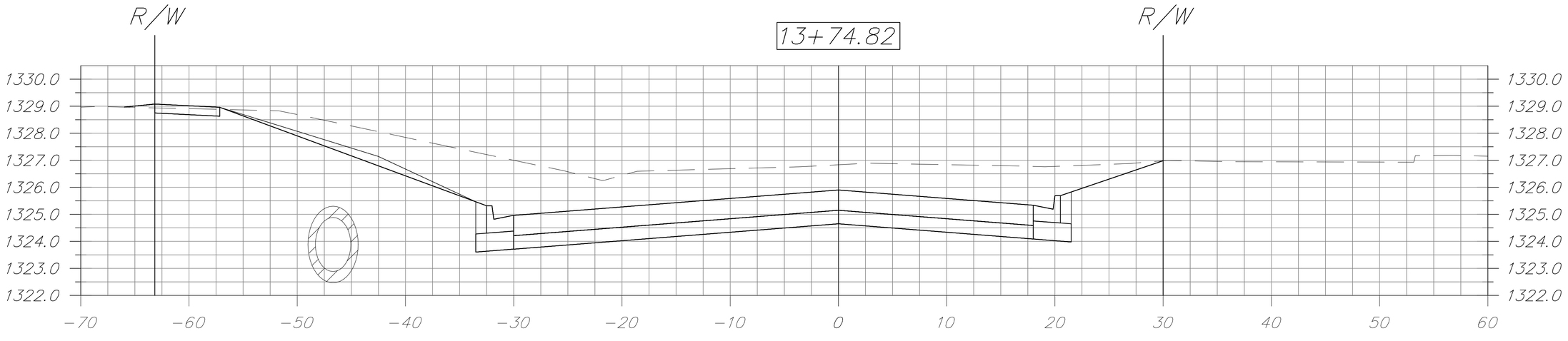
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 13+21.96 to Sta. 13+50.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
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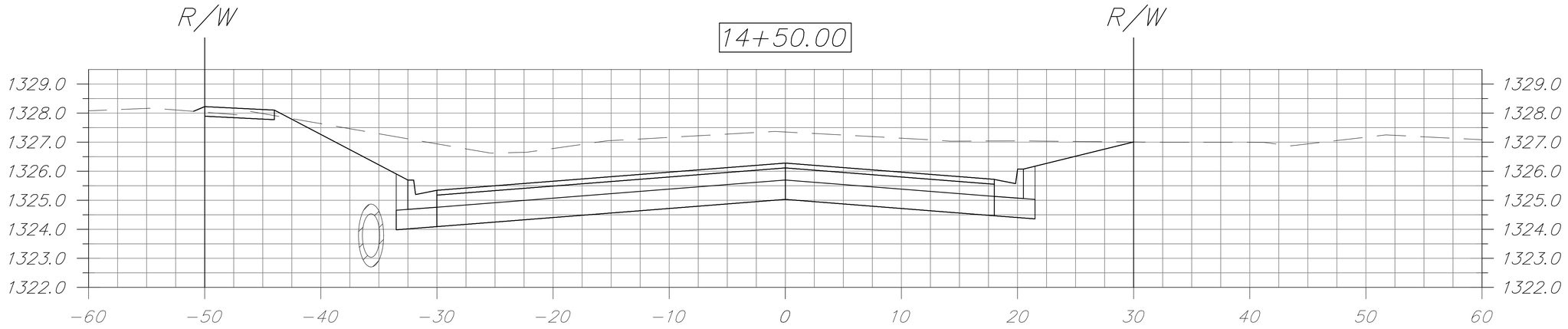
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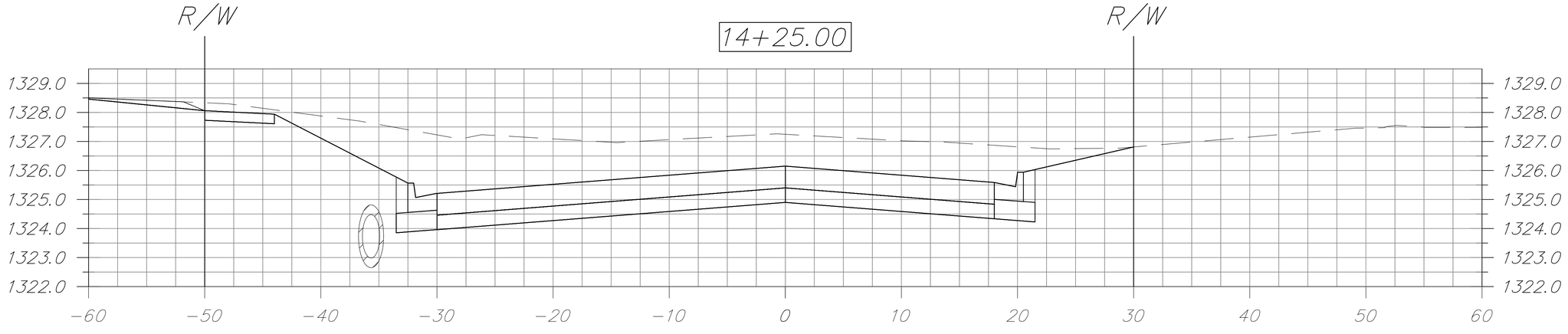
NOVEMBER, 2013

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SHEET 106 OF 177

SCALE:
1" = 5' Horizontal
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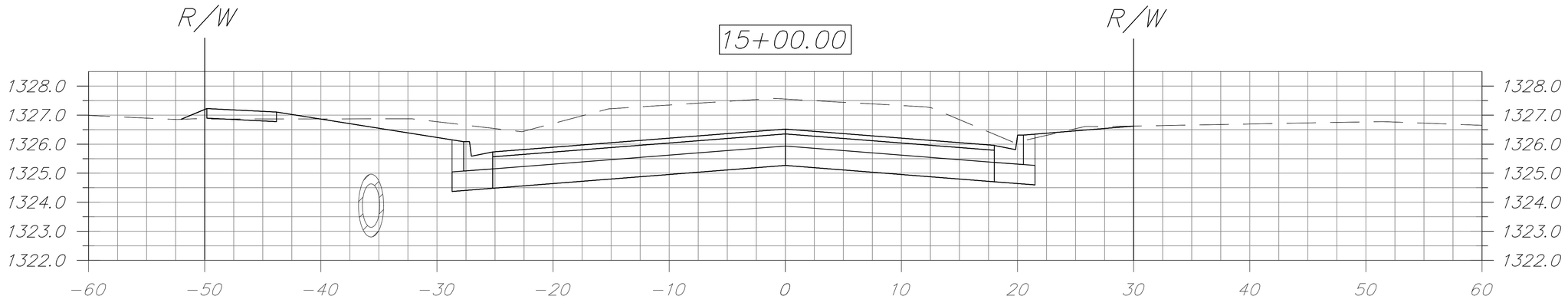
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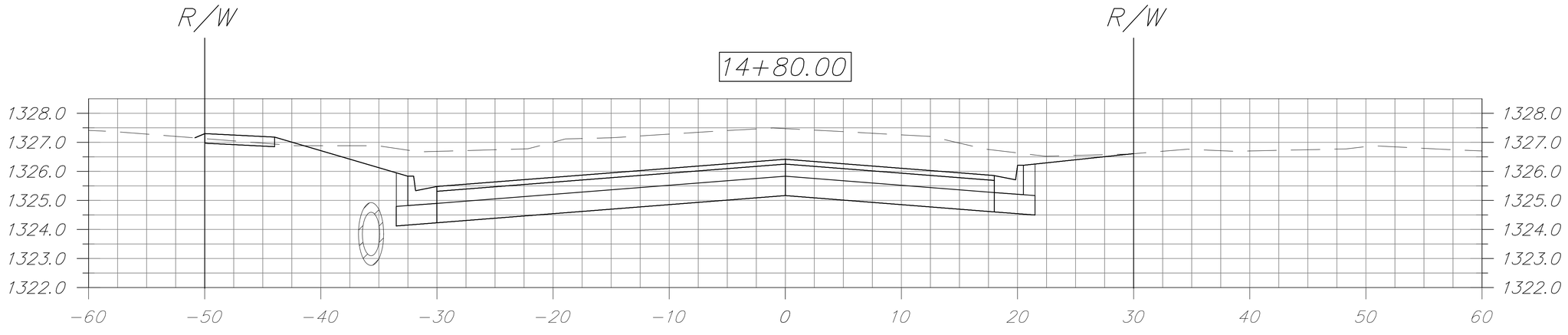
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 14+25.00 to Sta. 14+50.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 107 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical



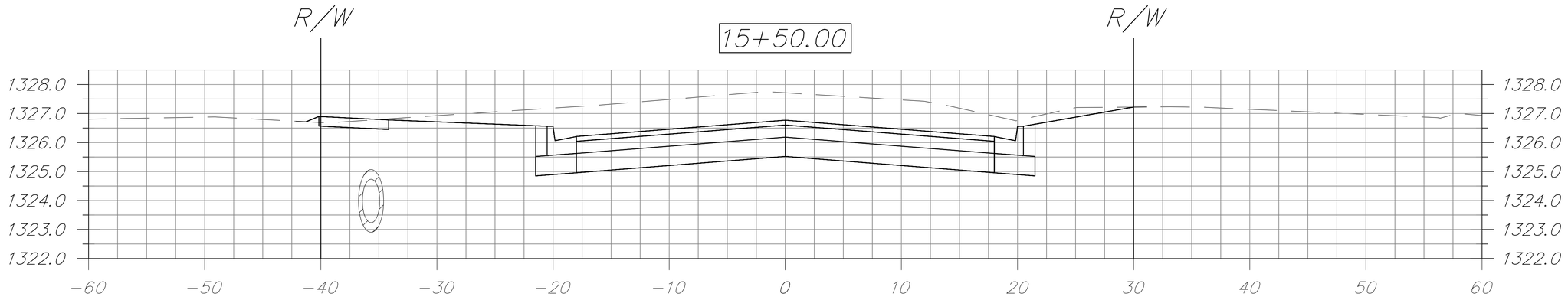


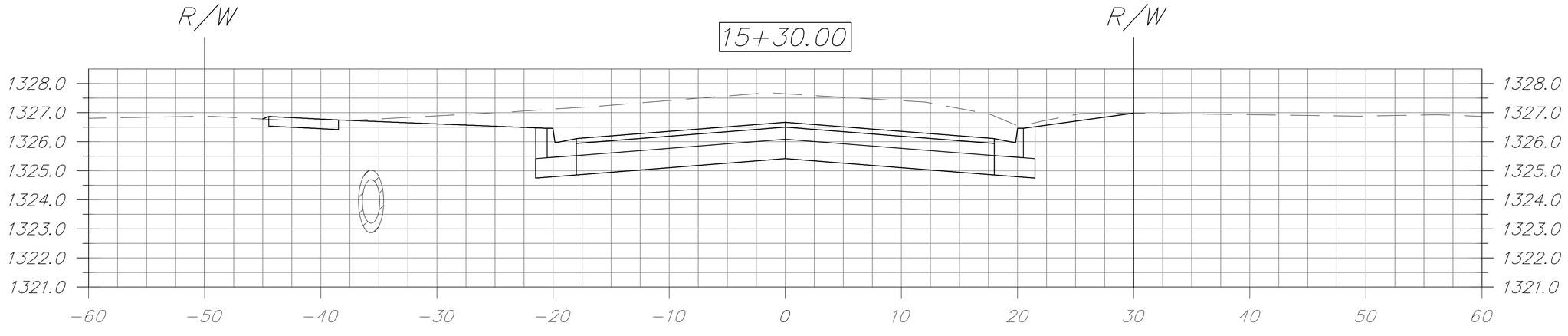
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NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT	29th St. Cross Sections Sta. 14+80.00 to Sta. 15+00.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE	SHEET 108 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





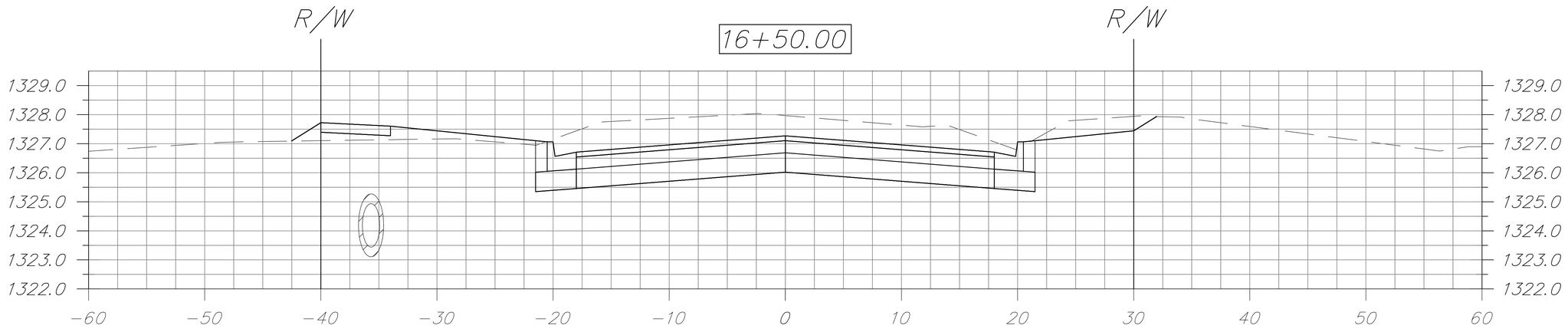
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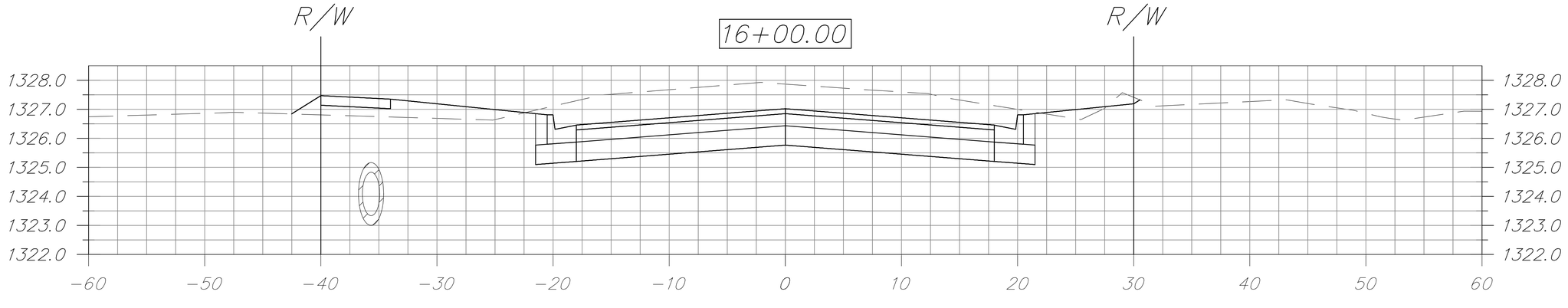
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SHEET 109 OF 177

SCALE:
1" = 5' Horizontal
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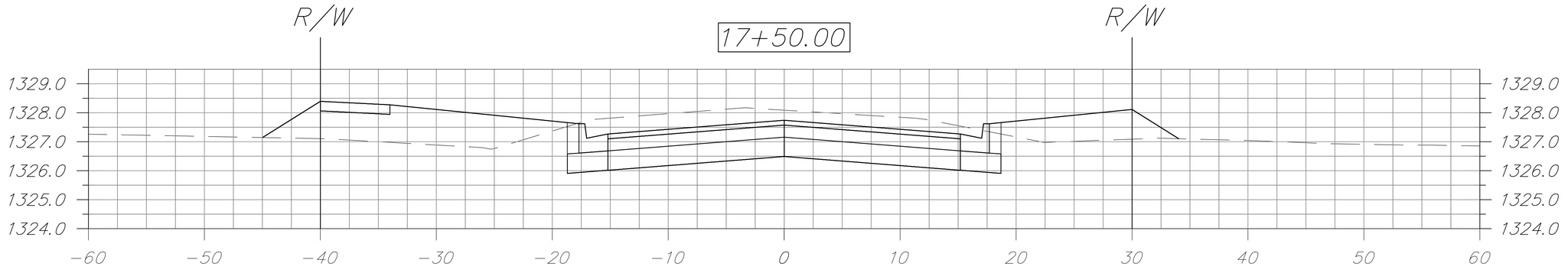
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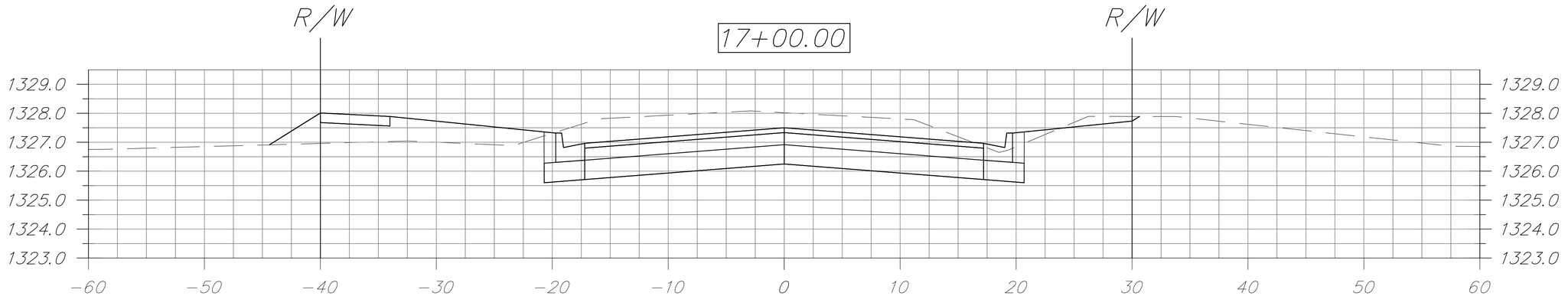
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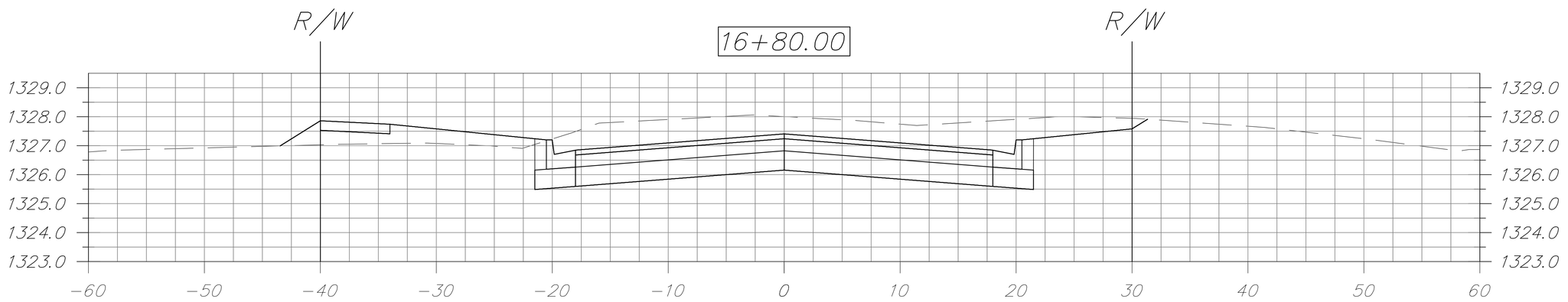
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SHEET 110 OF 177

SCALE:
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1" = 2' Vertical





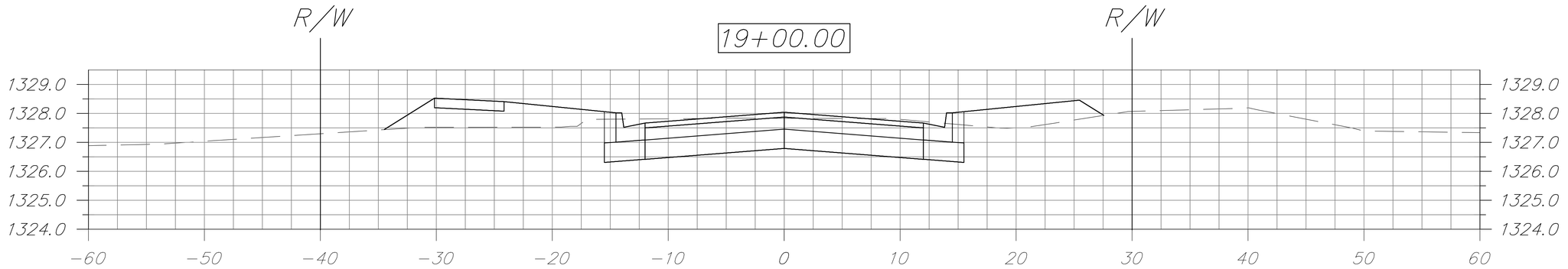


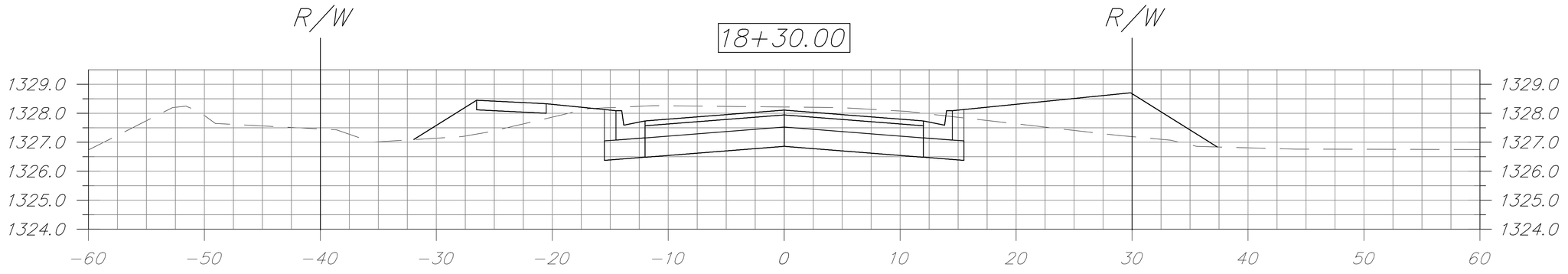
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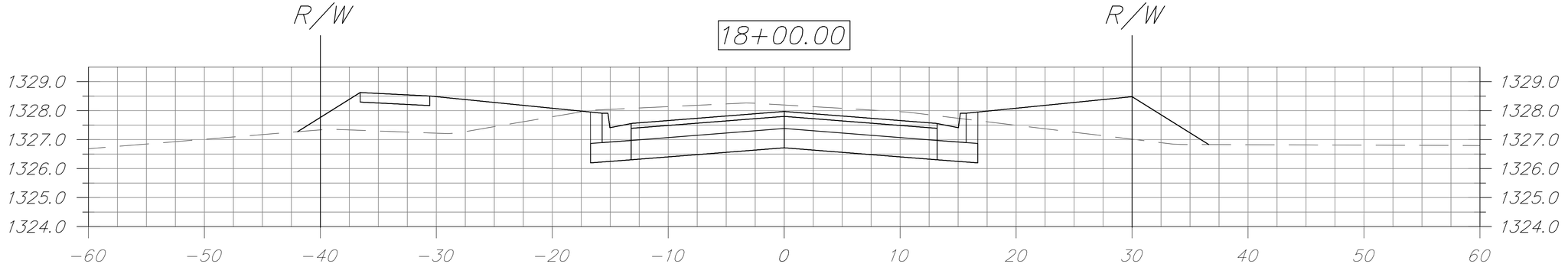
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SCALE:
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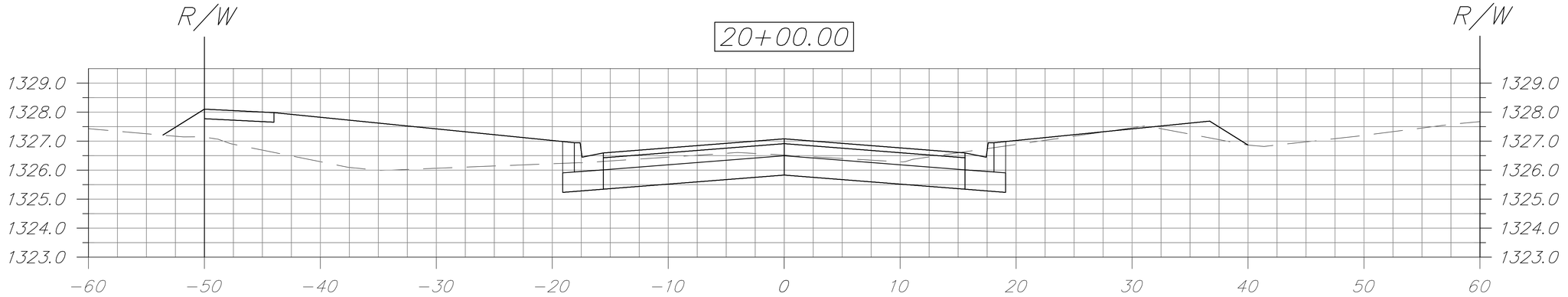
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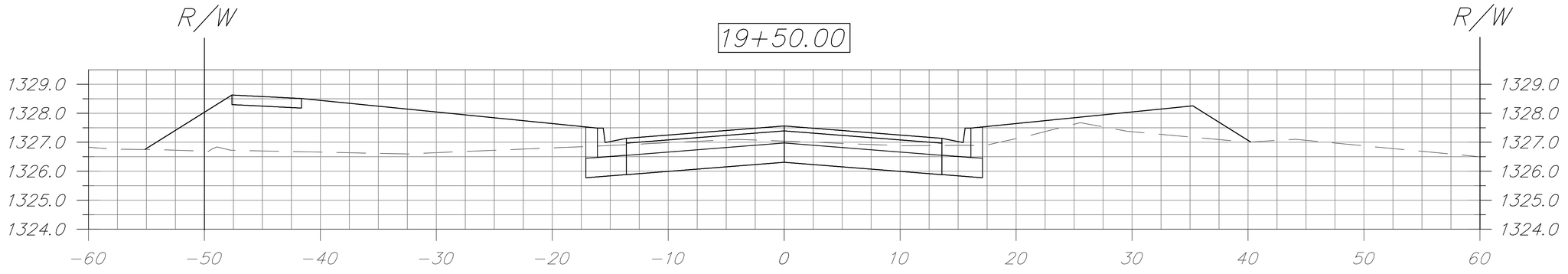
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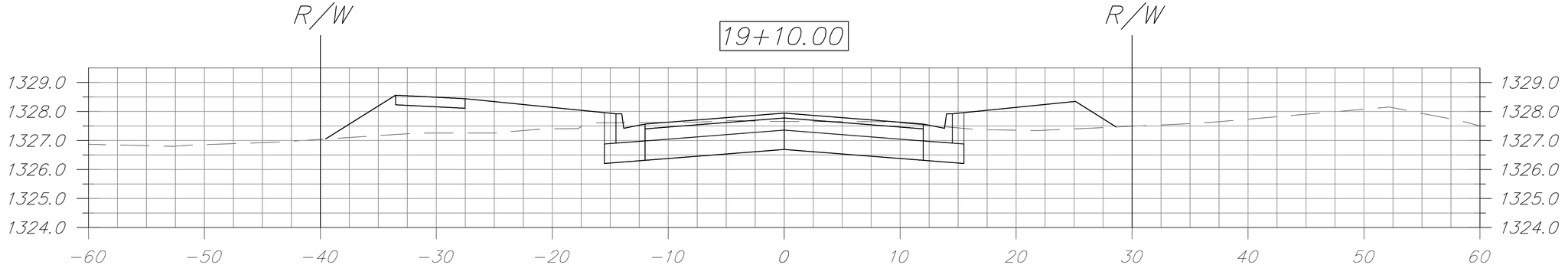
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SHEET 112 OF 177

SCALE:
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1" = 2' Vertical





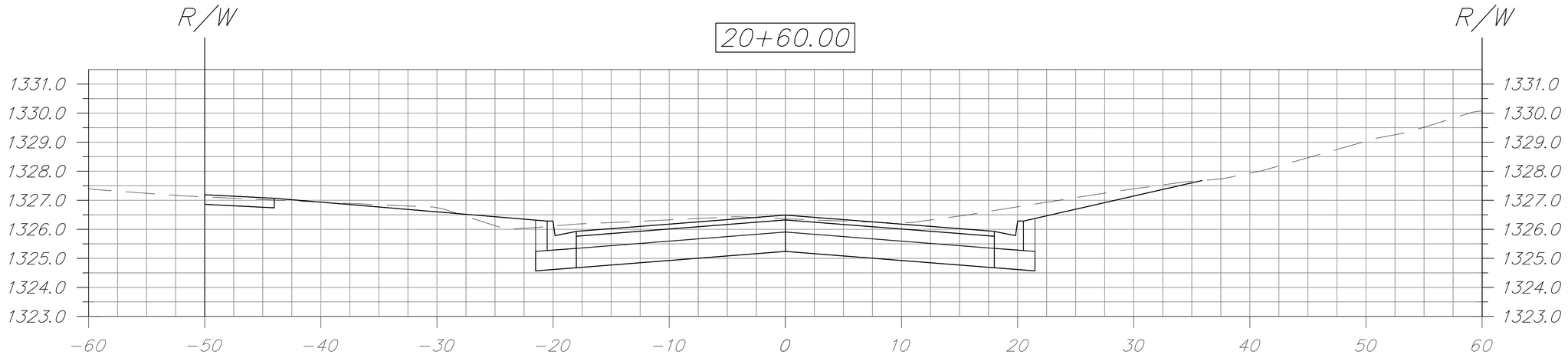


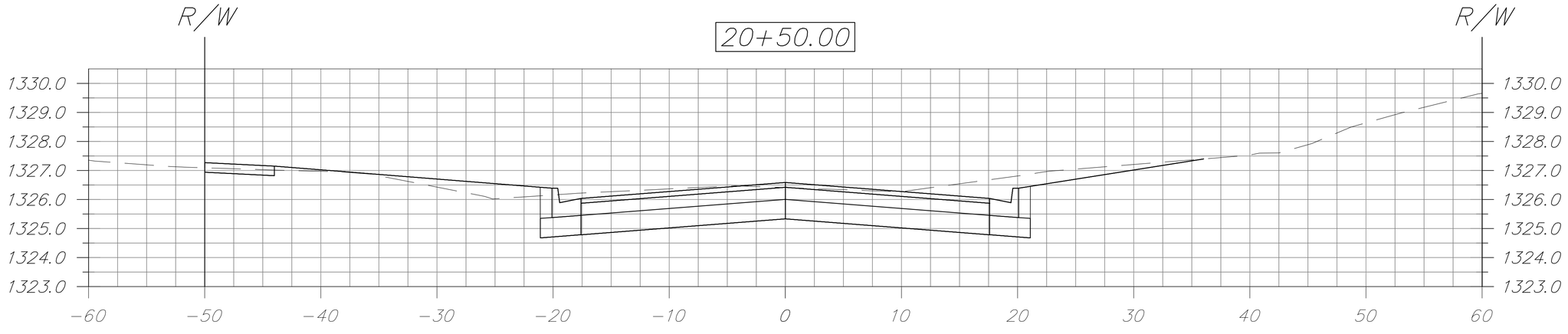
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NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT	29th St. Cross Sections Sta. 19+10.00 to Sta. 20+00.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE	SHEET 113 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





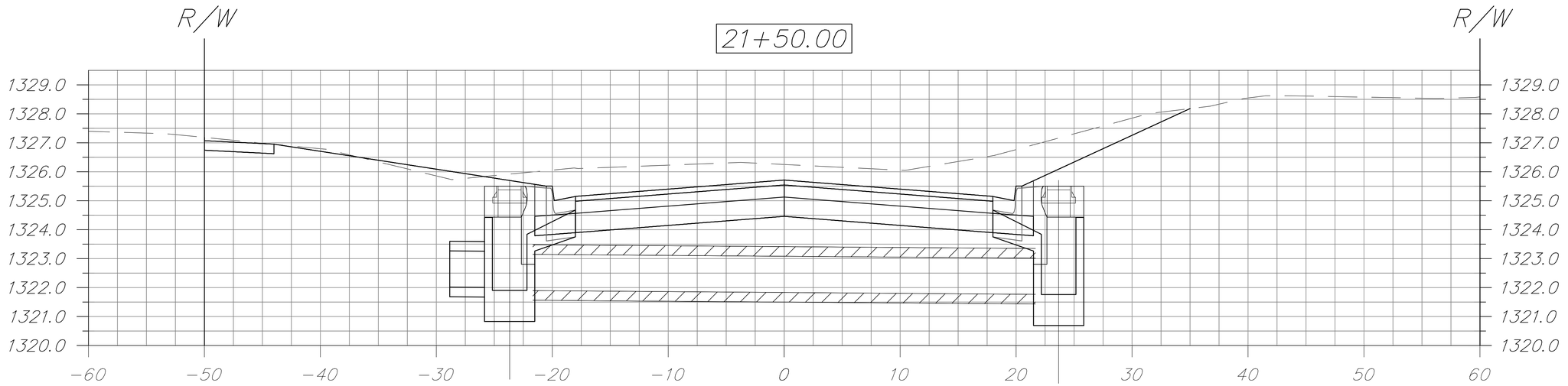
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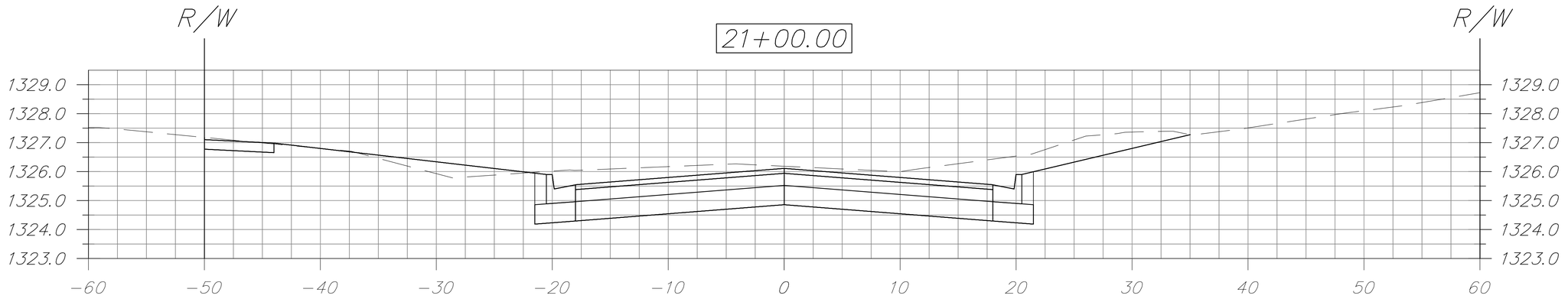
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 20+50.00 to Sta. 20+60.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 114 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





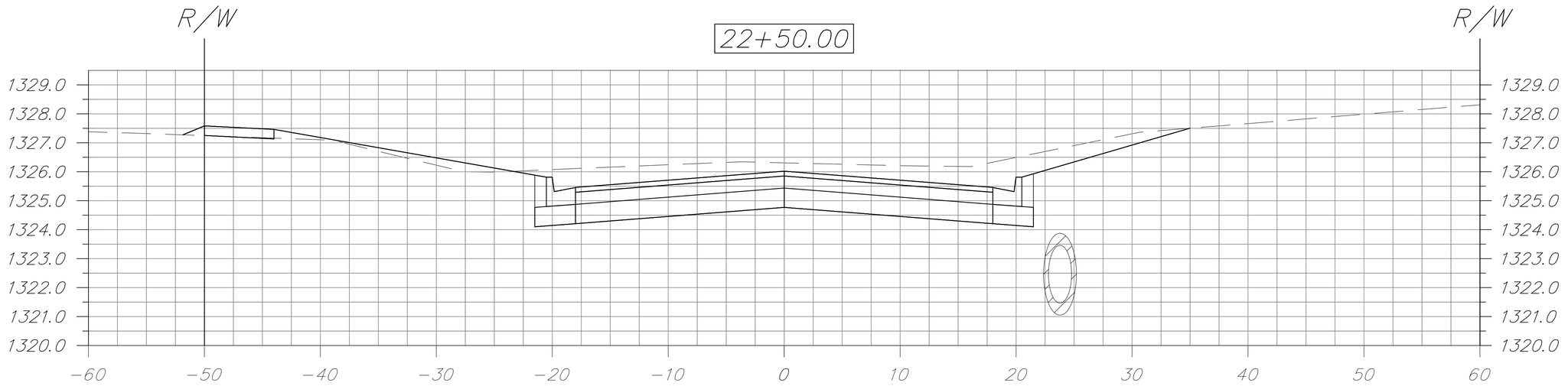
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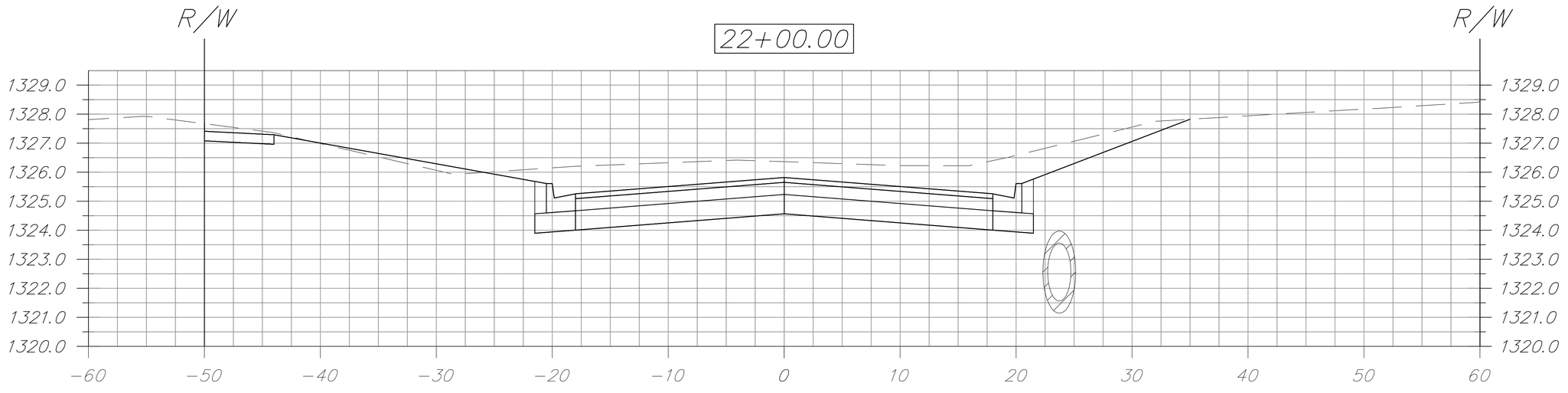
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 21+00.00 to Sta. 21+50.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 115 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





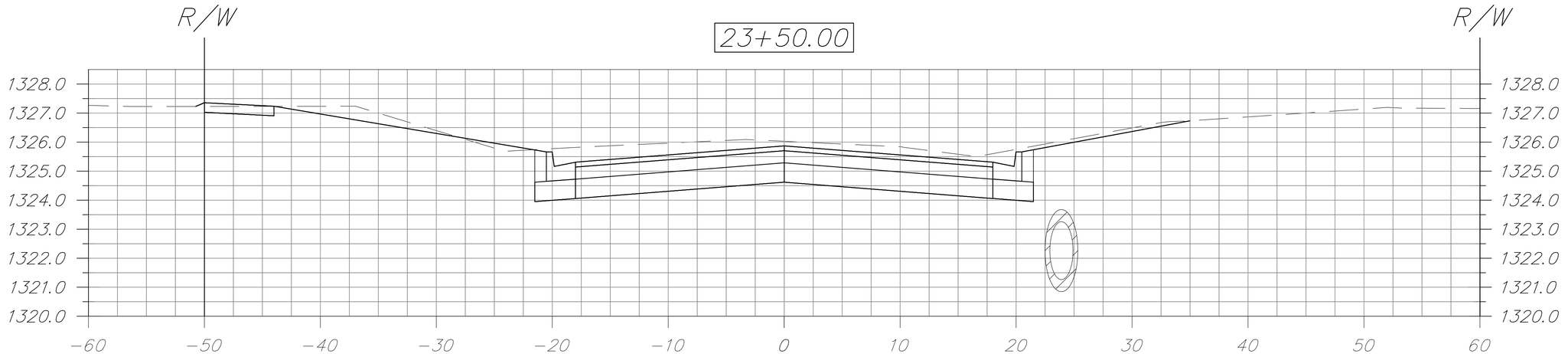
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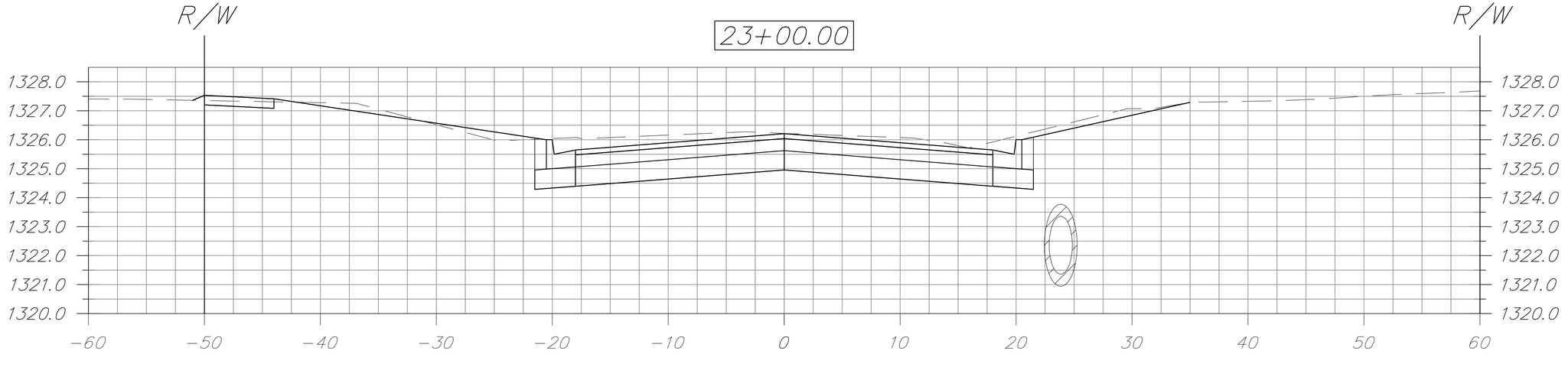
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 22+00.00 to Sta. 22+50.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
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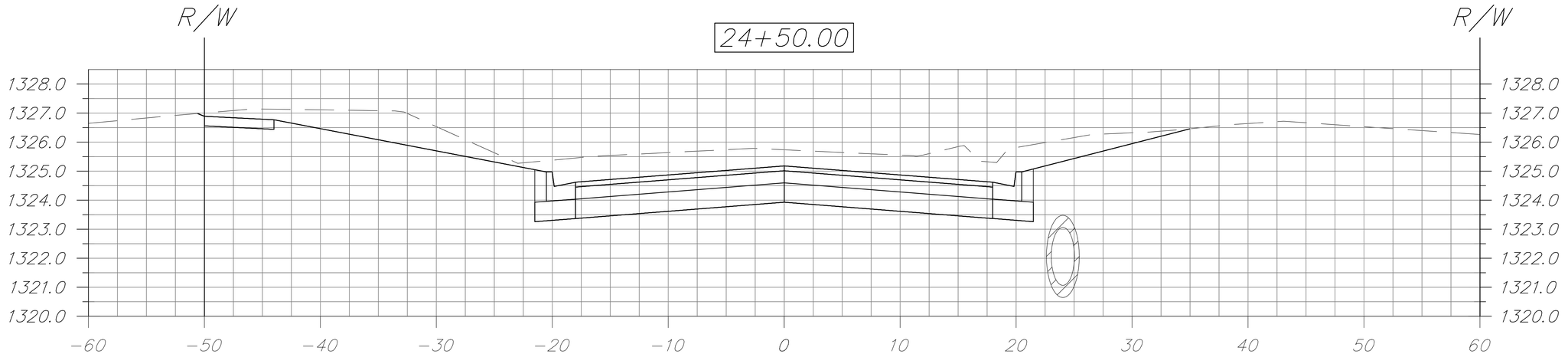
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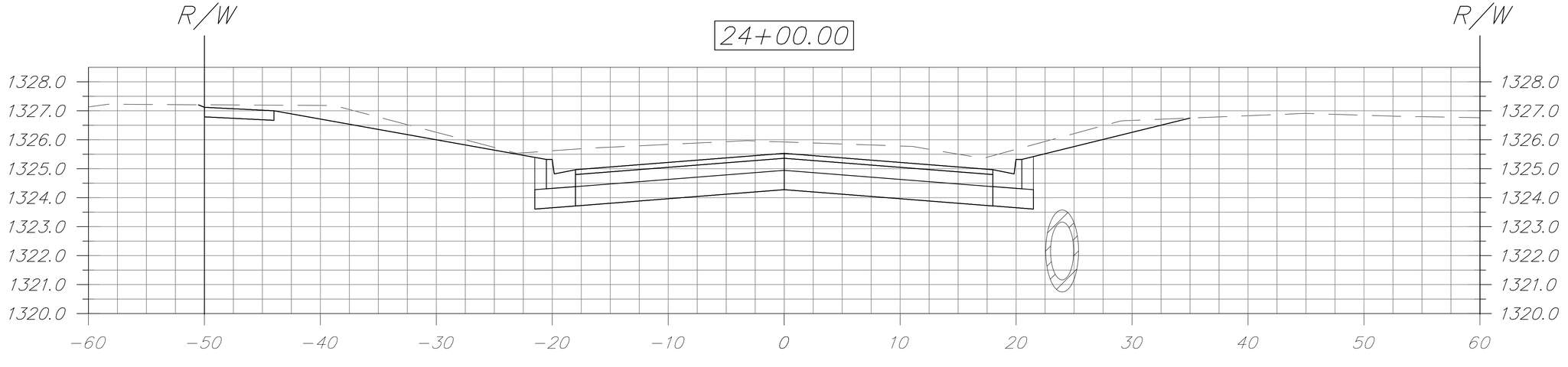
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 23+00.00 to Sta. 23+50.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 117 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





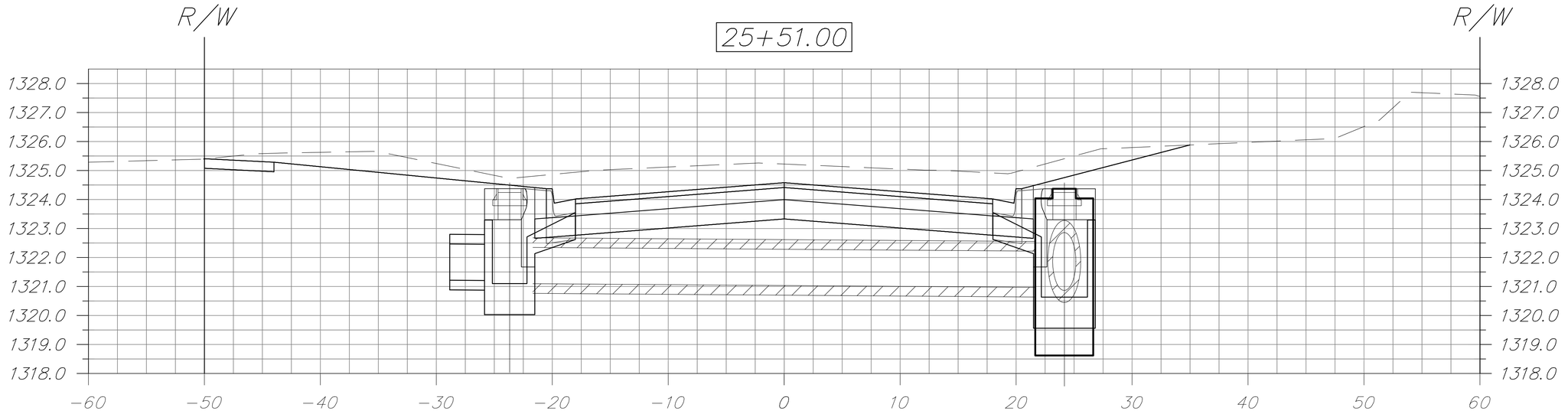
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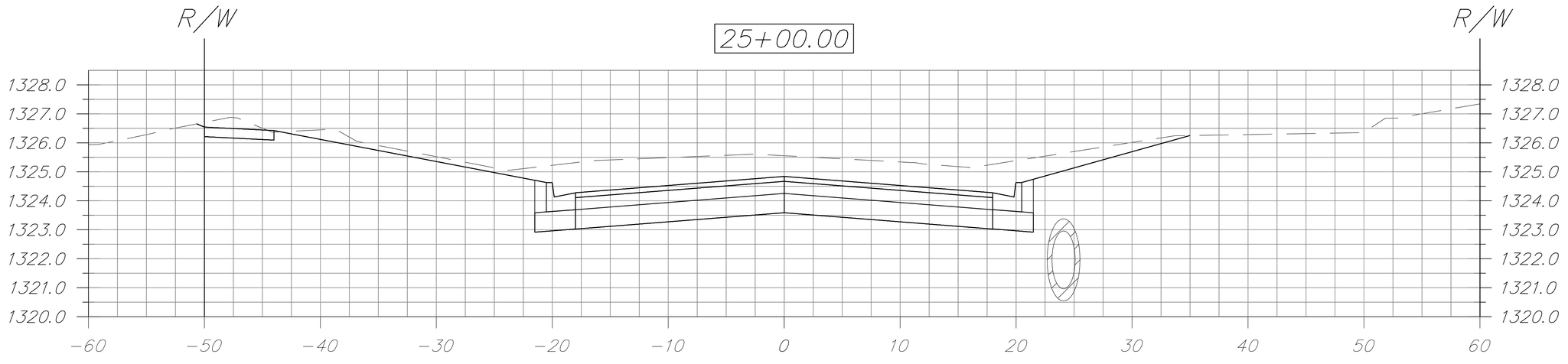
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 24+00.00 to Sta. 24+50.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 118 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





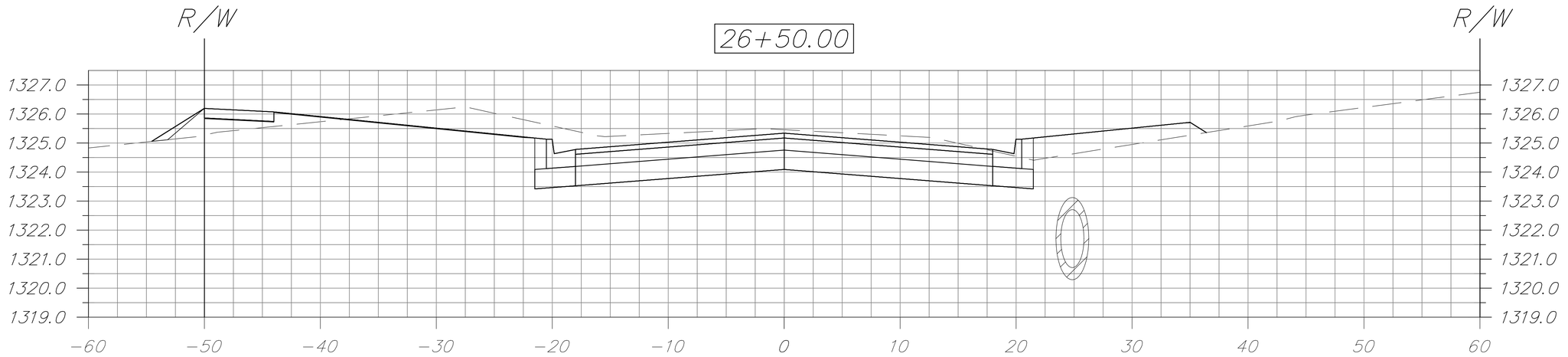
Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

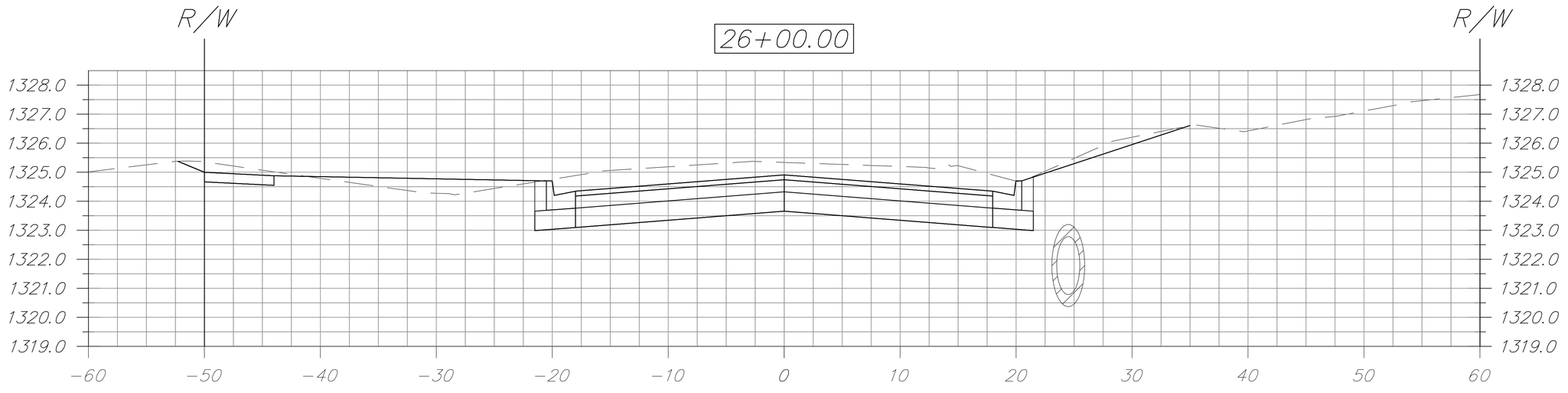
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 25+00.00 to Sta. 25+51.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





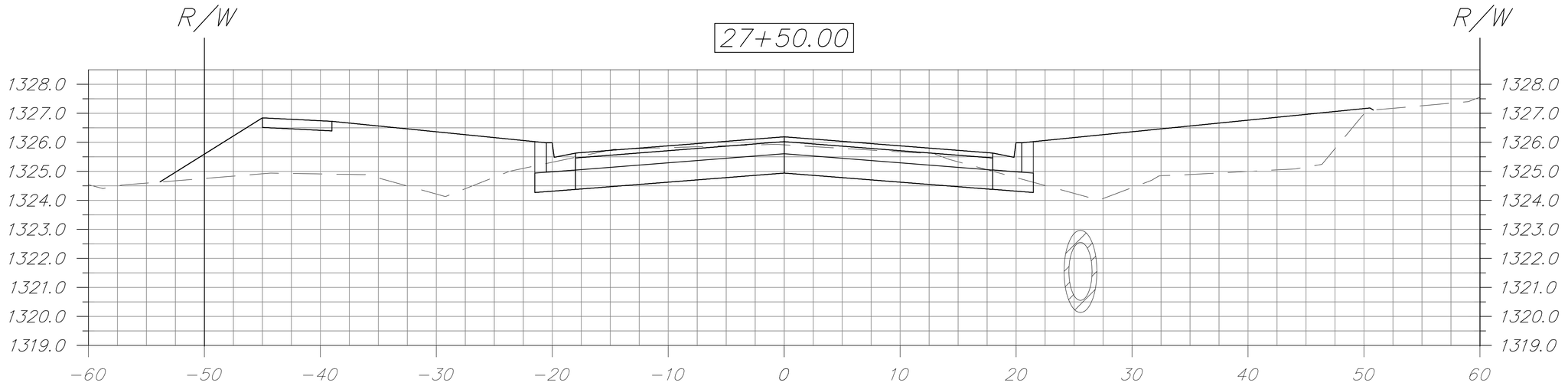
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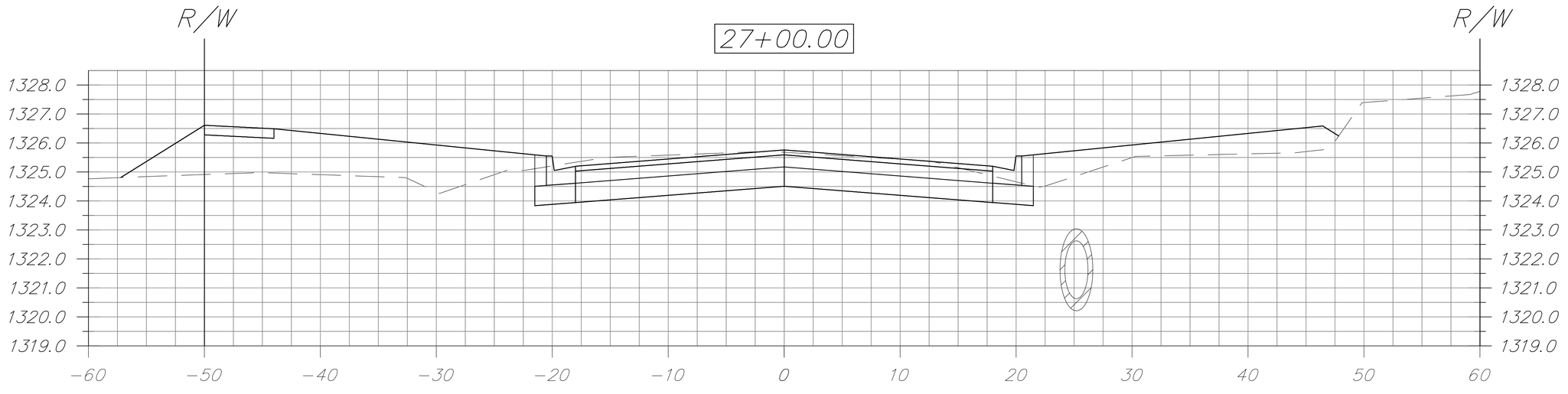
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 26+0.00 to Sta. 26+50.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





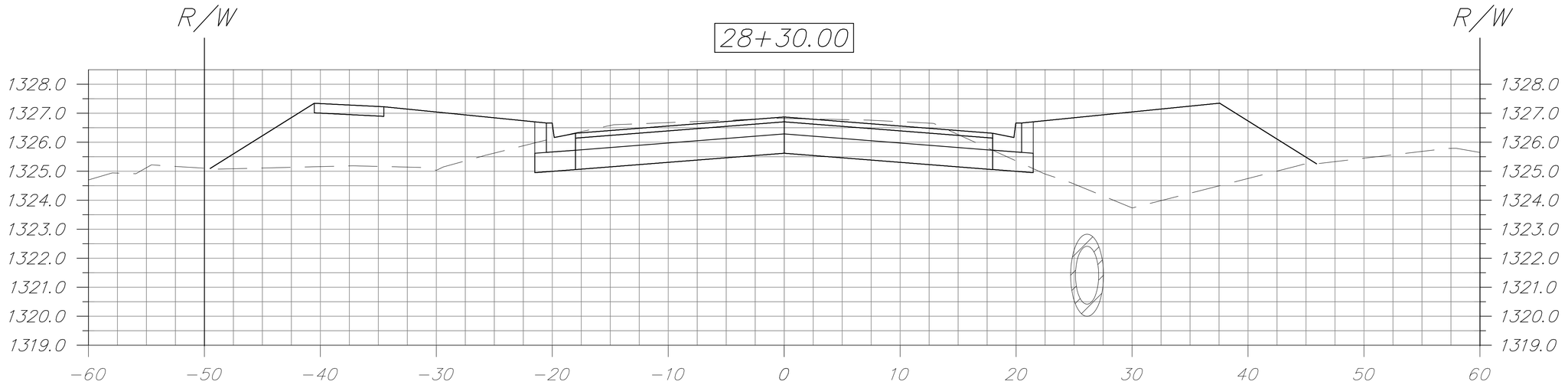
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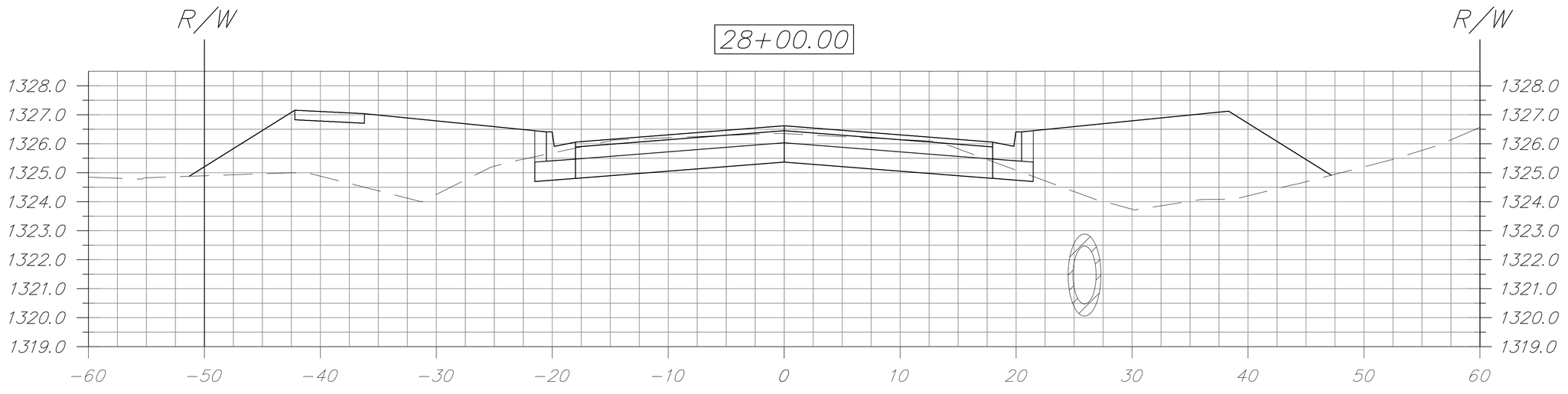
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 27+00.00 to Sta. 27+50.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





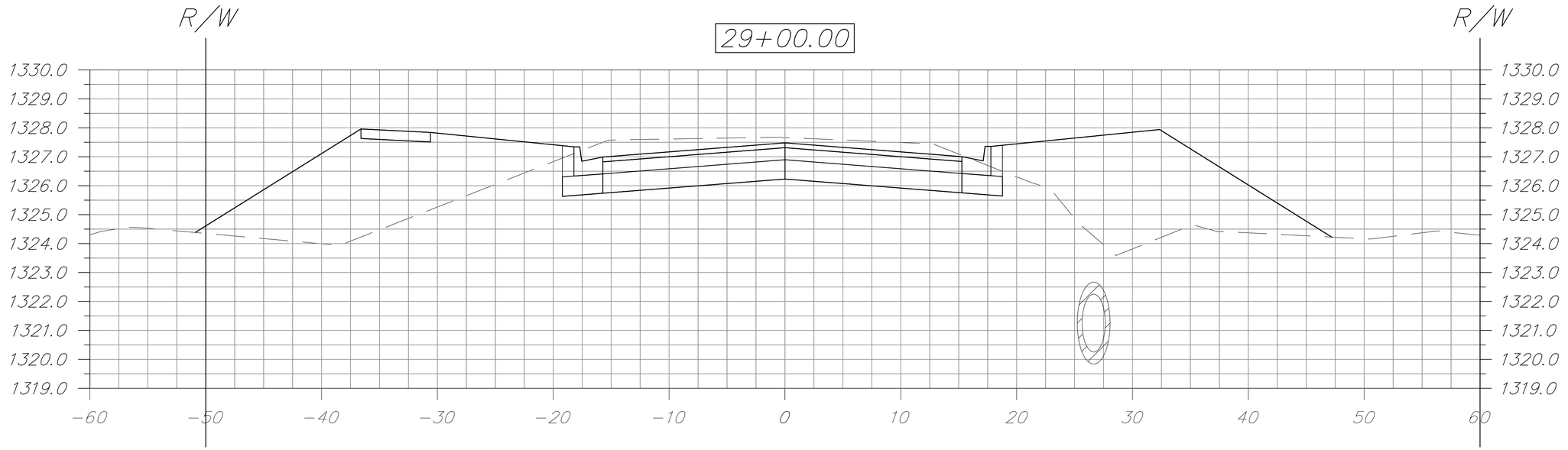
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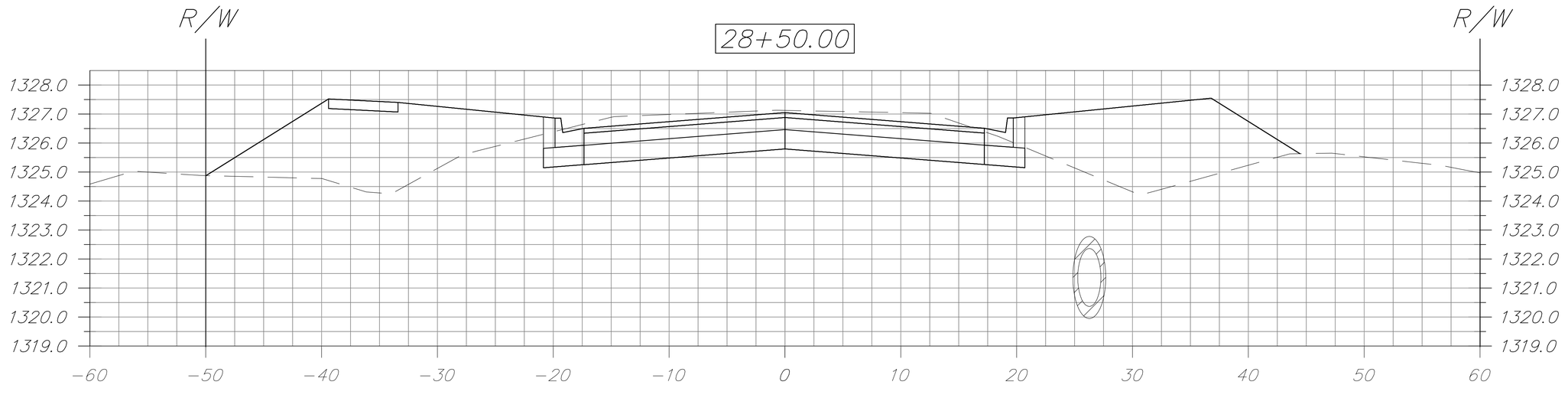
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 28+00.00 to Sta. 28+30.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

Project No. 09-09-E382

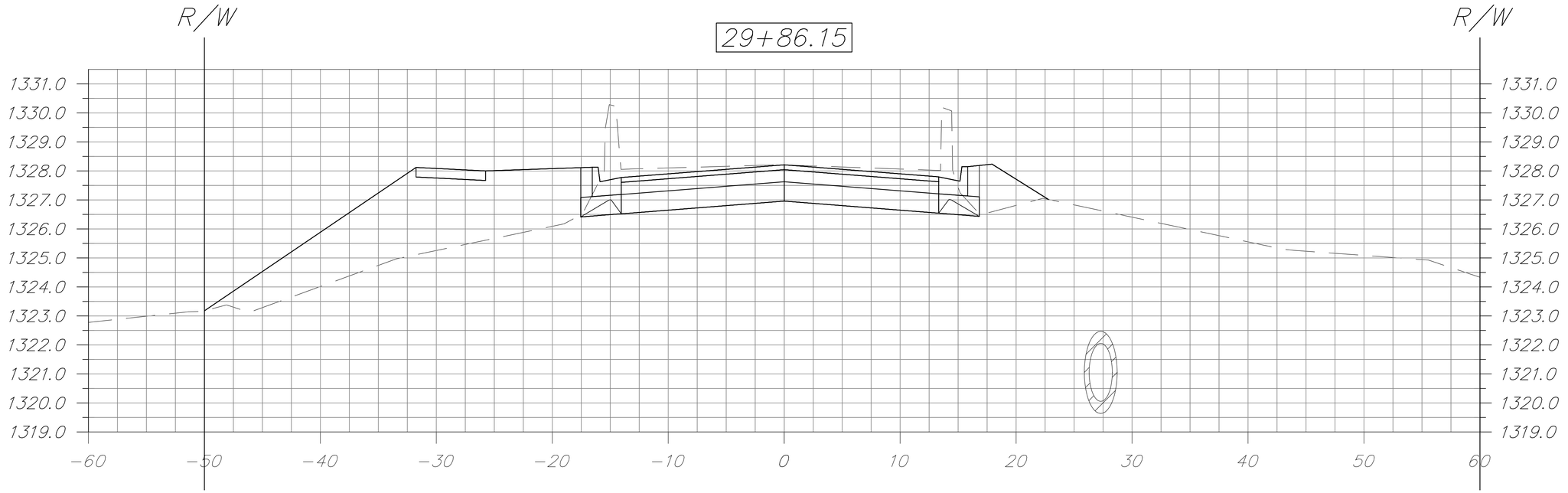
CAPITAL IMPROVEMENT PROJECT

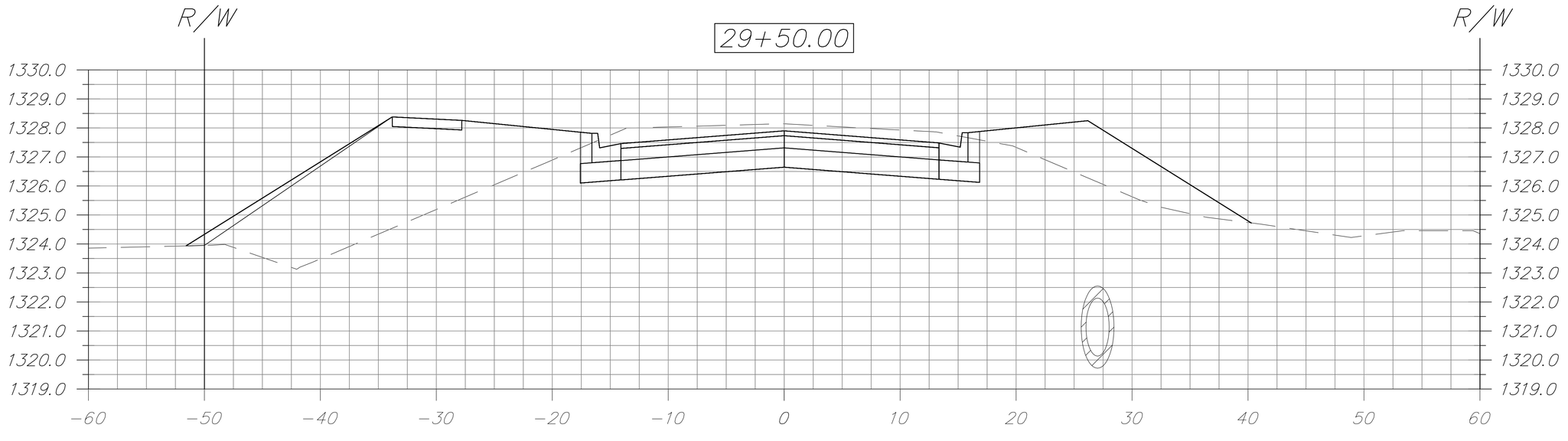
29th St. Cross Sections
Sta. 28+50.00 to Sta. 29+00.00

29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical



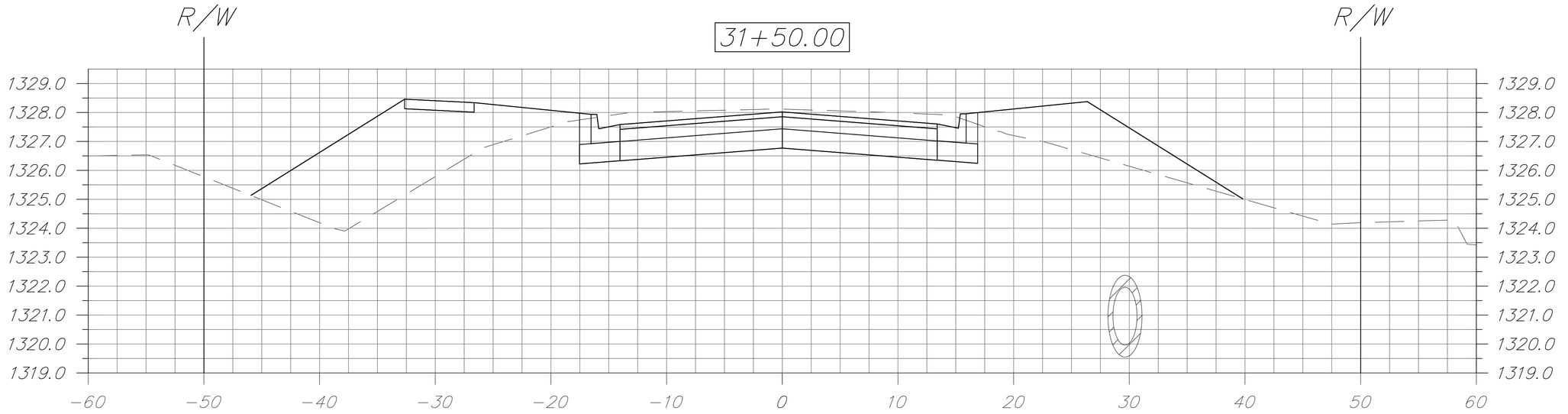


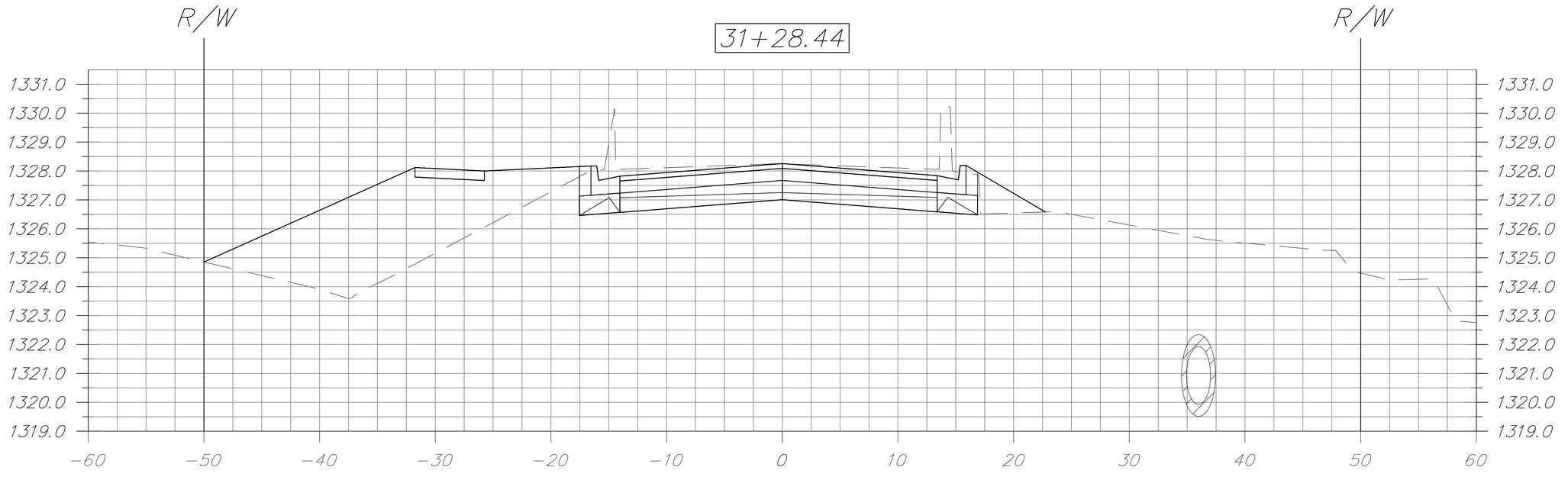
Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 29+50.00 to Sta. 29+86.15 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE	SHEET 124 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

Project No. 09-09-E382

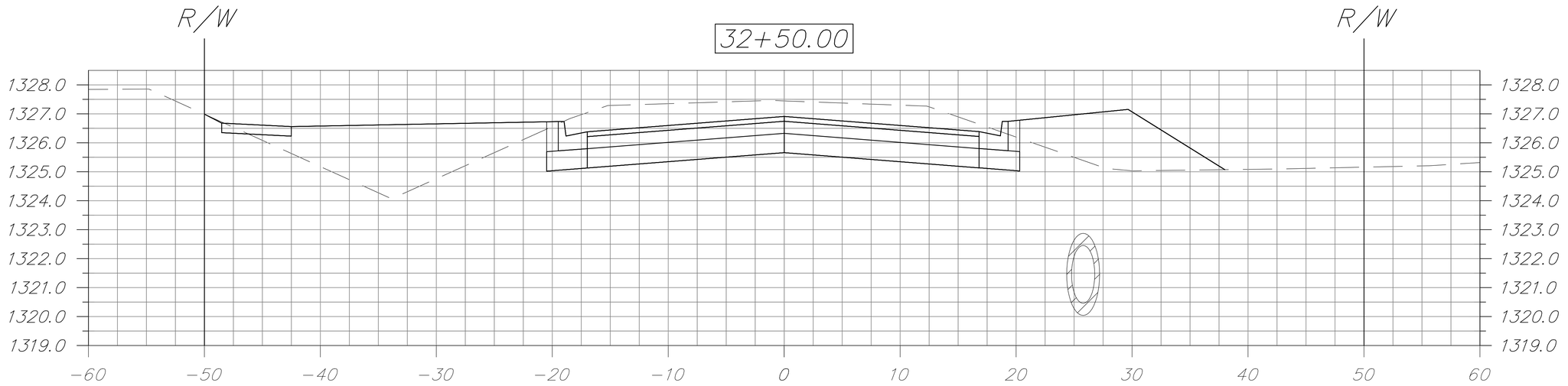
CAPITAL IMPROVEMENT PROJECT

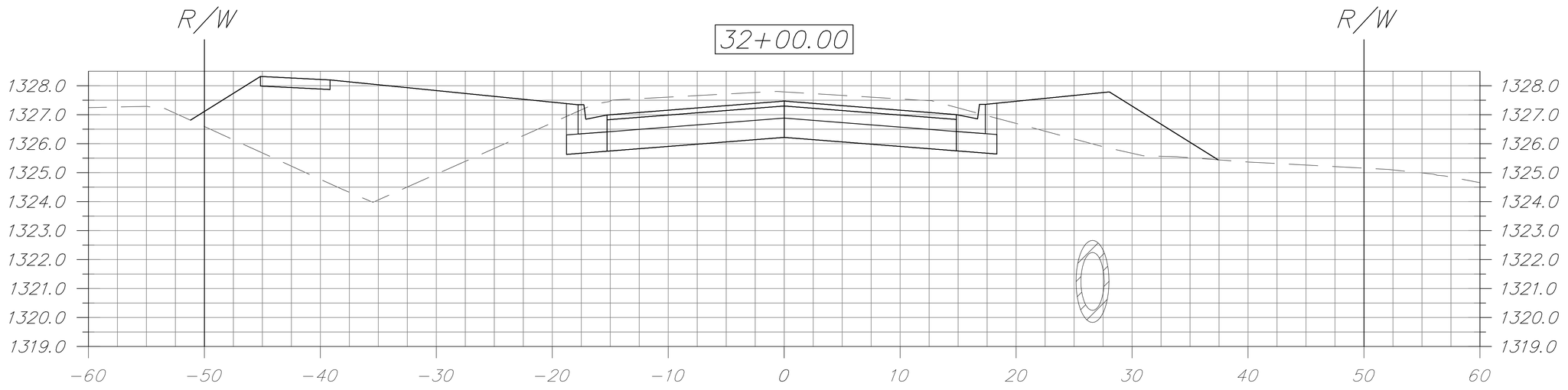
29th St. Cross Sections
Sta. 31+28.44 to Sta. 31+50.00

29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





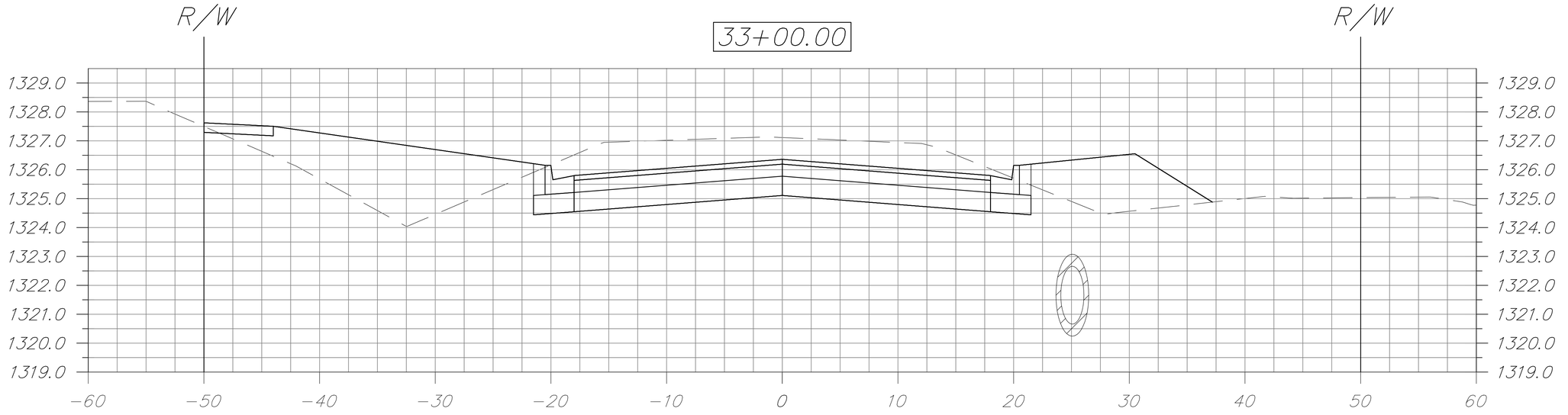
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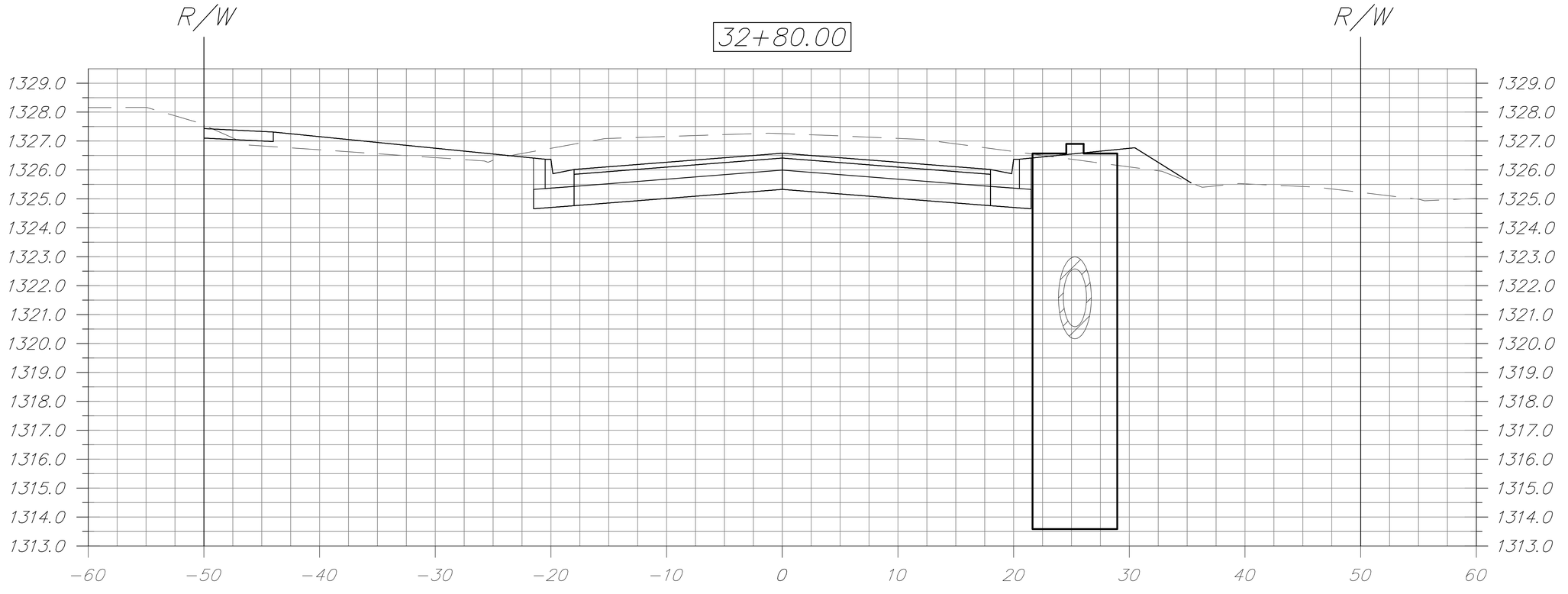
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 32+00.00 to Sta. 32+50.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





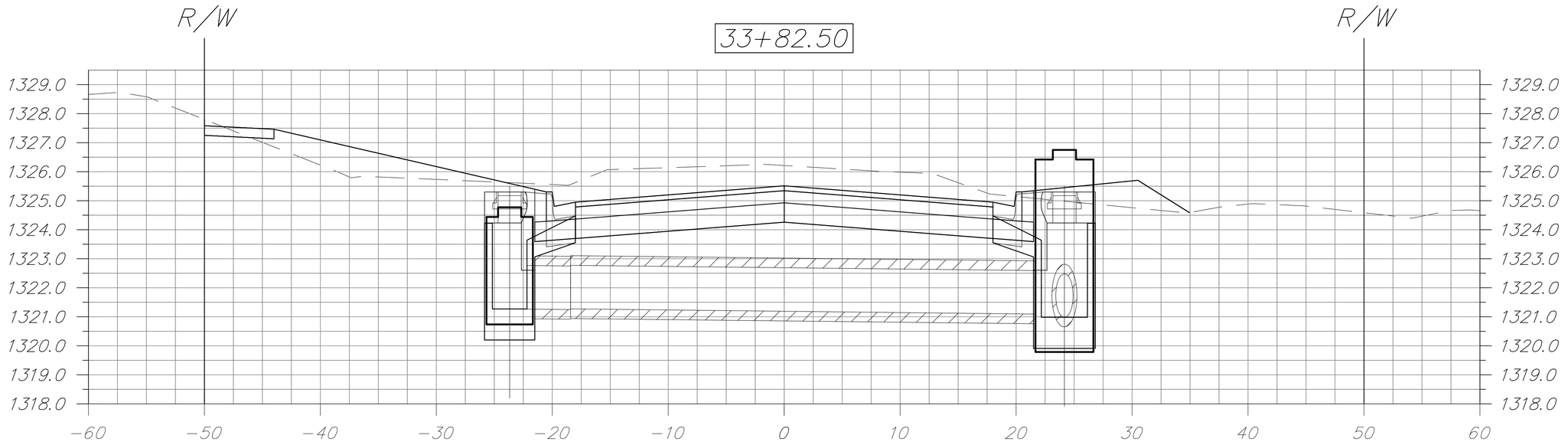
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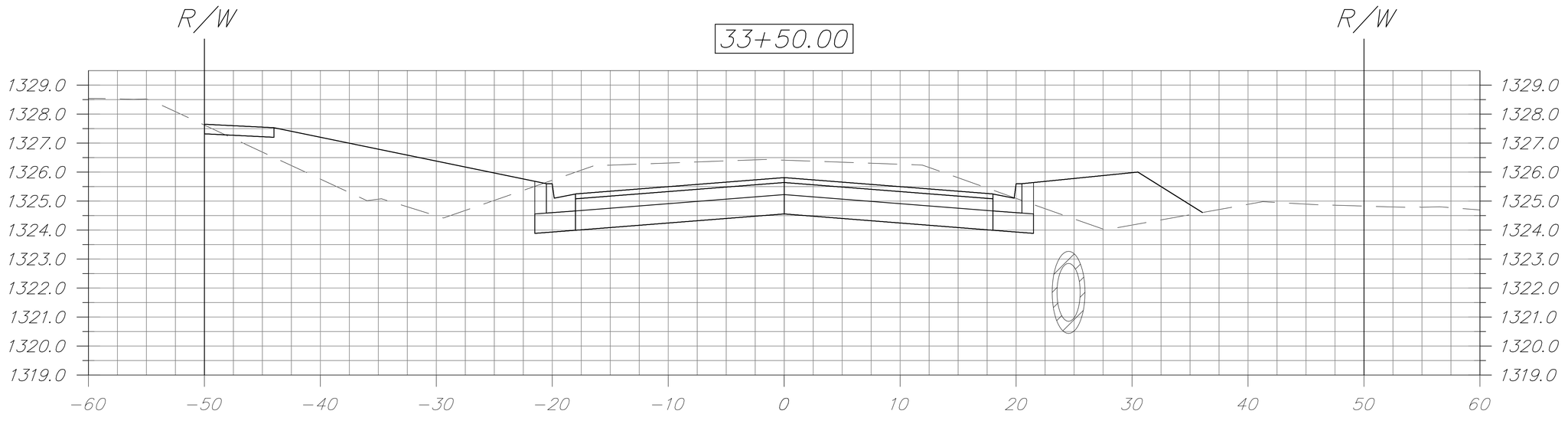
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 32+80.00 to Sta. 33+00.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 127 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





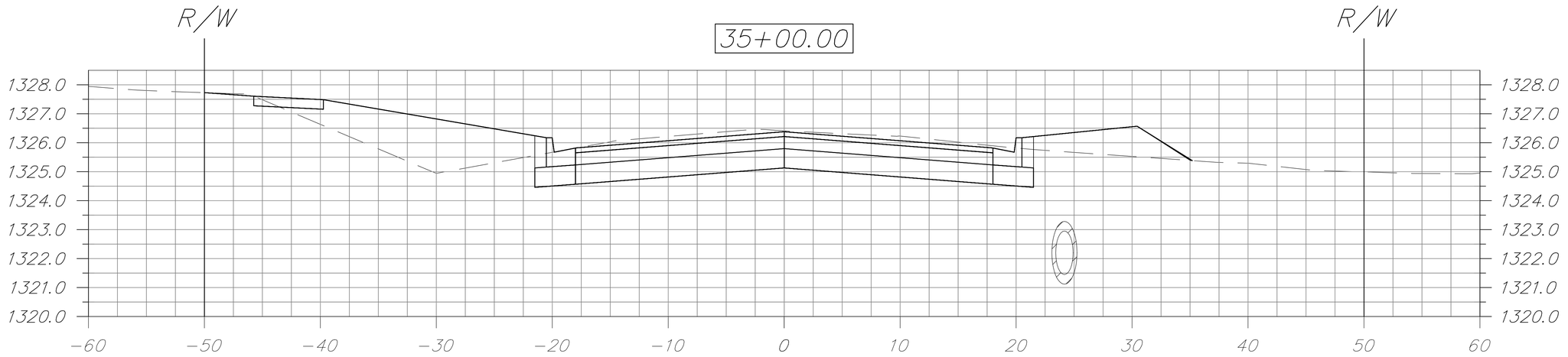
Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

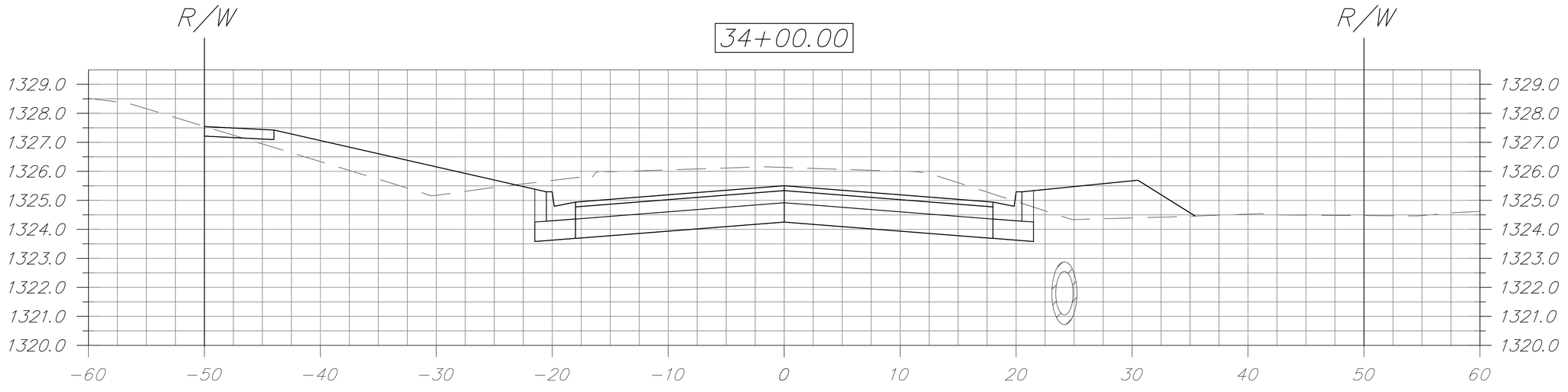
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 33+50.00 to Sta. 33+82.50 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 128 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





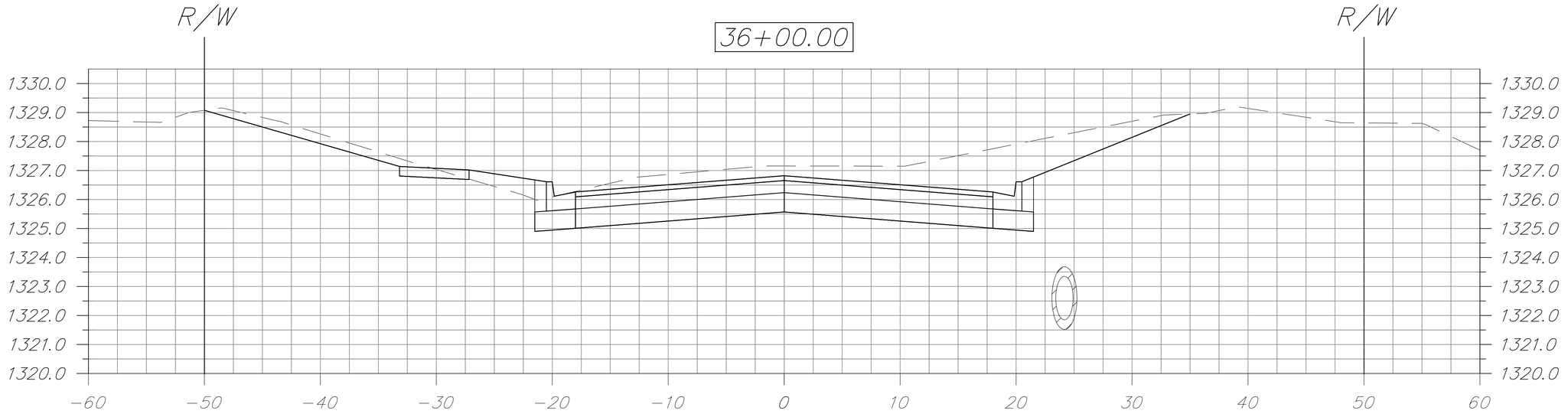
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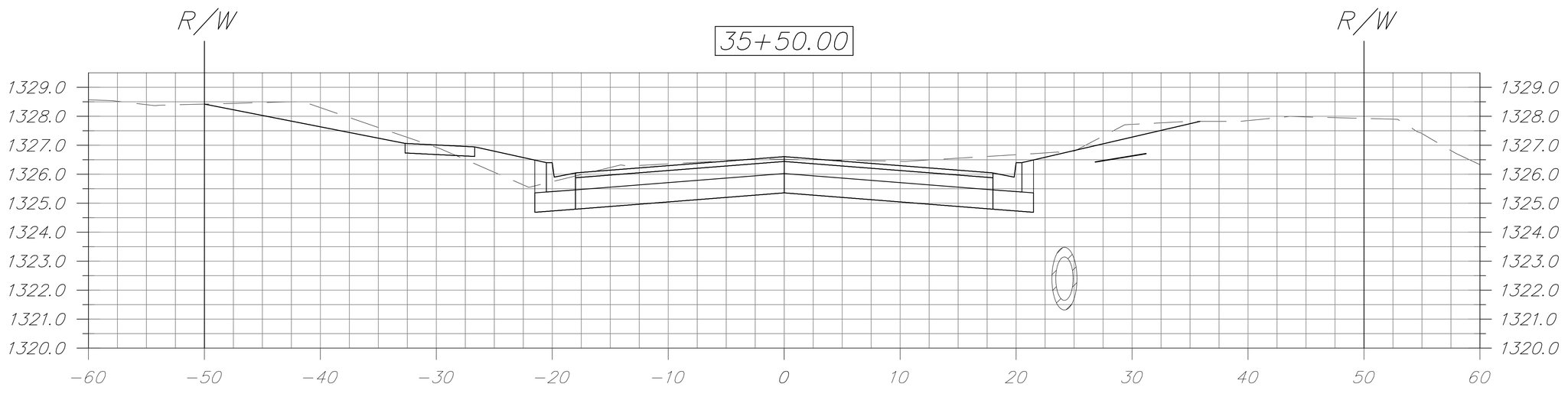
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 34+00.00 to Sta. 35+00.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





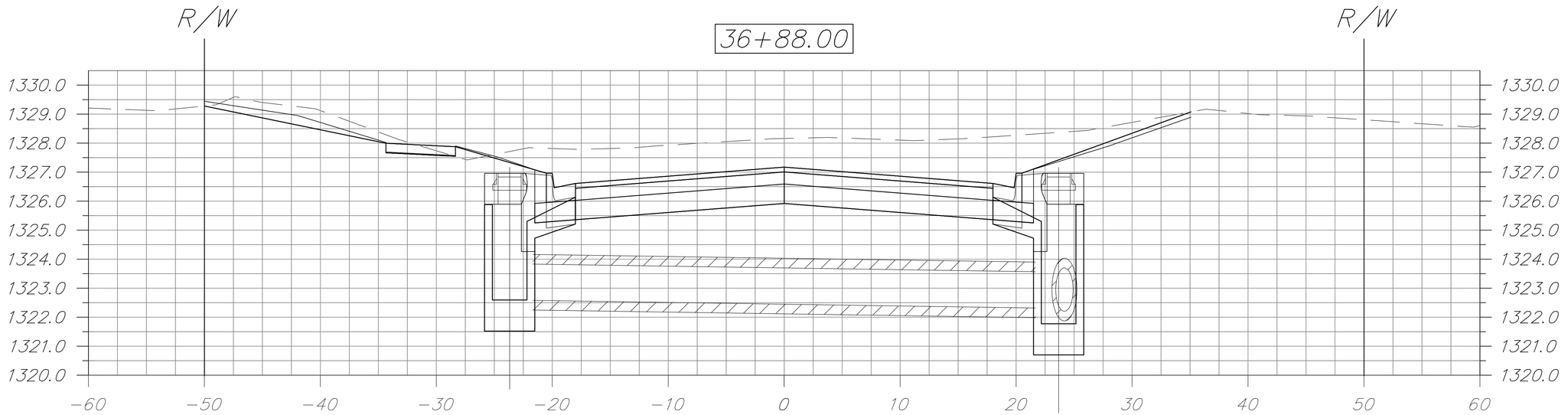
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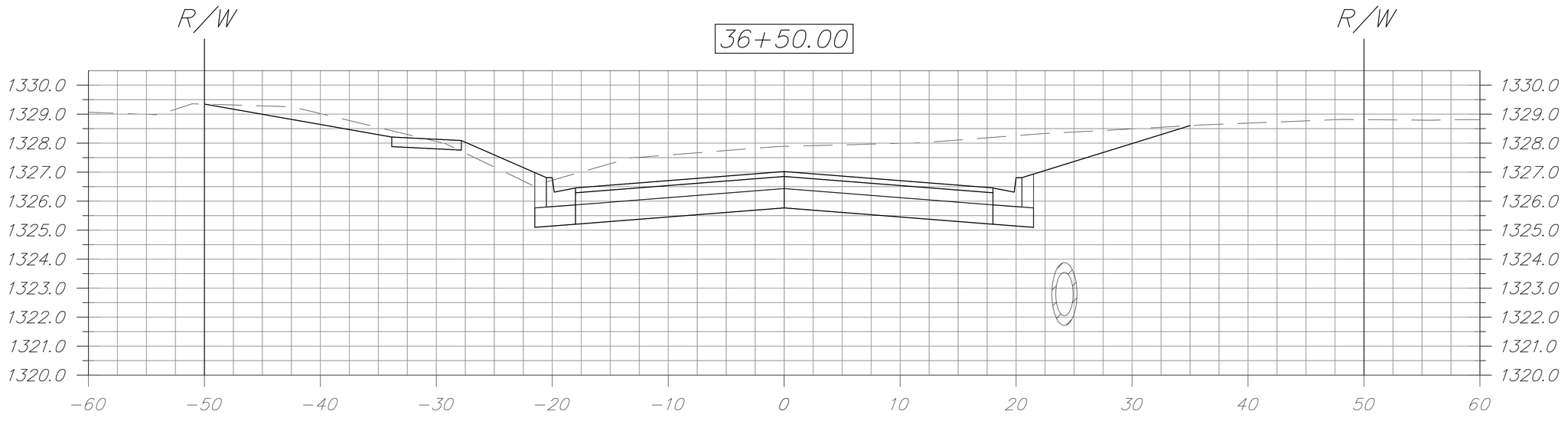
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 35+50.00 to Sta. 36+00.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





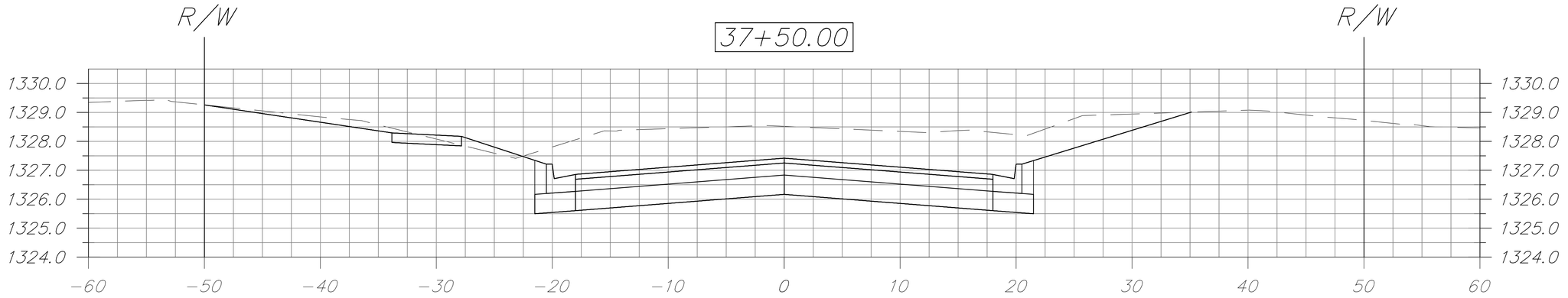
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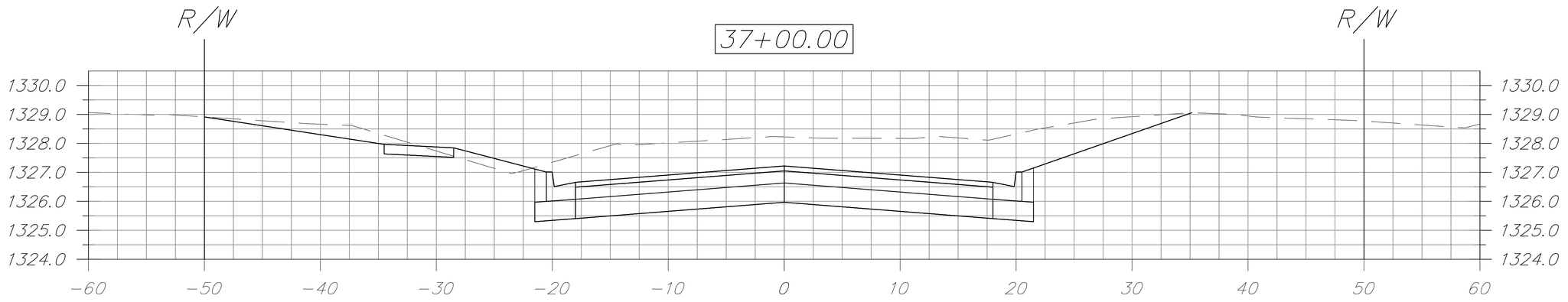
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta.36+50.00 to Sta. 36+88.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 131 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





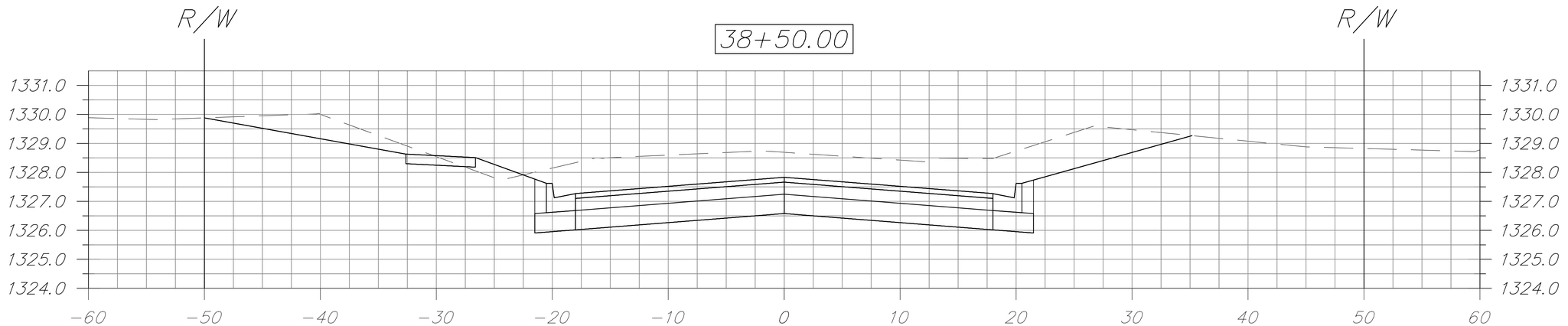
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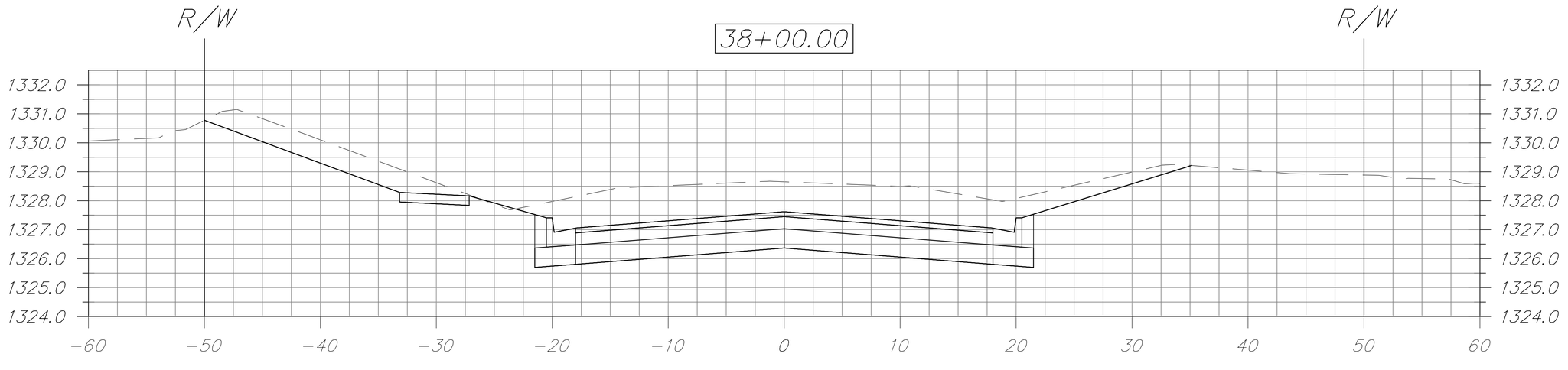
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 37+00.00 to Sta. 37+50.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





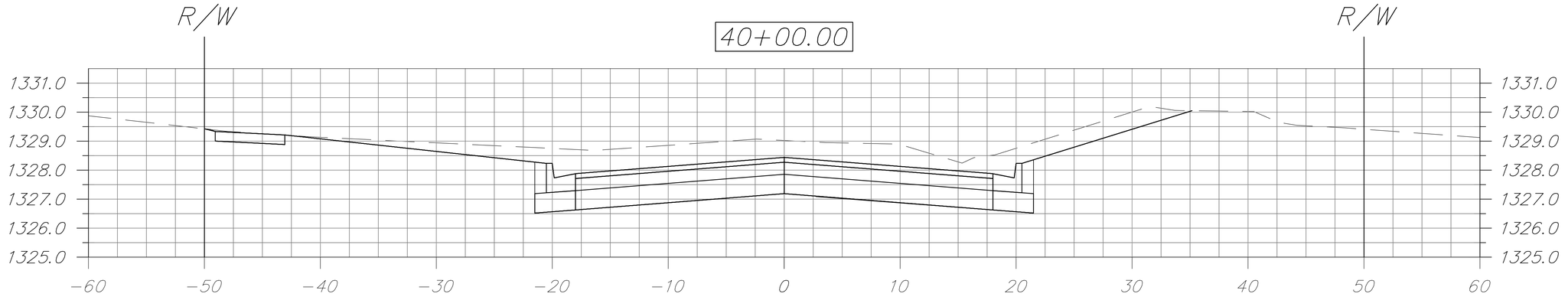
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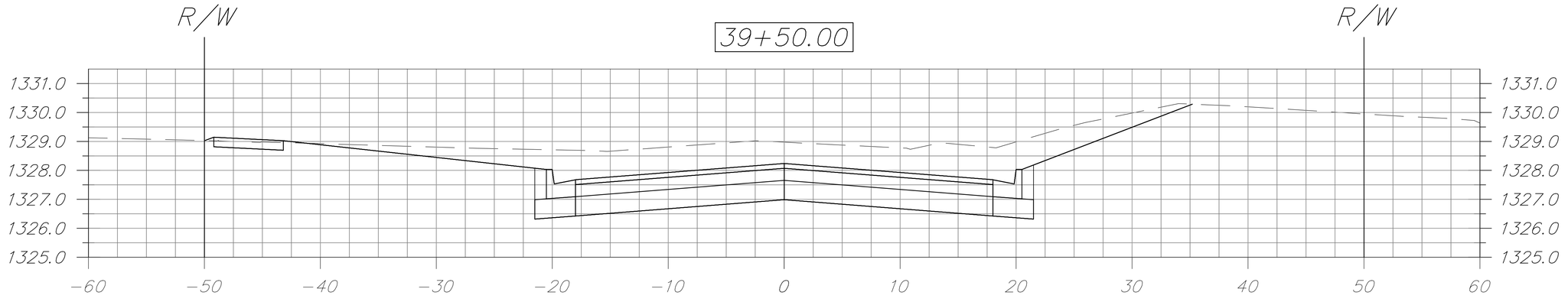
NOVEMBER, 2013

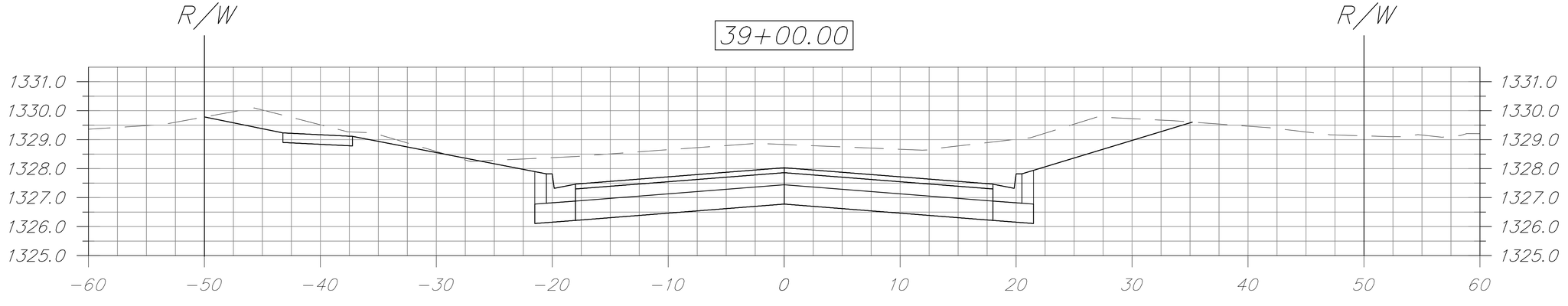
Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 38+00.00 to Sta. 38+50.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 133 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical







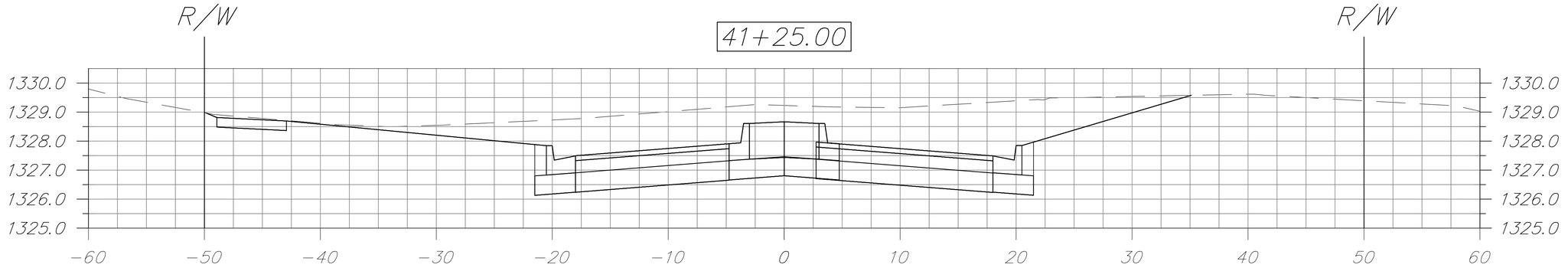
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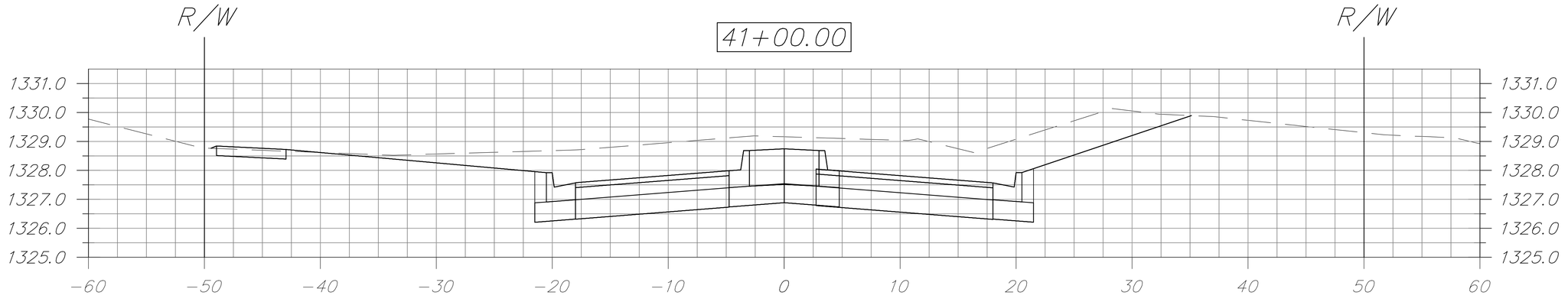
NOVEMBER, 2013

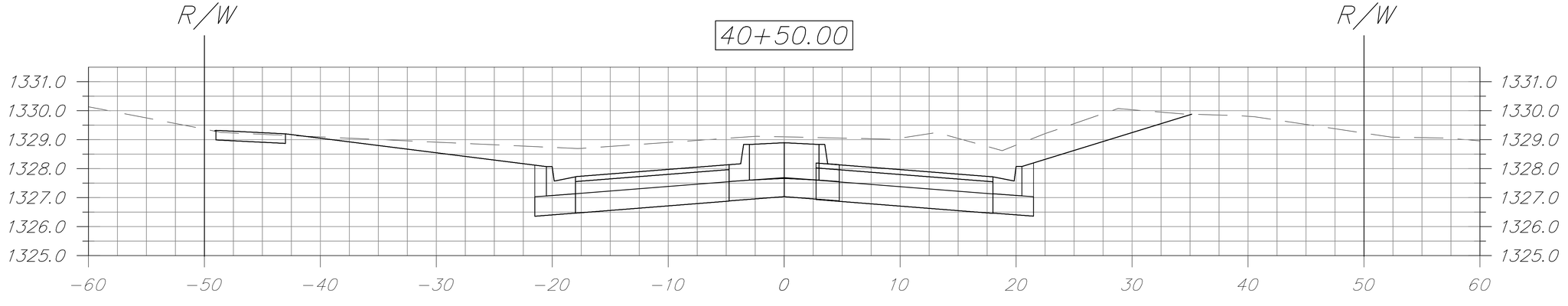
Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 39+00.00 to Sta. 40+00.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 134 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical







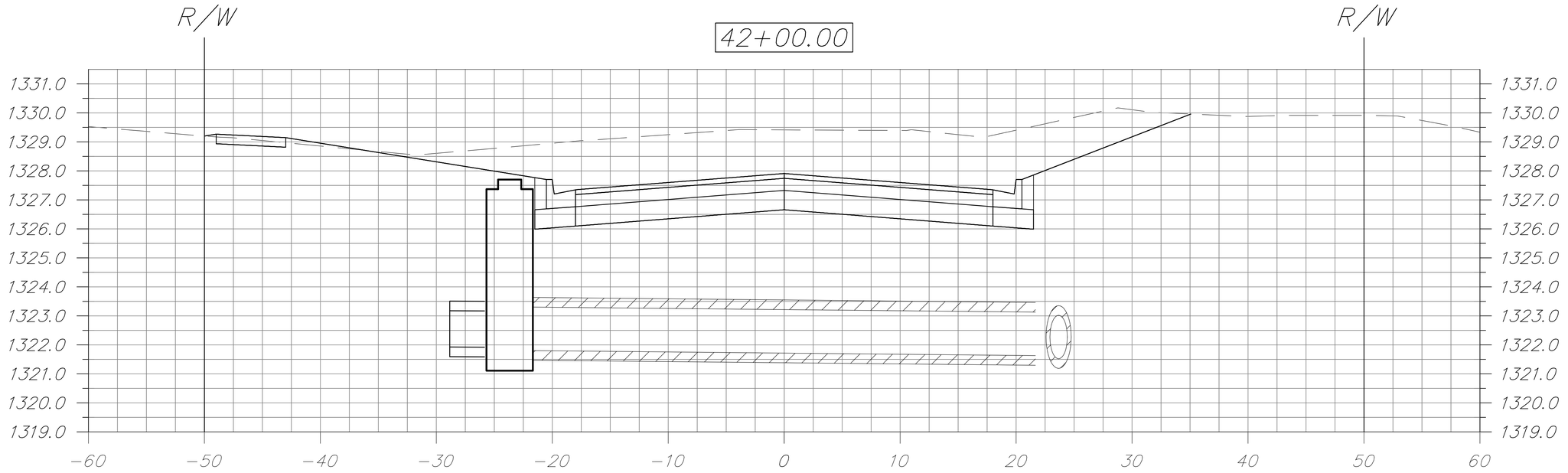
Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

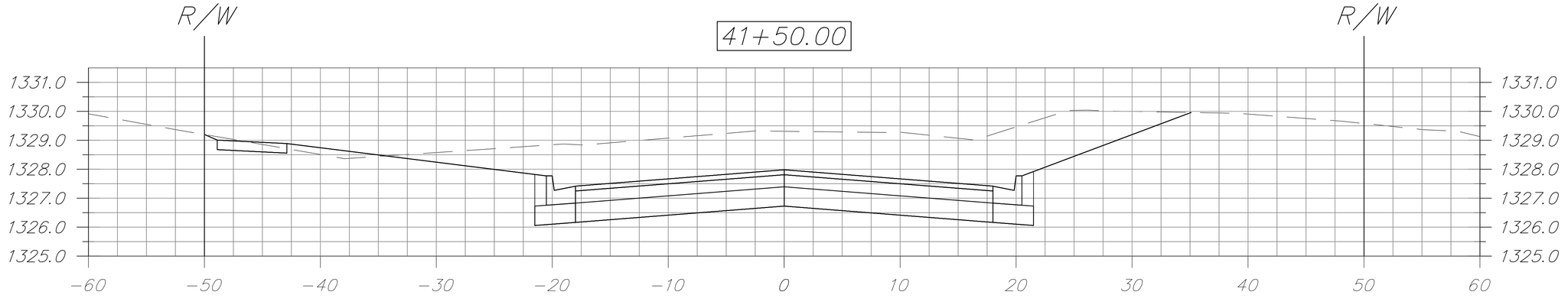
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 40+50.00 to Sta. 41+25.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 135 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

Project No. 09-09-E382

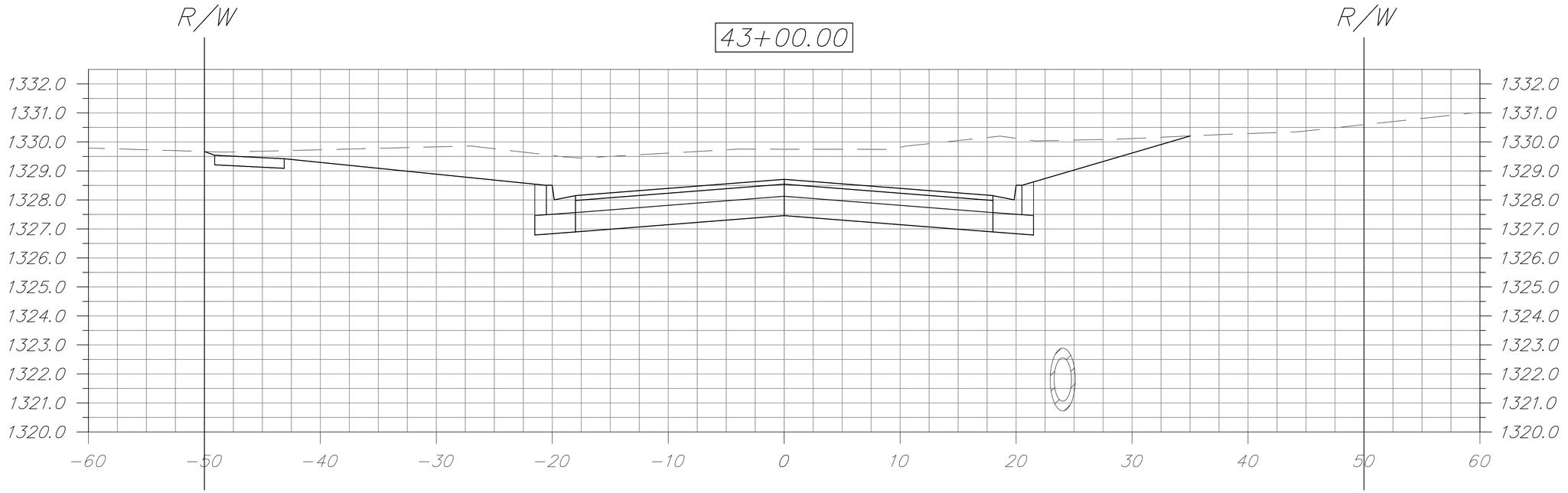
CAPITAL IMPROVEMENT PROJECT

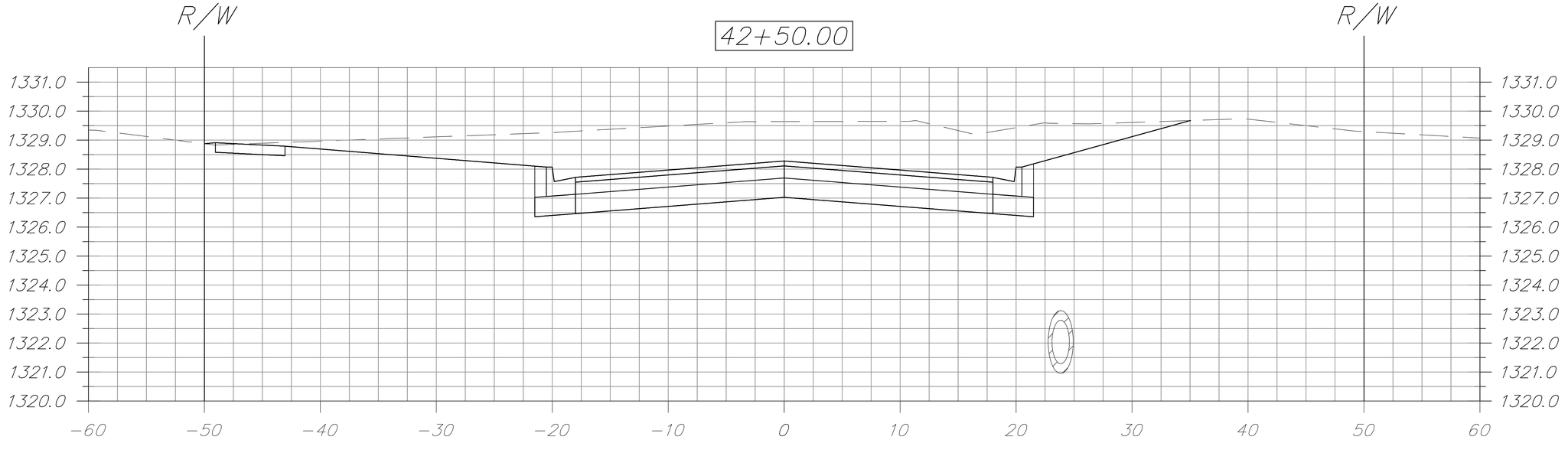
29th St. Cross Sections
Sta. 41+50.00 to Sta. 42+00.00

29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

Project No. 09-09-E382

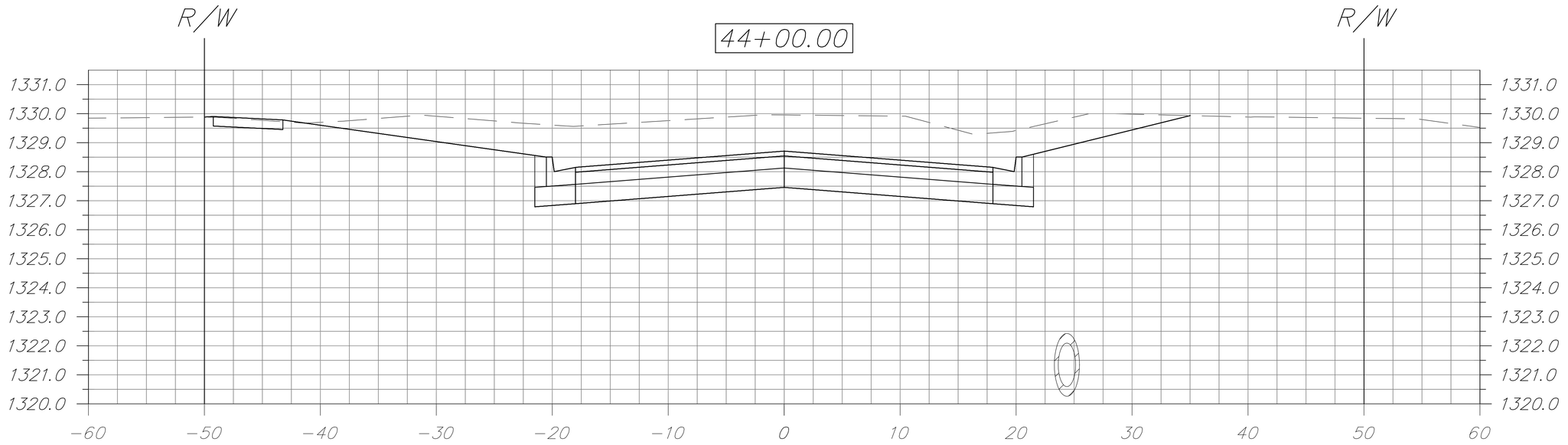
CAPITAL IMPROVEMENT PROJECT

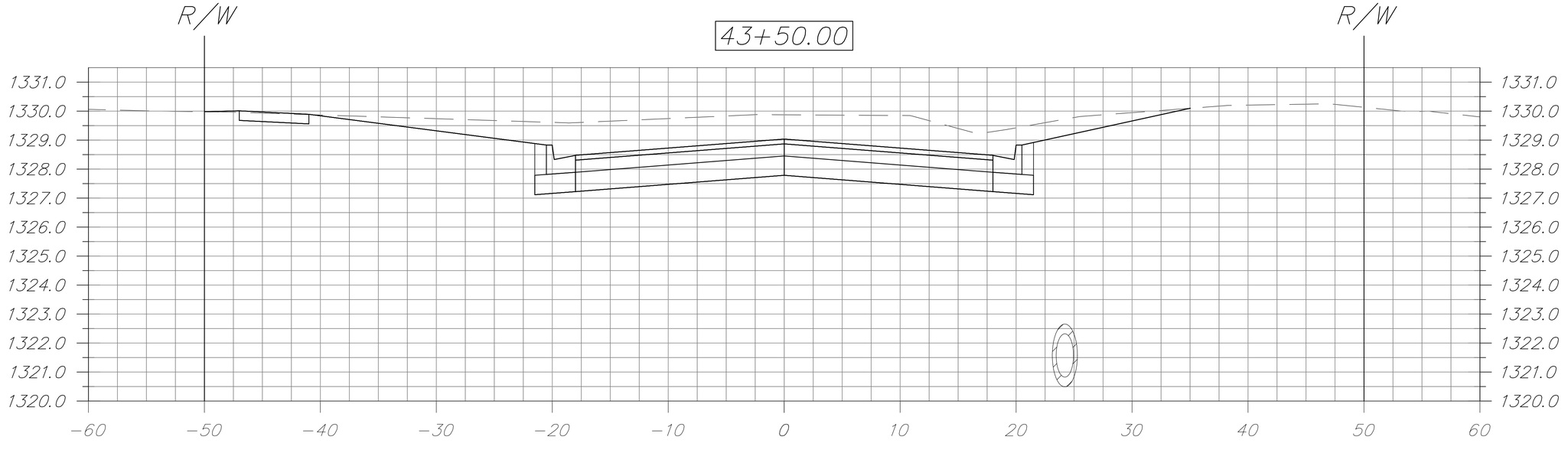
29th St. Cross Sections
Sta. 42+50.00 to Sta. 43+00.00

29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

Project No. 09-09-E382

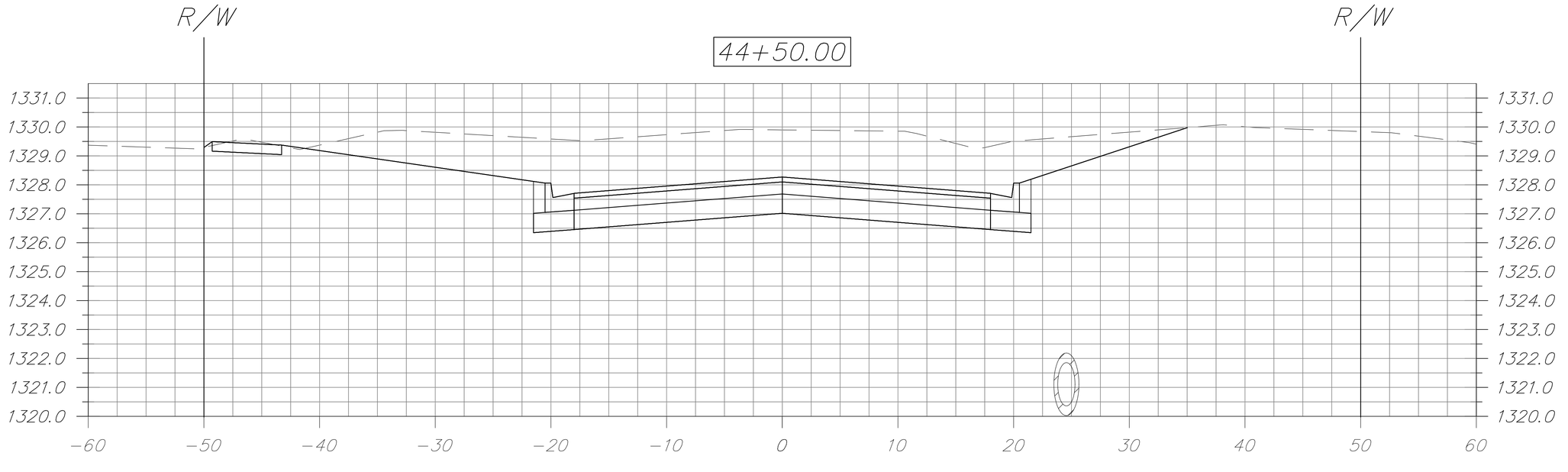
CAPITAL IMPROVEMENT PROJECT

29th St. Cross Sections
Sta. 43+50.00 to Sta. 44+00.00

29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical



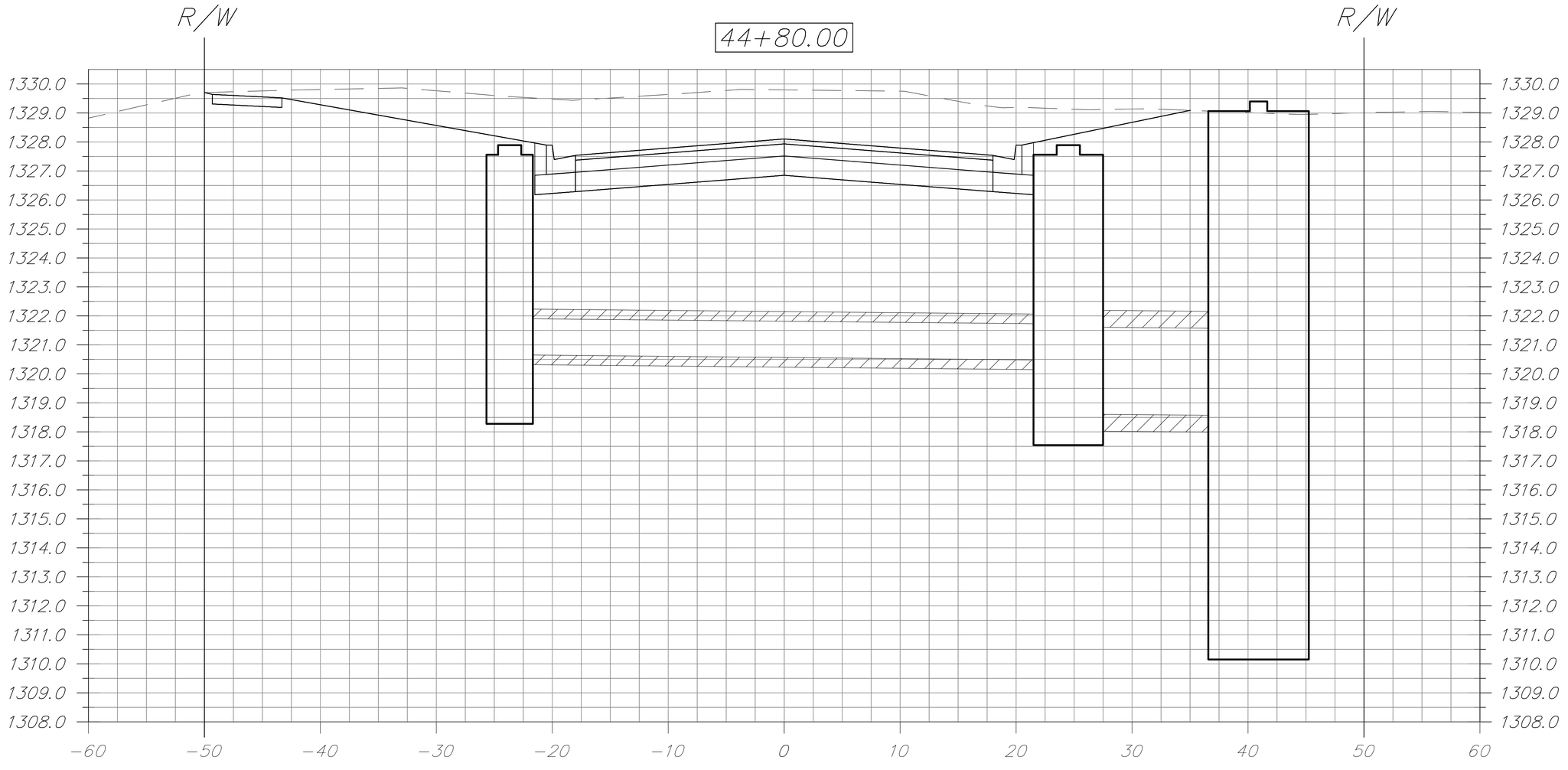
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NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 44+50.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 139 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical



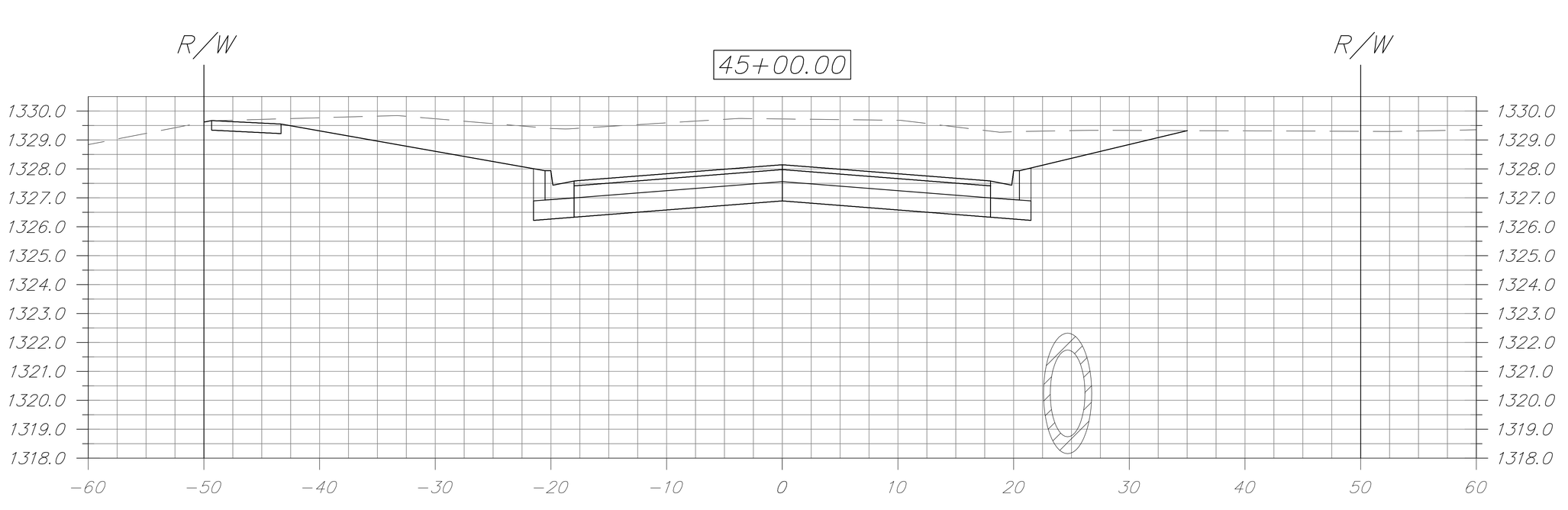
Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 44+80.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 140 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical

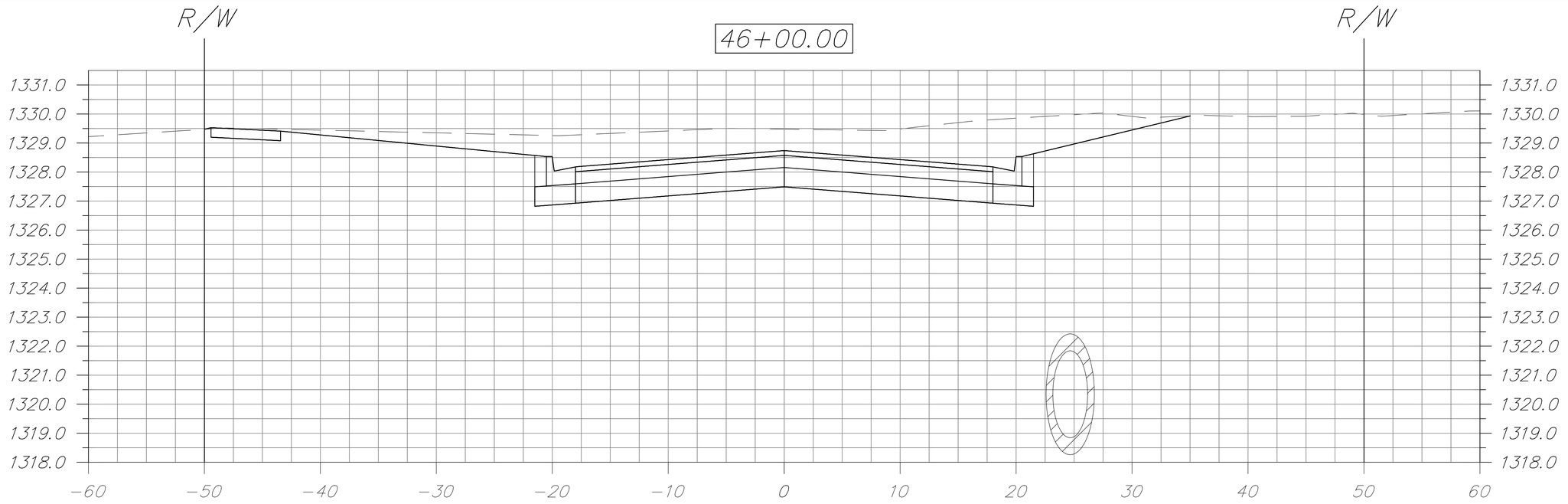


Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

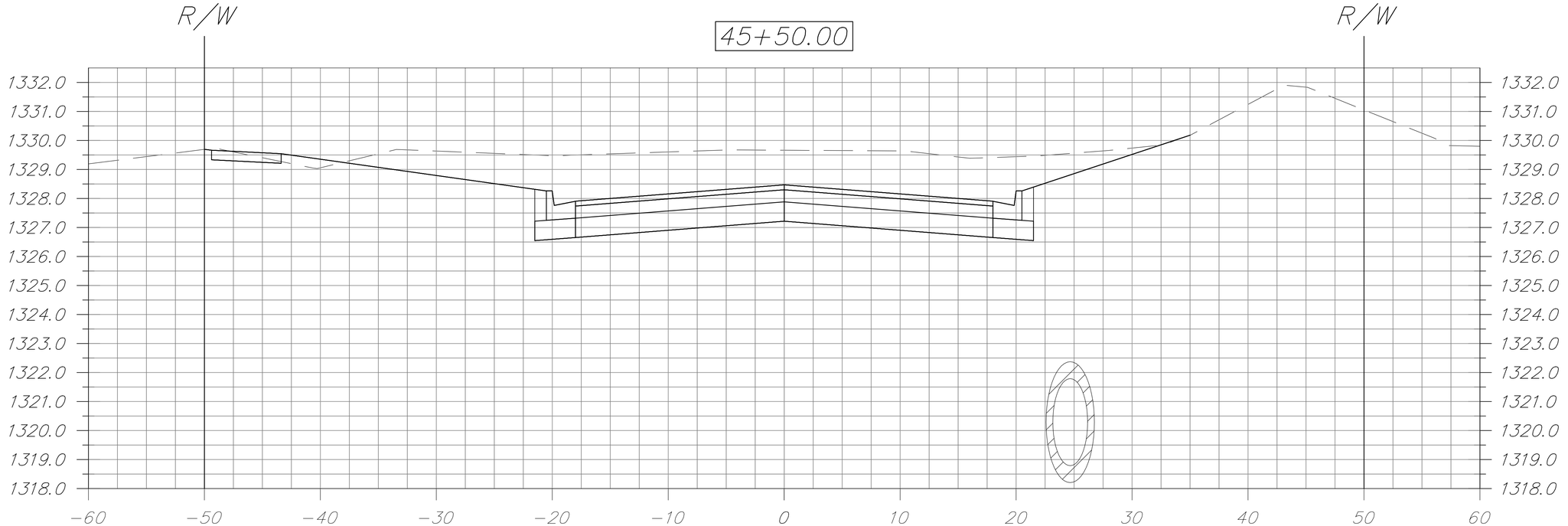
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 45+00.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 141 OF 177



SCALE:
1" = 5' Horizontal
1" = 2' Vertical



Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

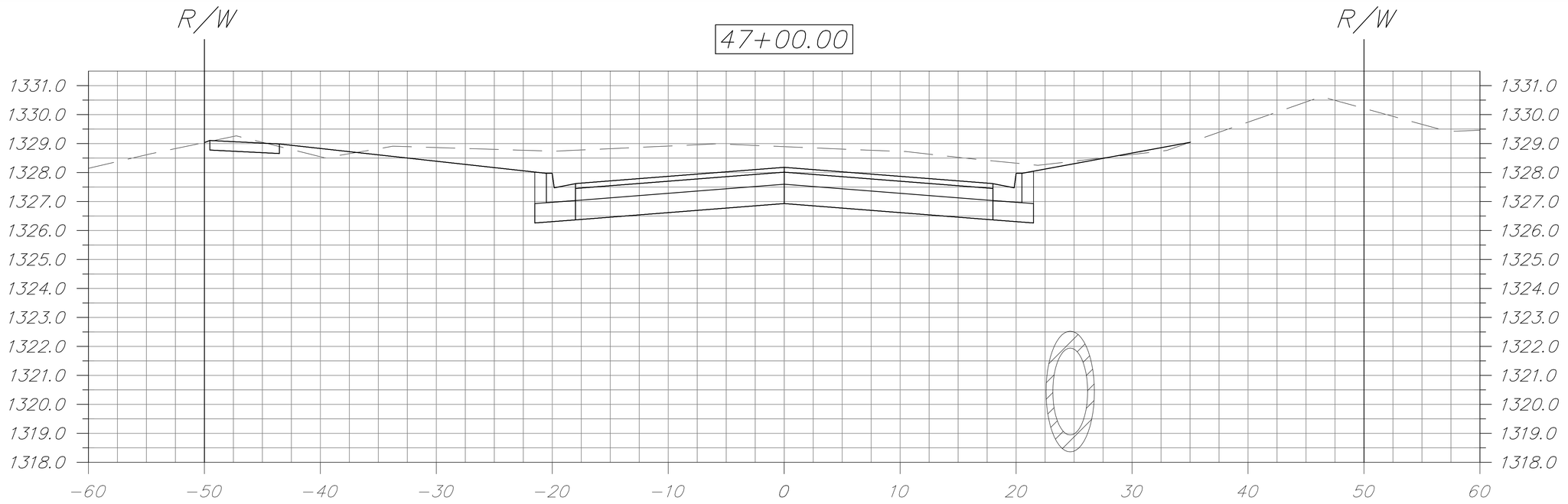
Project No. 09-09-E382

CAPITAL IMPROVEMENT PROJECT

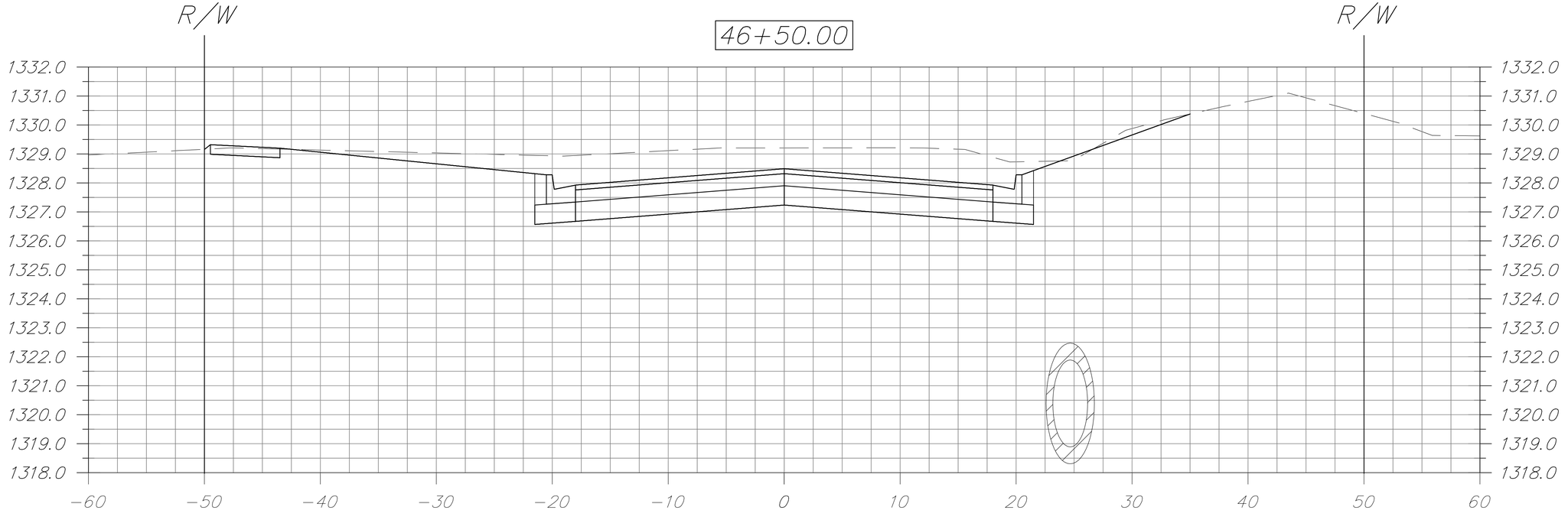
29th St. Cross Sections
Sta. 45+50.00 to Sta. 46+00.00

29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE



SCALE:
1" = 5' Horizontal
1" = 2' Vertical



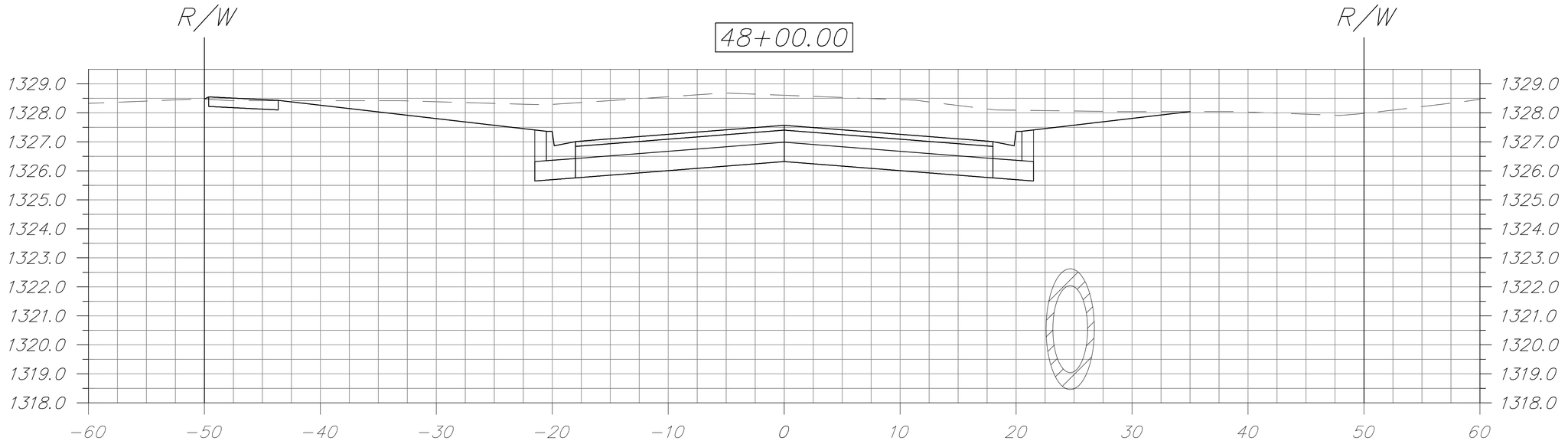
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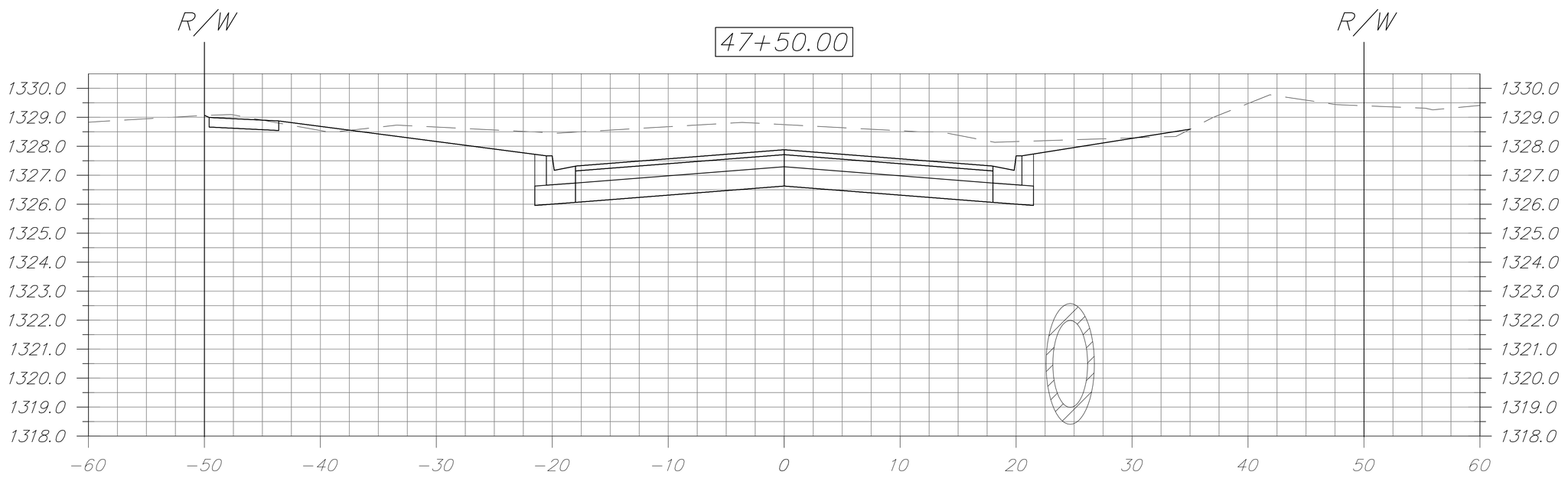
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 46+50.00 to Sta. 47+00.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

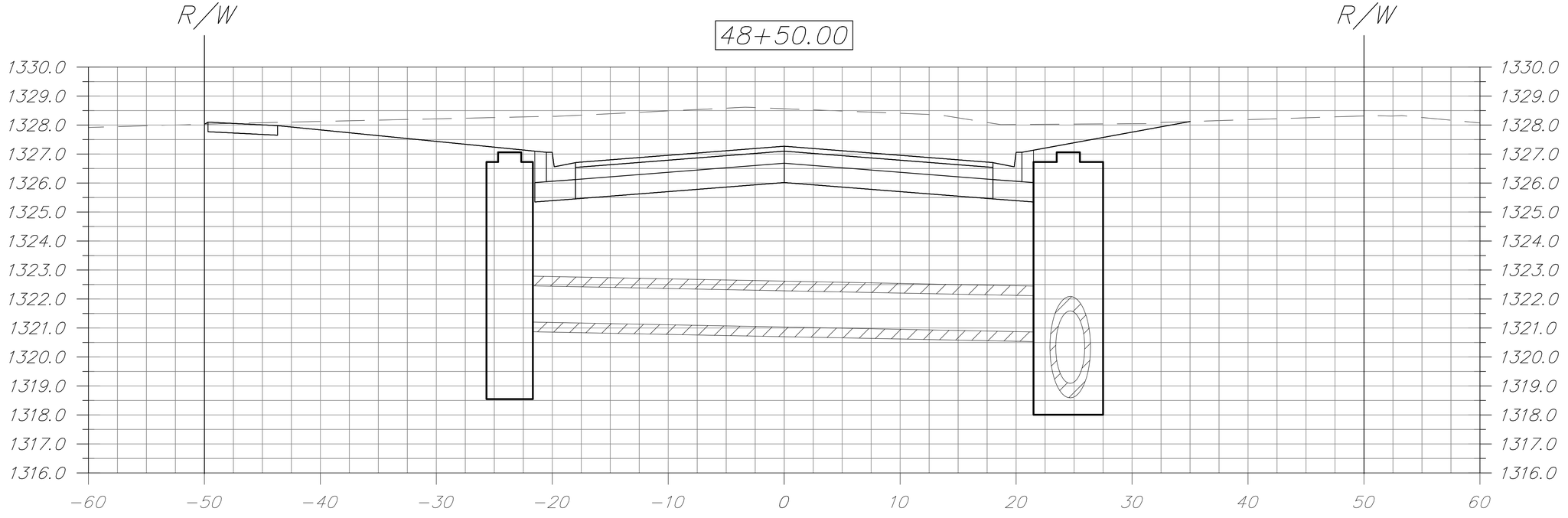
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 47+50.00 to Sta. 48+00.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 144 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical



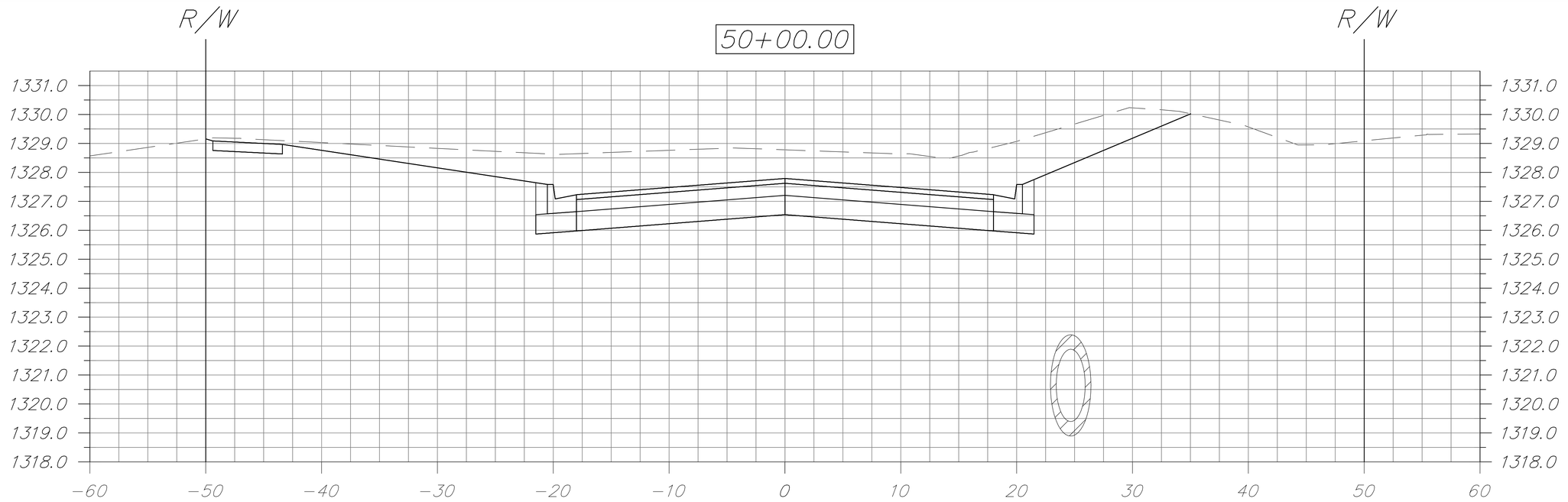


Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

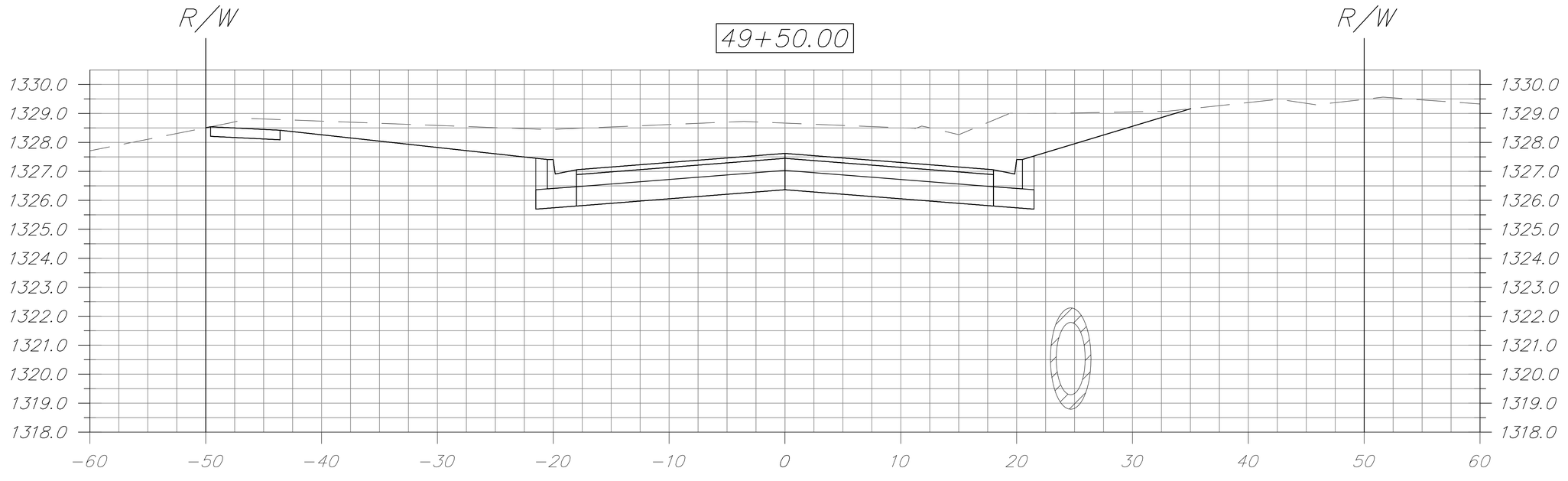
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 48+50.00 to Sta. 49+00.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE



SCALE:
1" = 5' Horizontal
1" = 2' Vertical



Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

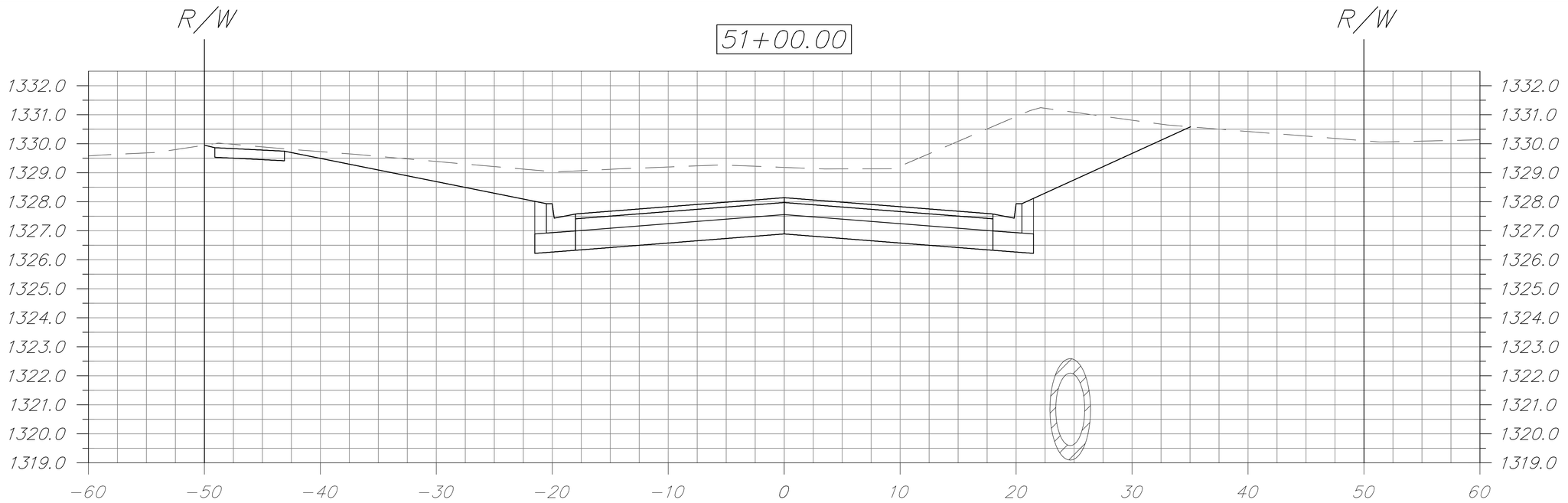
NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

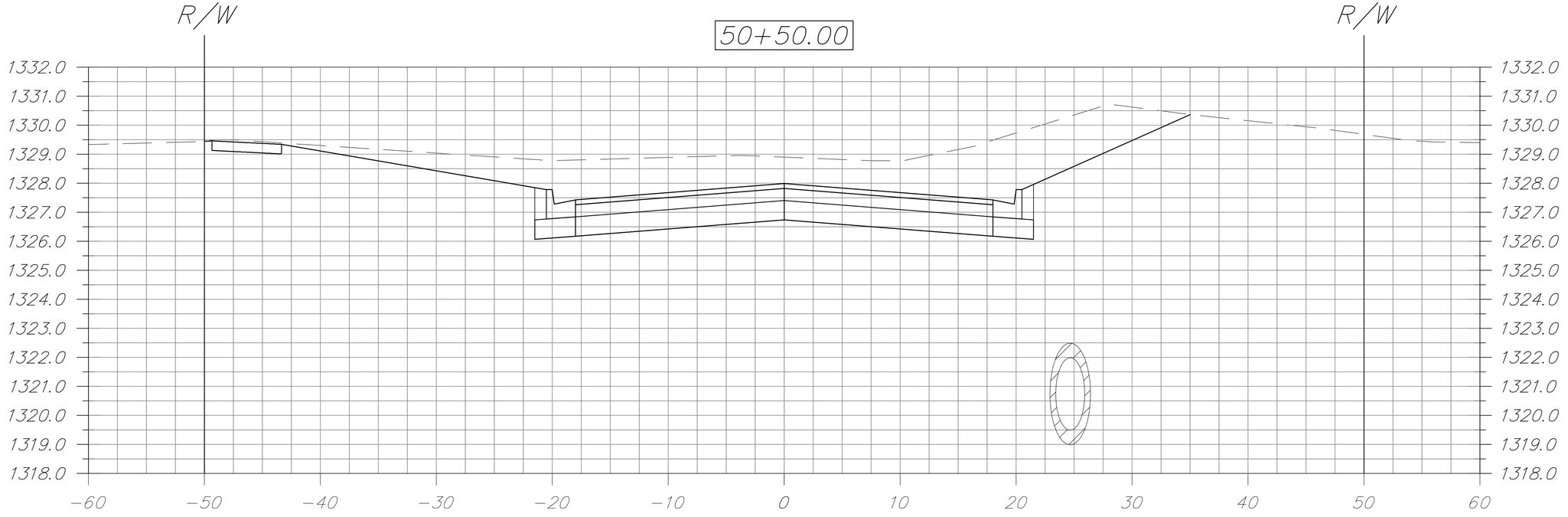
Project No. 09-09-E382

29th St. Cross Sections
Sta. 49+50.00 to Sta. 50+00.00
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE



SCALE:
1" = 5' Horizontal
1" = 2' Vertical

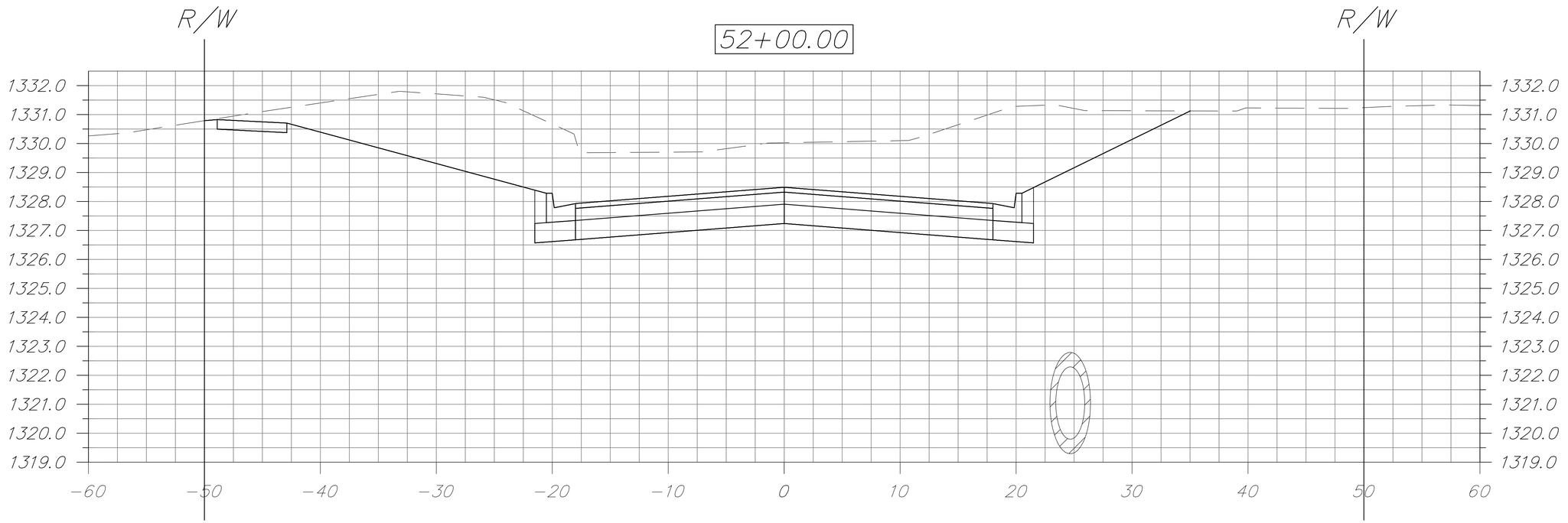


Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

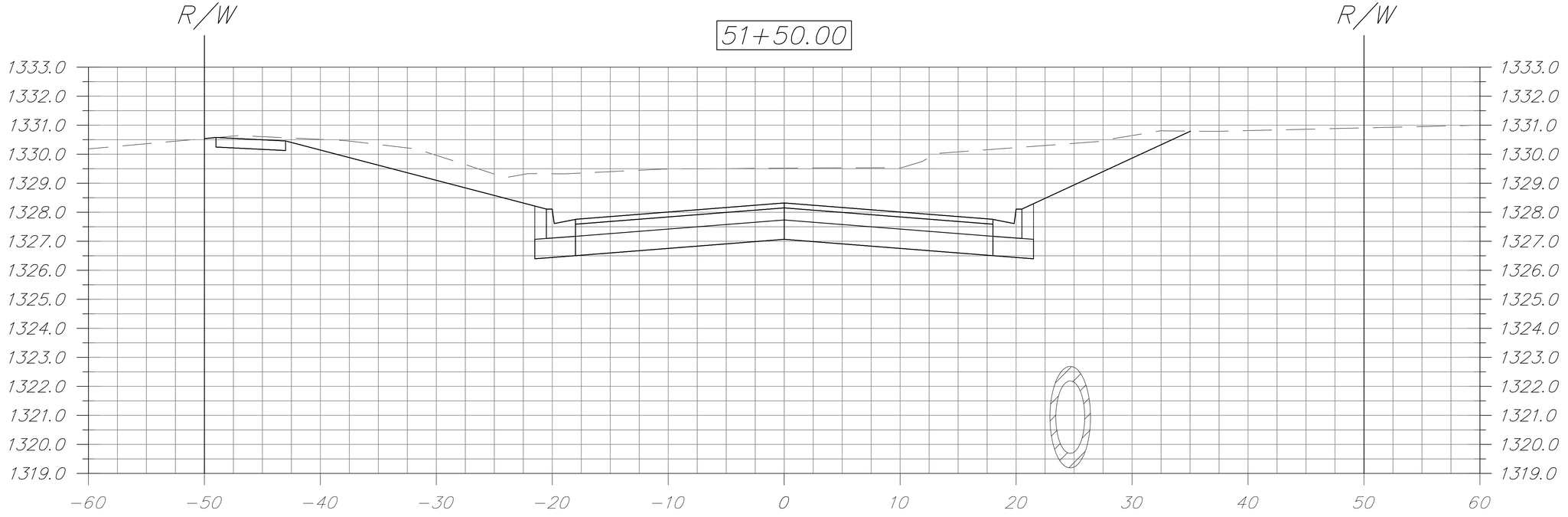
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 50+50.00 to Sta. 51+00.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE



SCALE:
1" = 5' Horizontal
1" = 2' Vertical



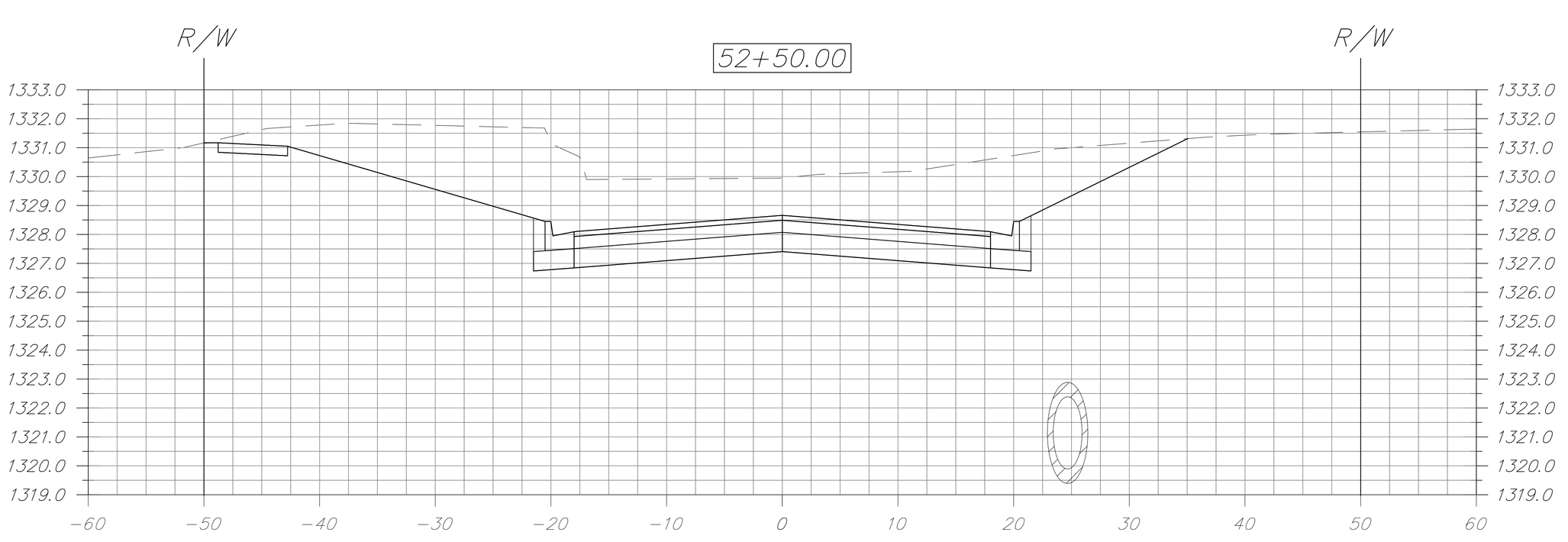
Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 51+50.00 to Sta. 52+00.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical

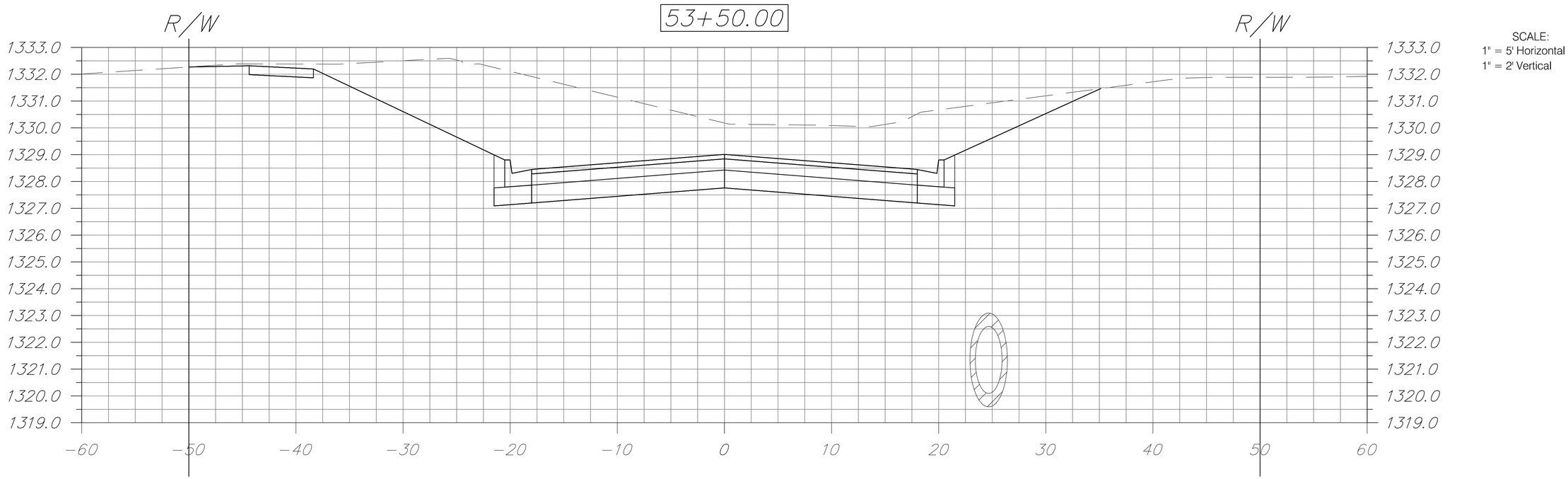


Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

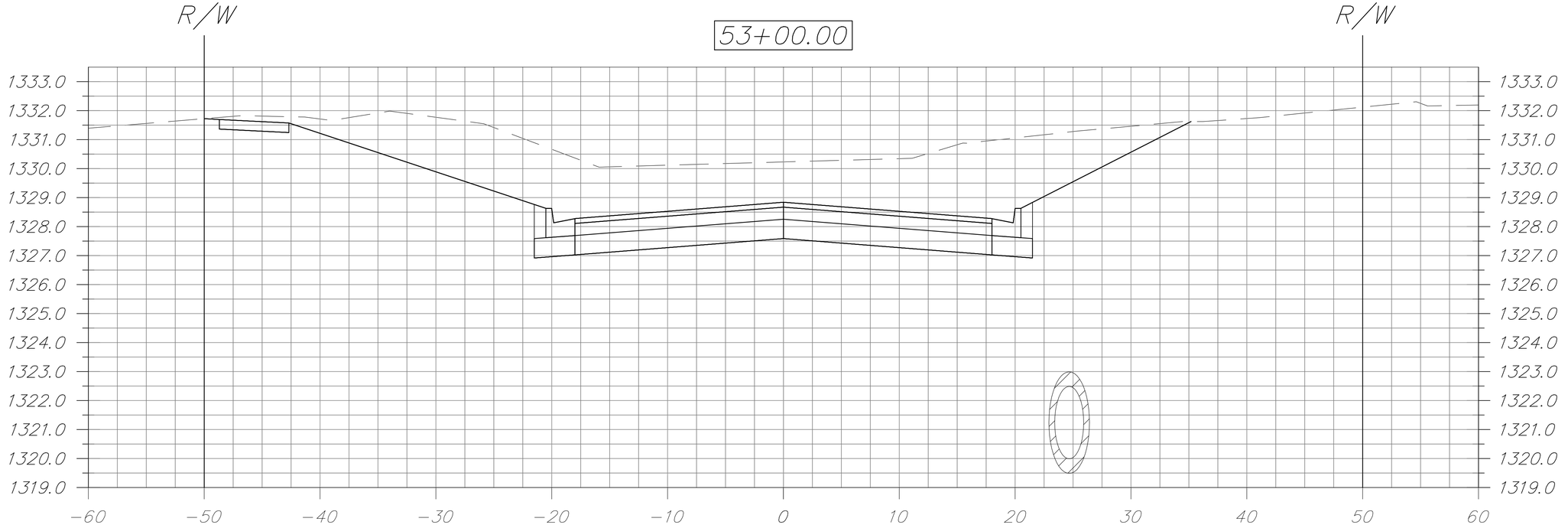
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 52+50.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE



SCALE:
1" = 5' Horizontal
1" = 2' Vertical

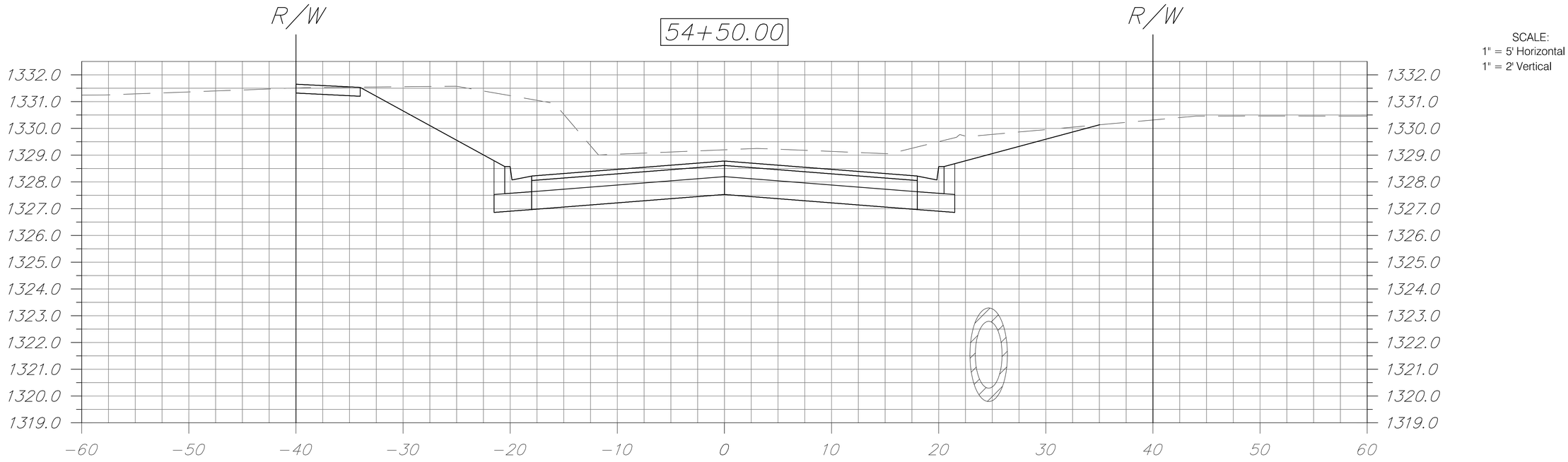


Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 53+00.00 to Sta. 53+50.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 150 OF 177



SCALE:
1" = 5' Horizontal
1" = 2' Vertical



Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

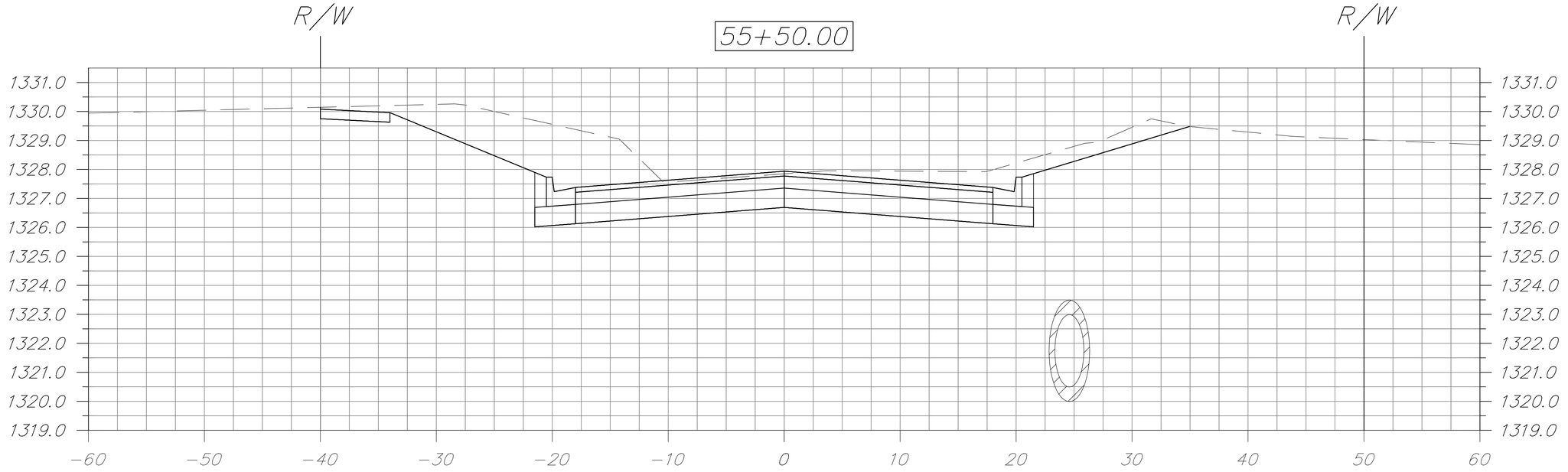
Project No. 09-09-E382

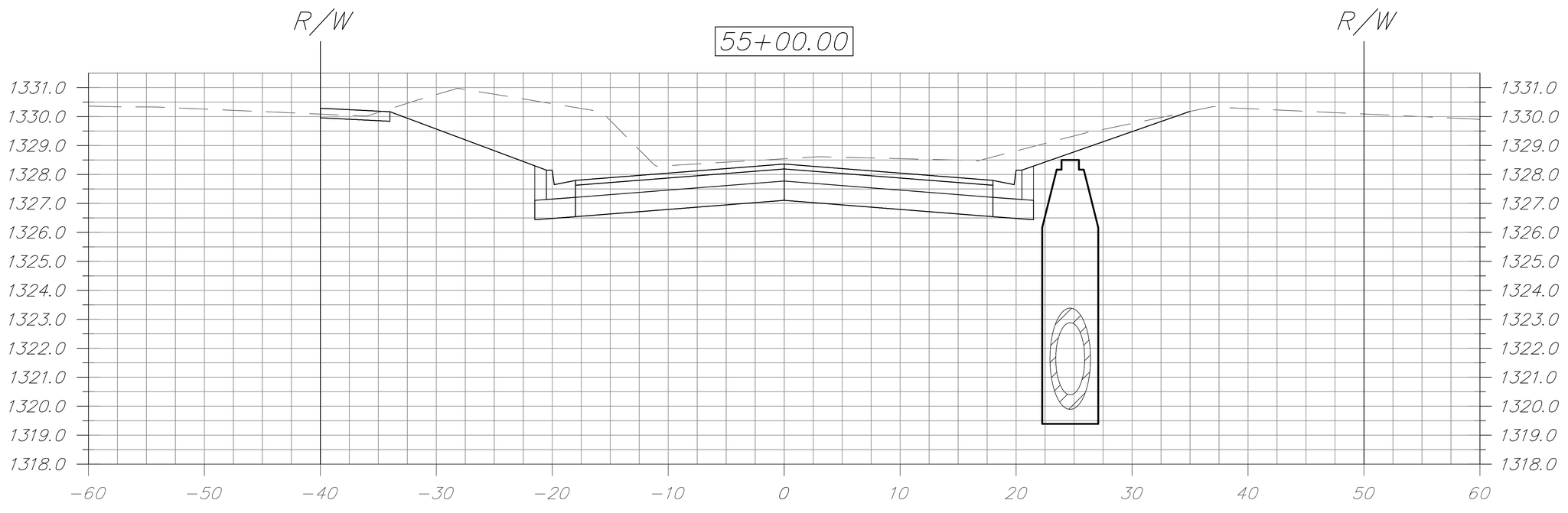
CAPITAL IMPROVEMENT PROJECT

29th St. Cross Sections
Sta. 54+00.00 to Sta. 54+50.00
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical



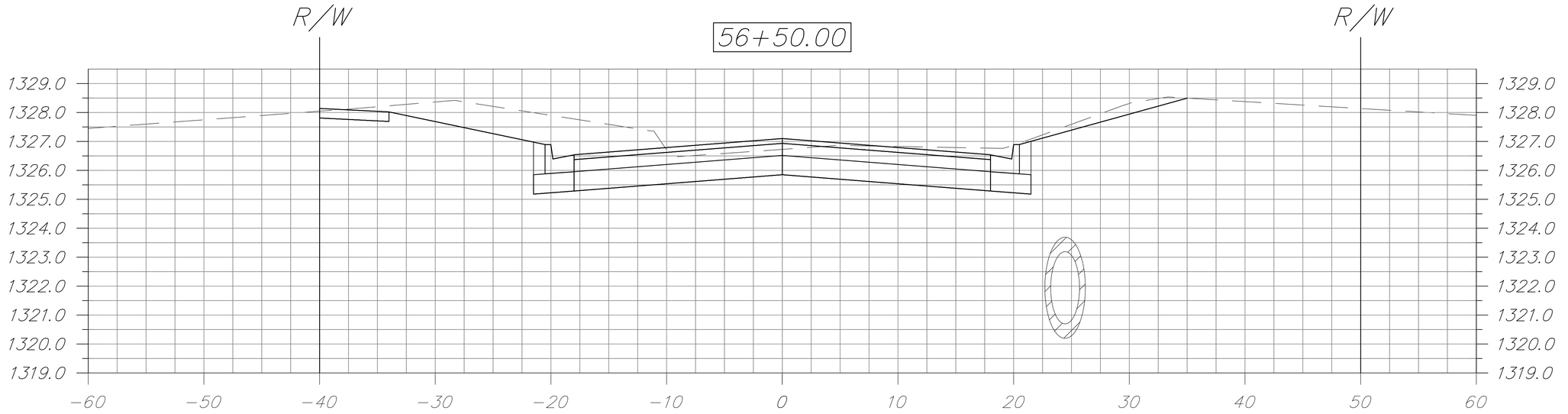


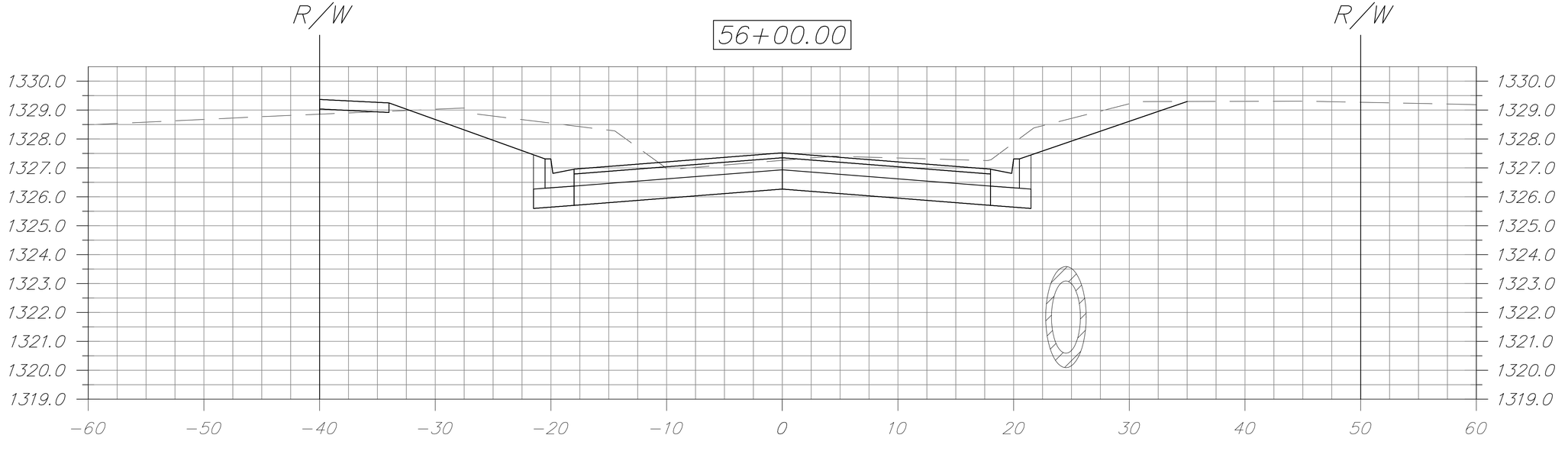
Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 55+00.00 to Sta. 55+50.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

Project No. 09-09-E382

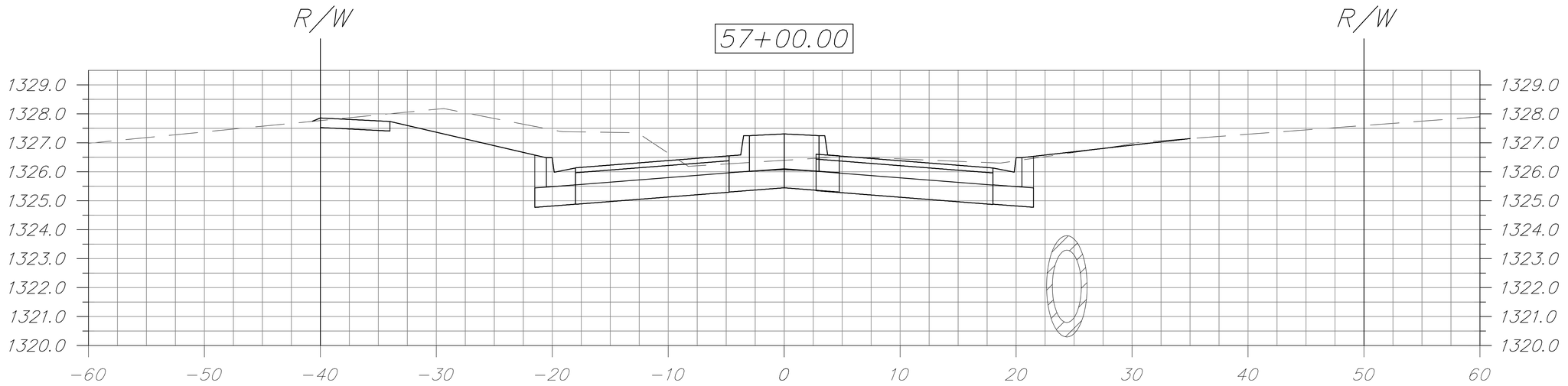
CAPITAL IMPROVEMENT PROJECT

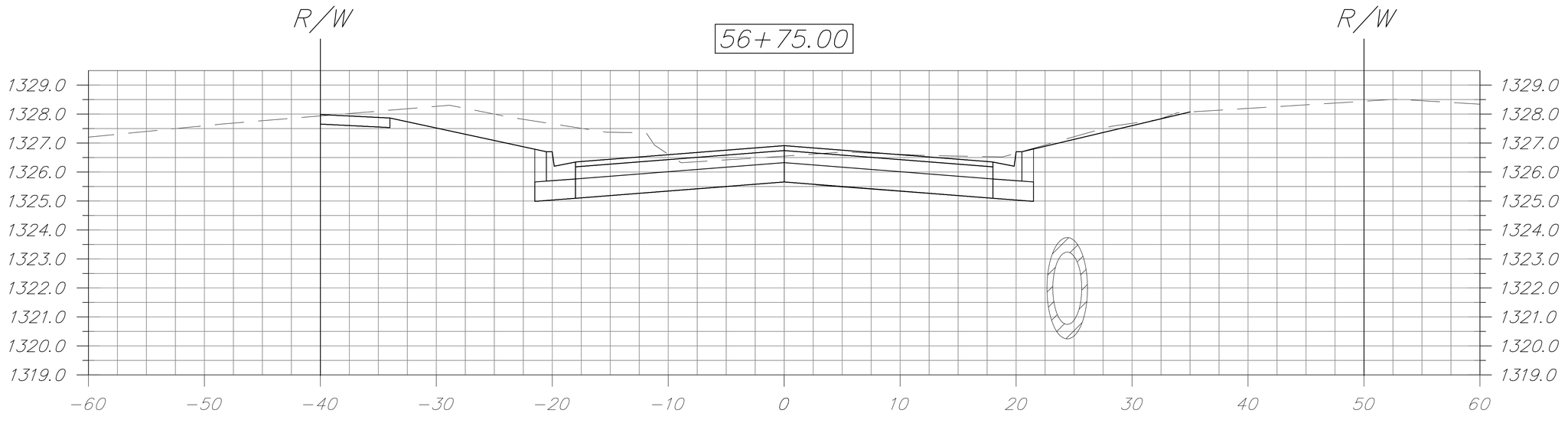
29th St. Cross Sections
Sta. 56+00.00 to Sta. 56+50.00

29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





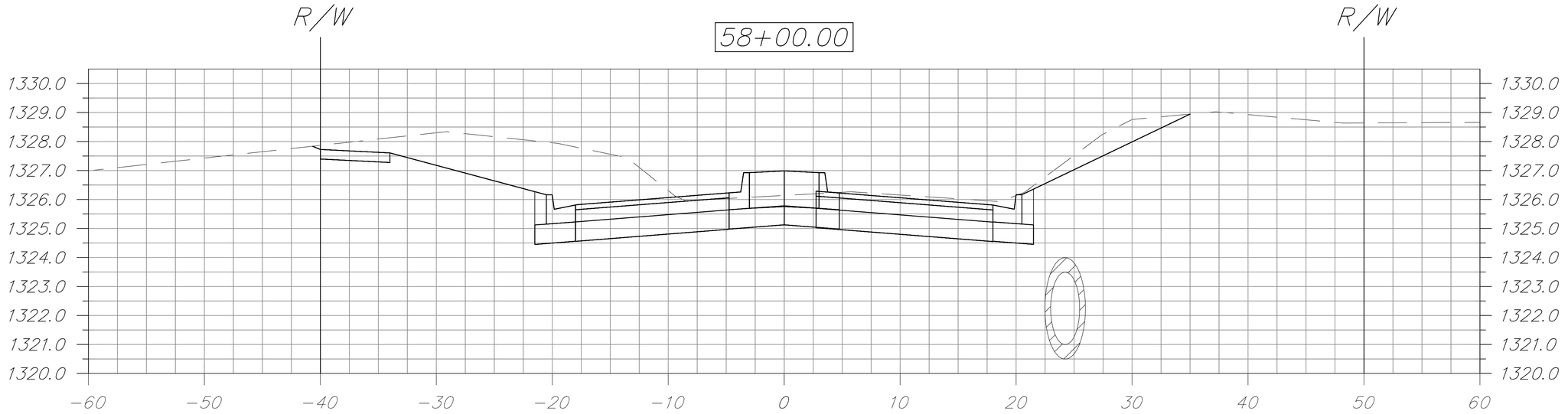
Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

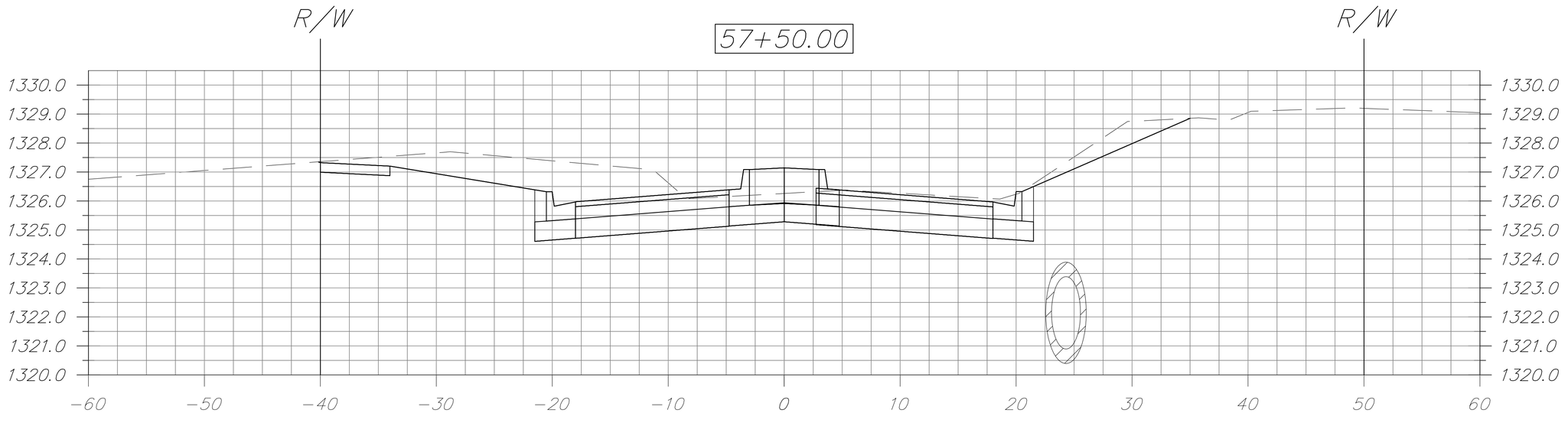
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 56+75.00 to Sta. 57+00.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





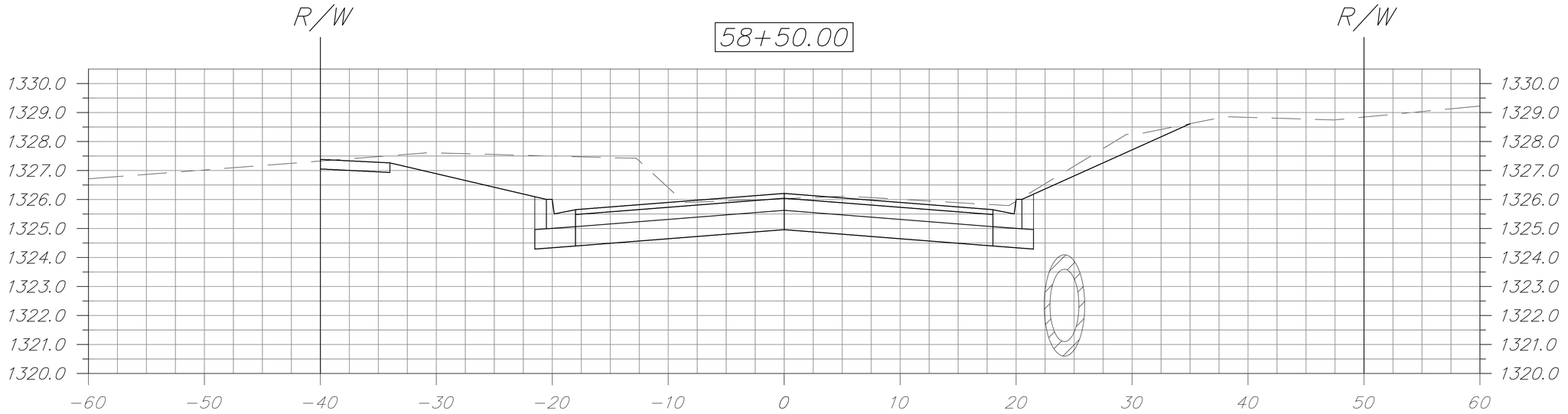
Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

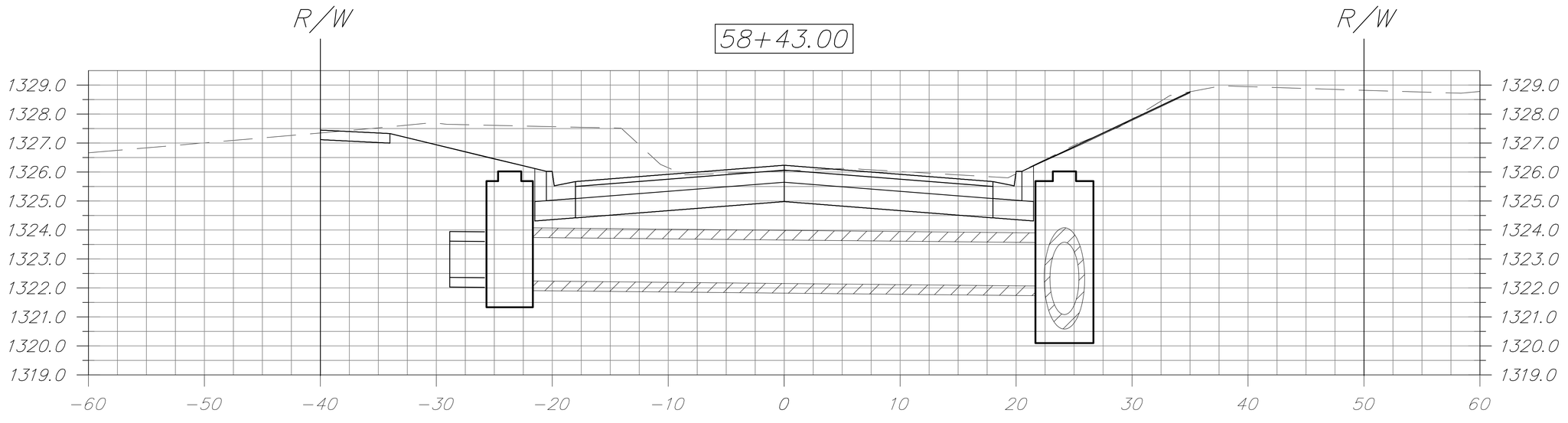
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 57+50.00 to Sta. 58+00.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





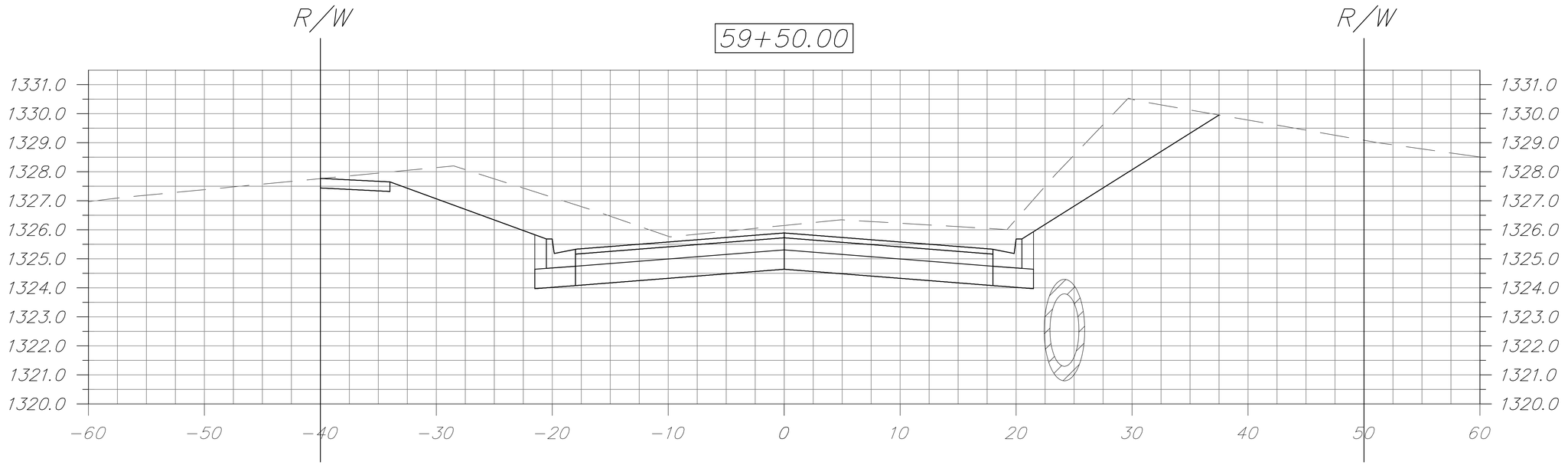
Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

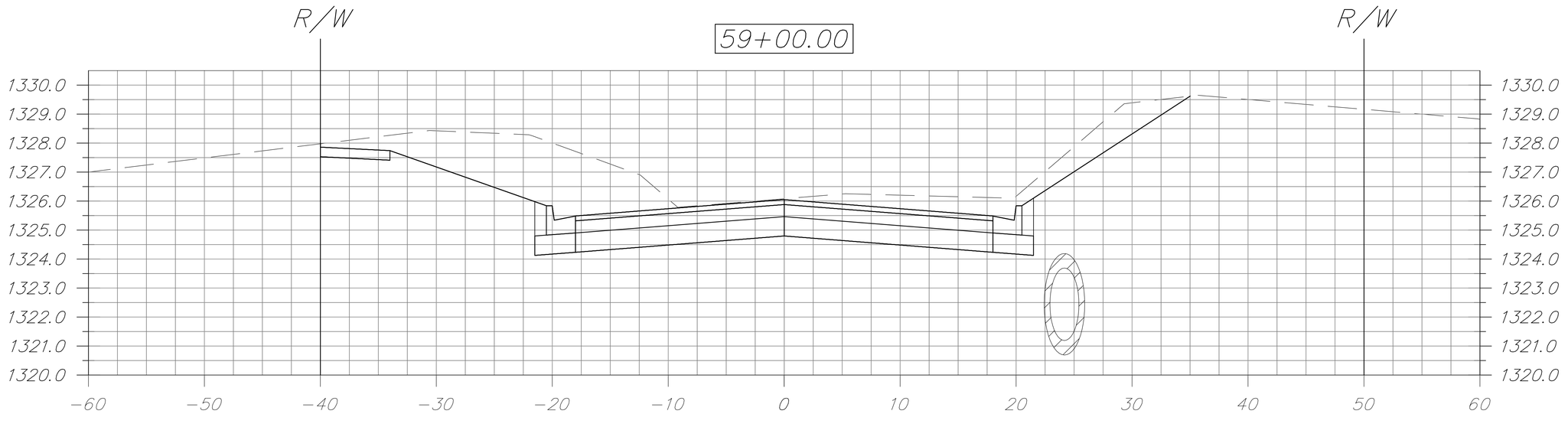
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 58+43.00 to Sta. 58+50.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 156 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

Project No. 09-09-E382

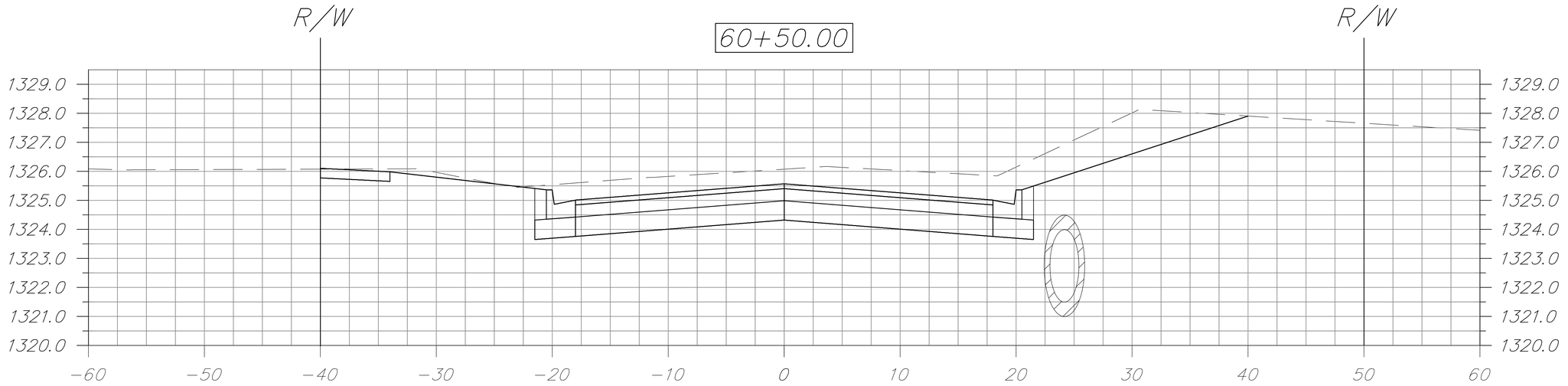
CAPITAL IMPROVEMENT PROJECT

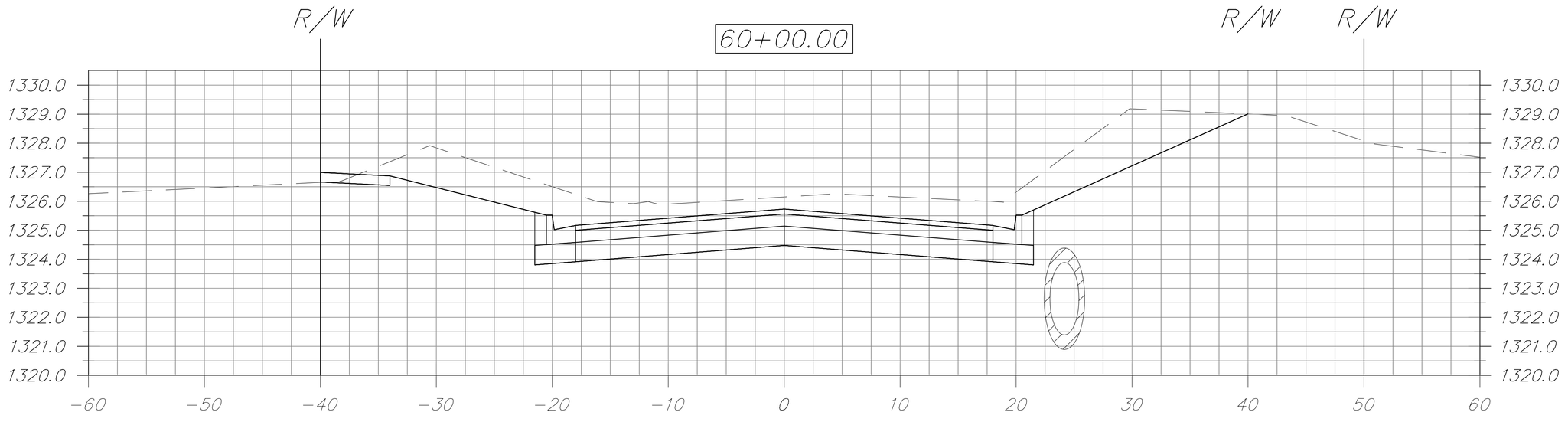
29th St. Cross Sections
Sta. 59+00.00 to Sta. 59+50.00

29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





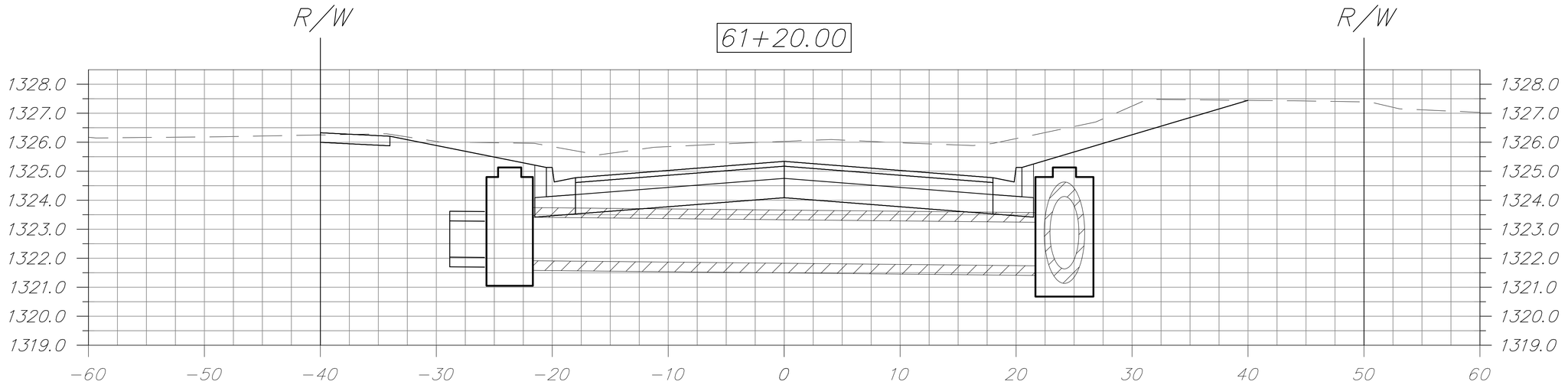
Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

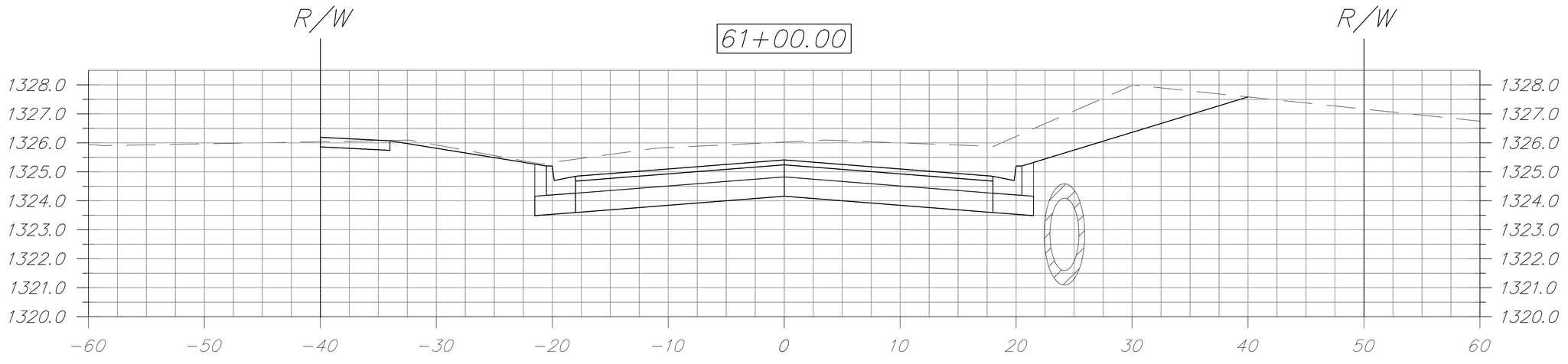
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 60+00.00 to Sta. 60+50.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 158 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





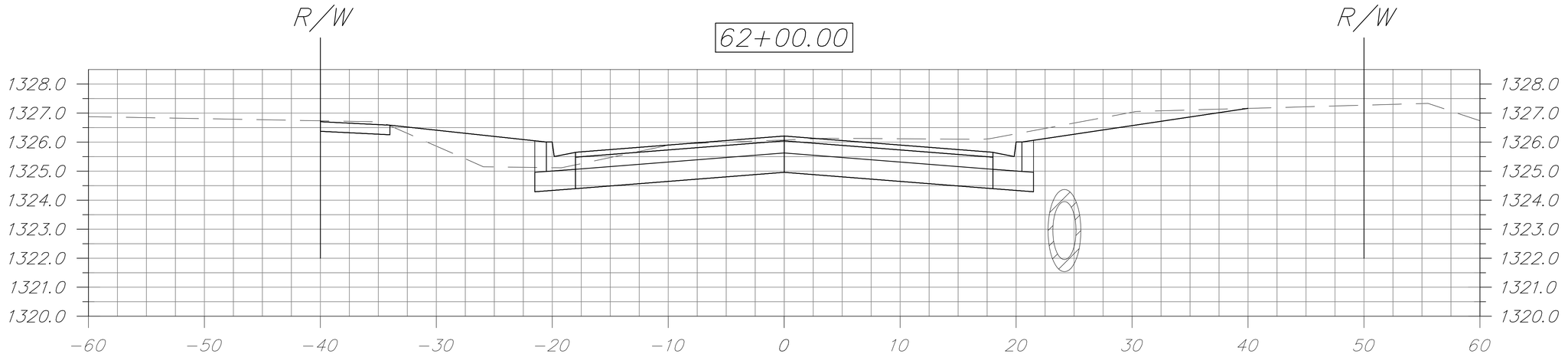
Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

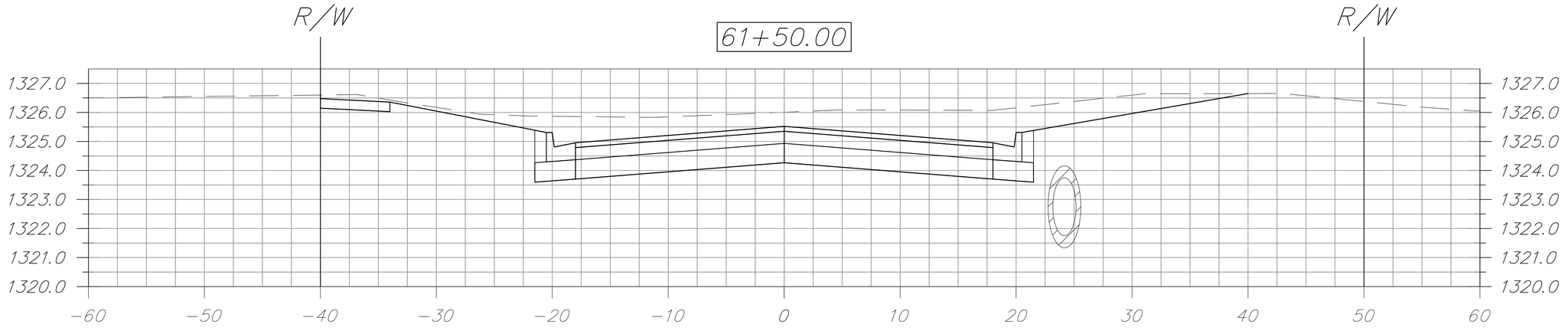
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 61+00.00 to Sta. 61+20.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





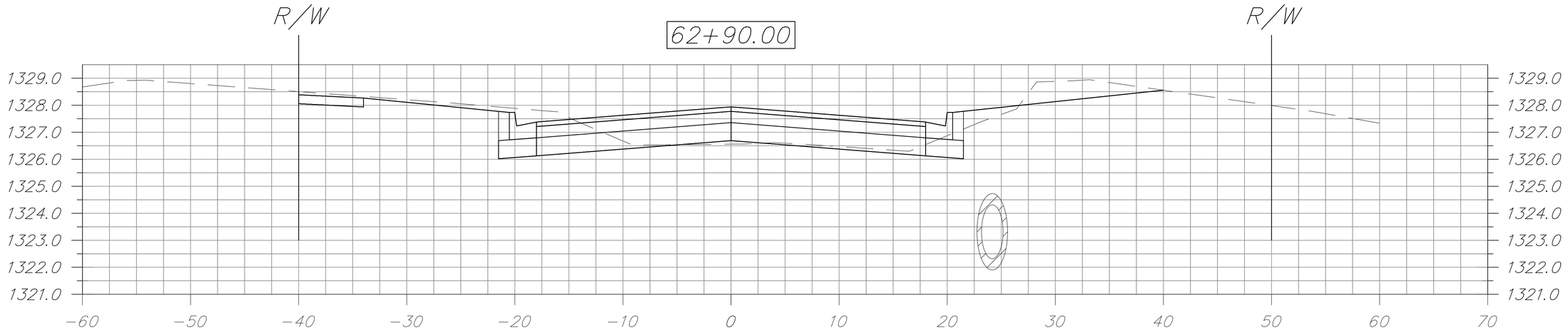
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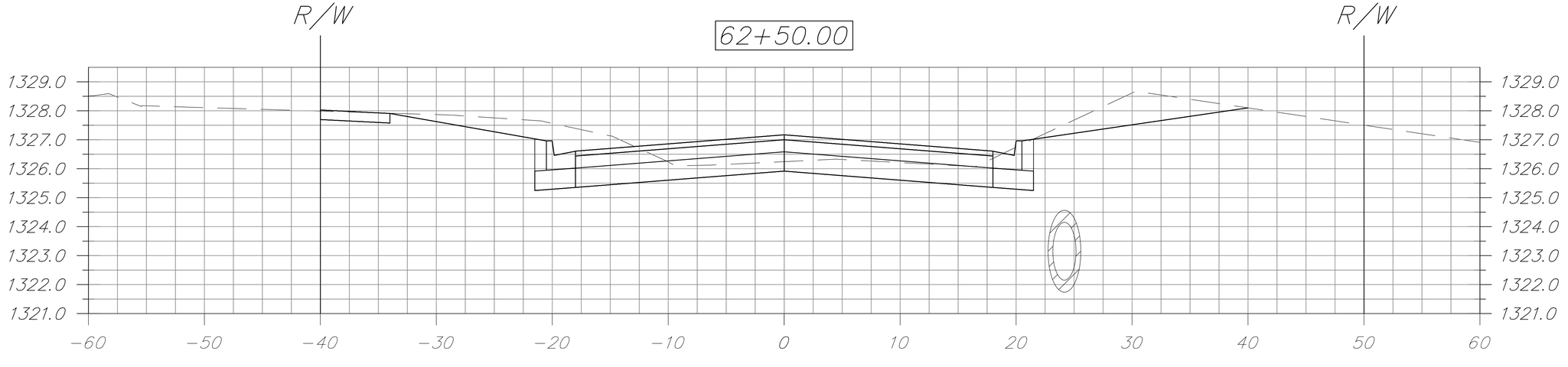
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 61+50.00 to Sta. 62+00.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 160 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





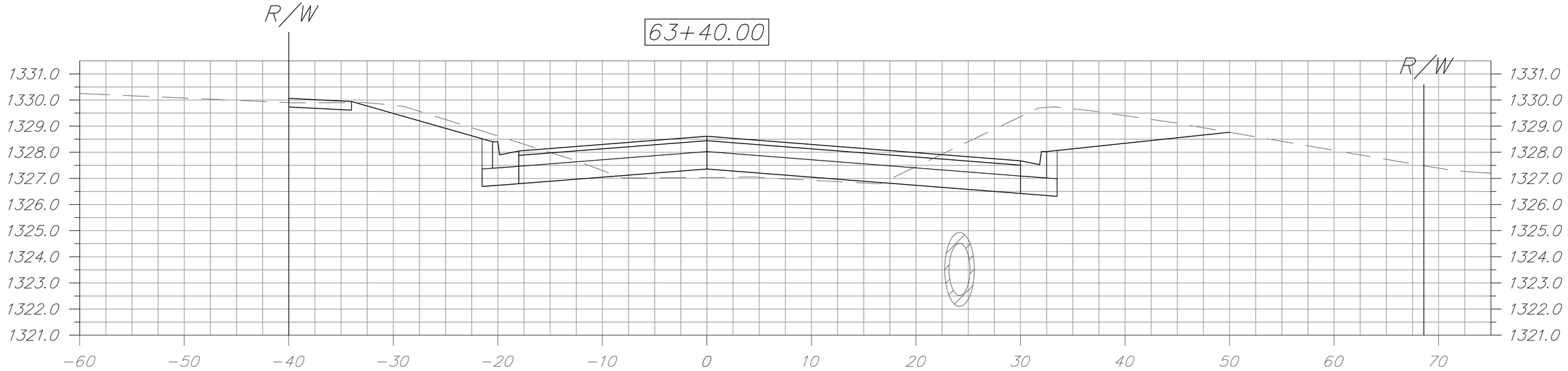
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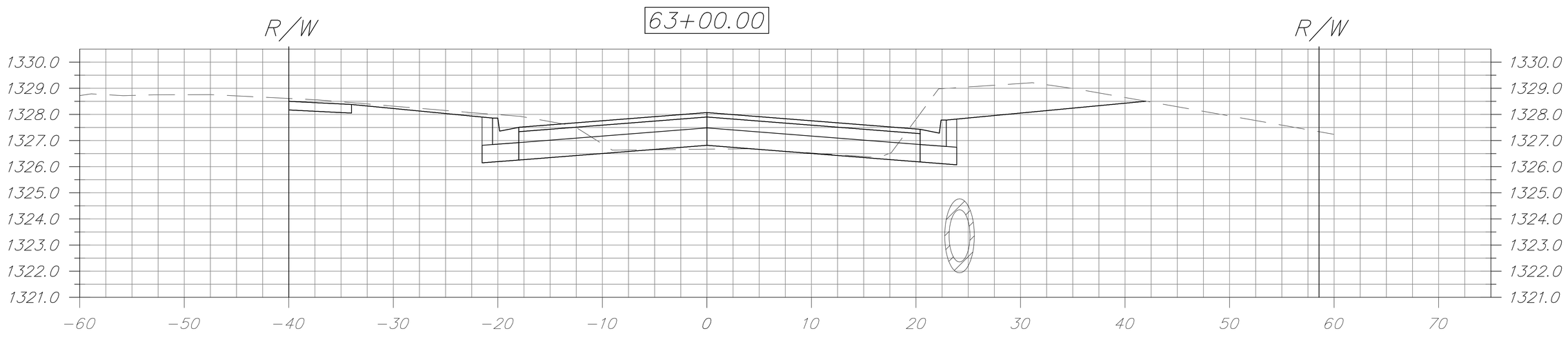
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 62+50.00 to Sta. 62+90.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 161 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





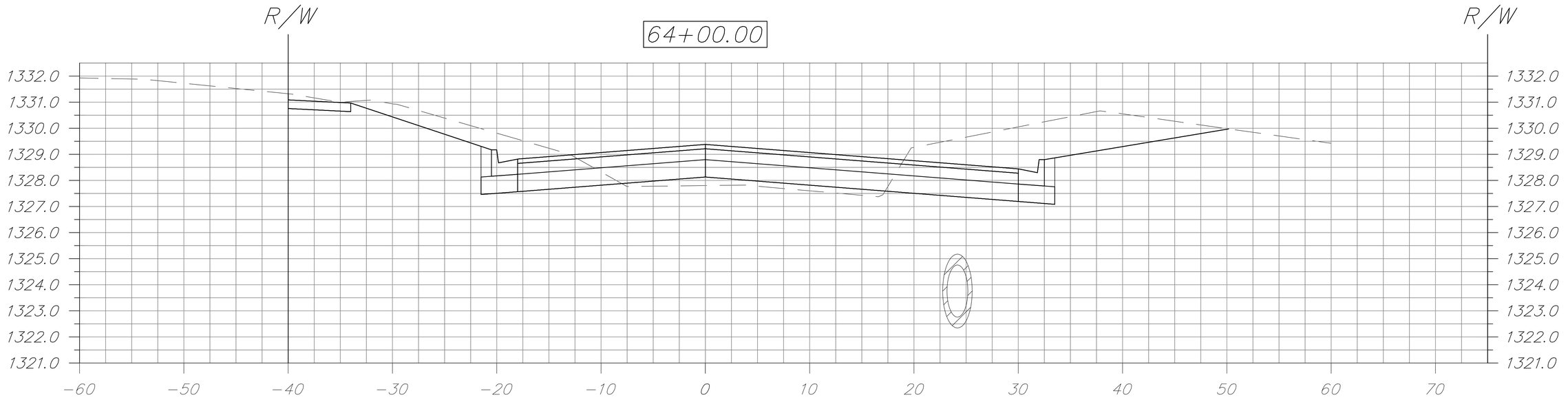
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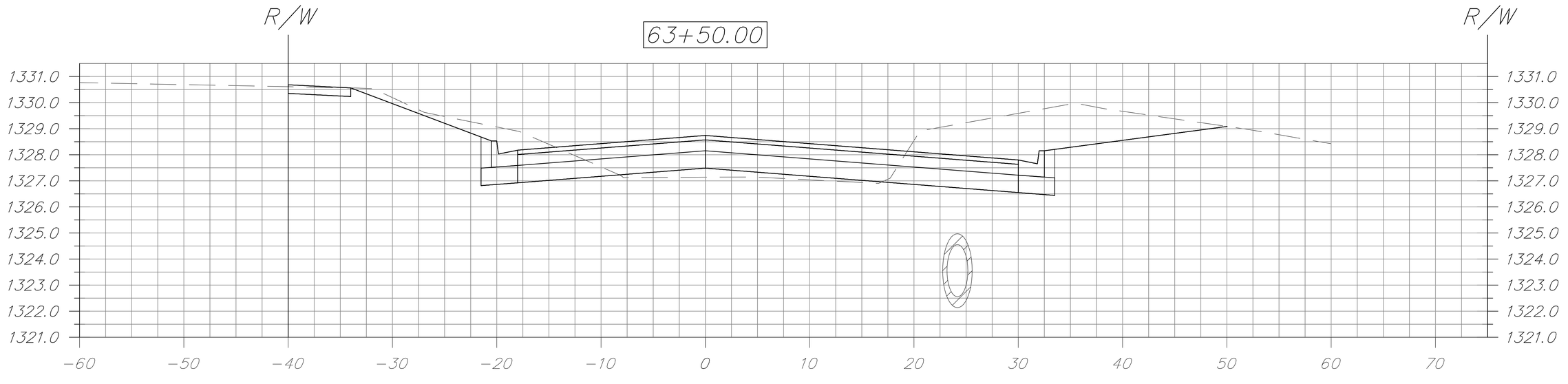
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 63+00.00 to Sta. 63+40.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





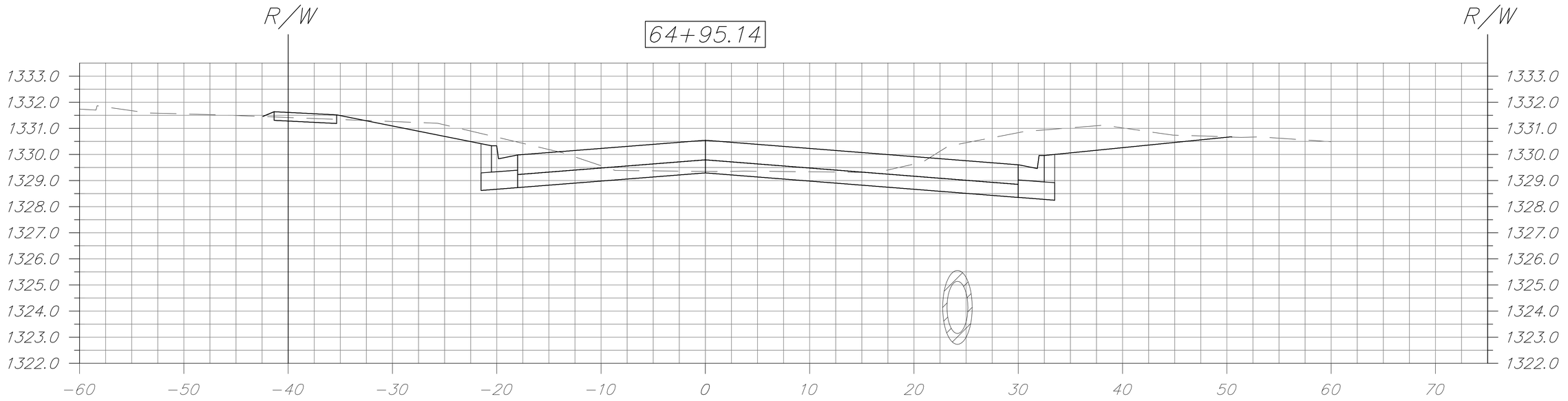
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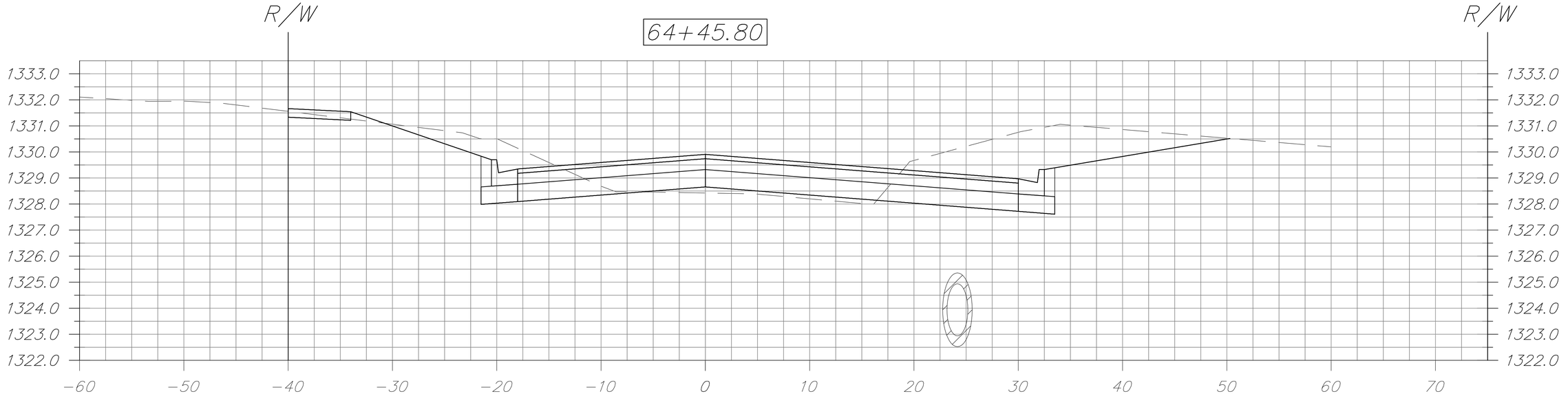
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 63+50.00 to Sta. 64+00.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 163 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

Project No. 09-09-E382

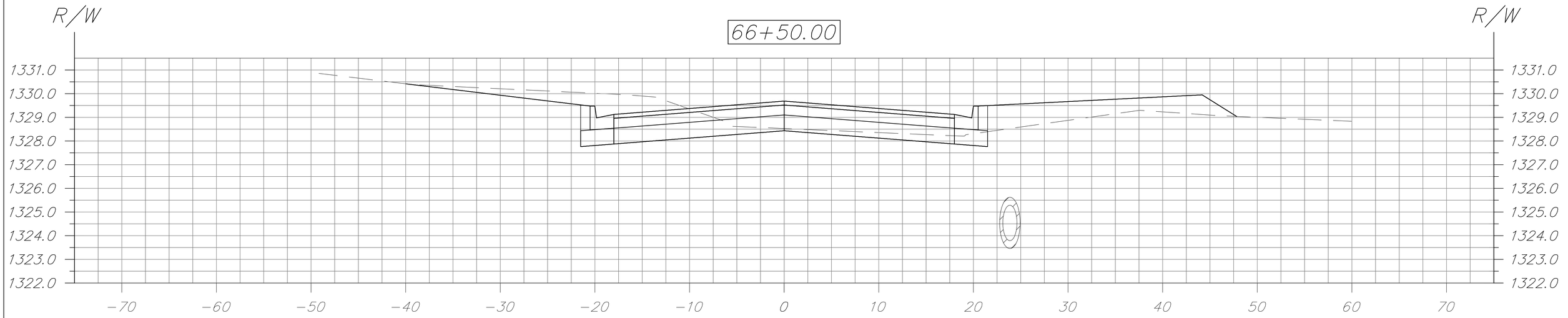
CAPITAL IMPROVEMENT PROJECT

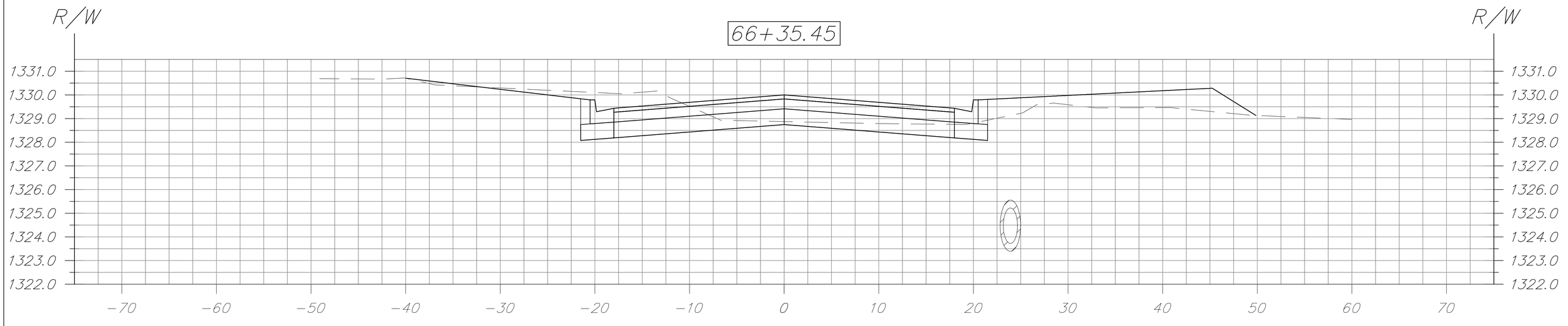
29th St. Cross Sections
Sta. 64+45.80 to Sta. 64+95.14

29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





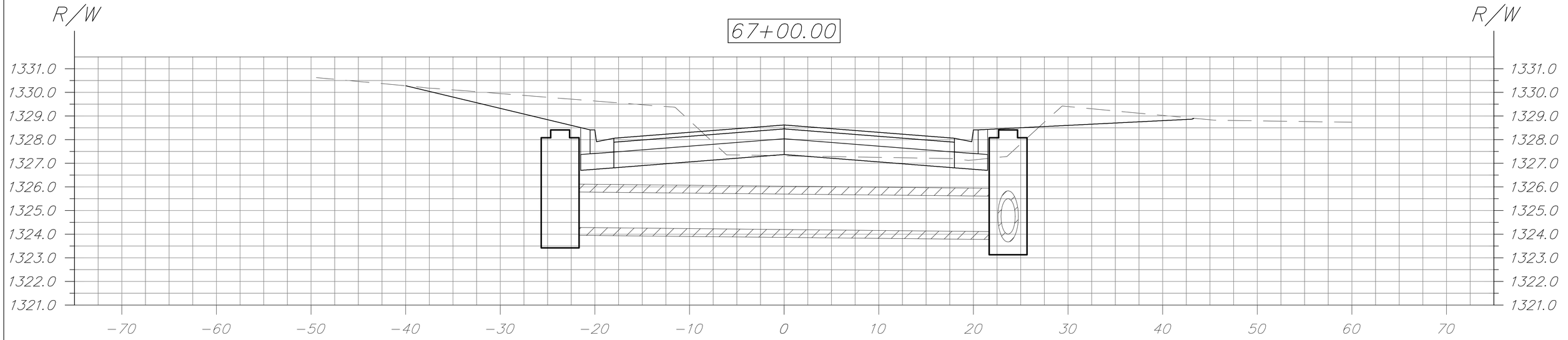
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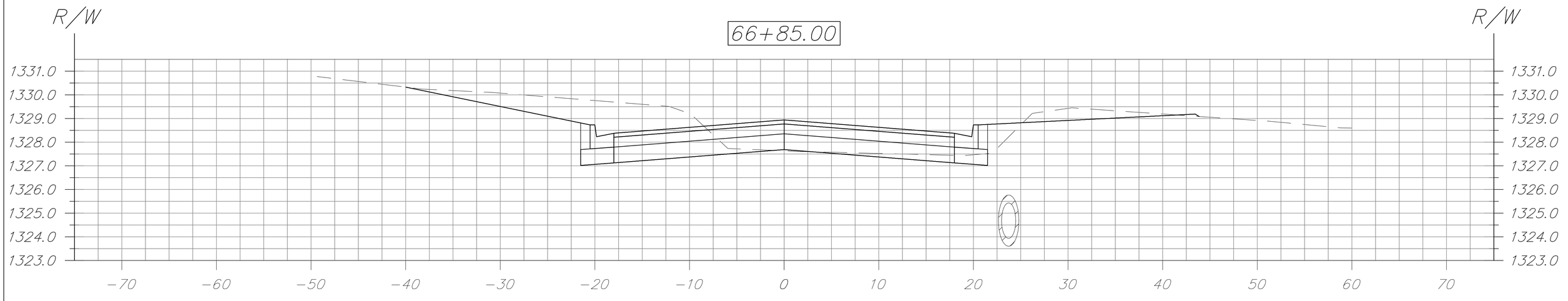
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 66+35.45 to Sta. 66+50.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	SHEET 165 OF 177

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





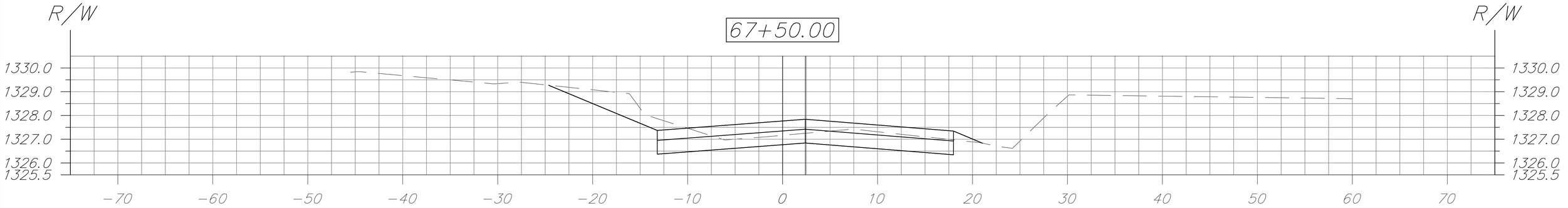
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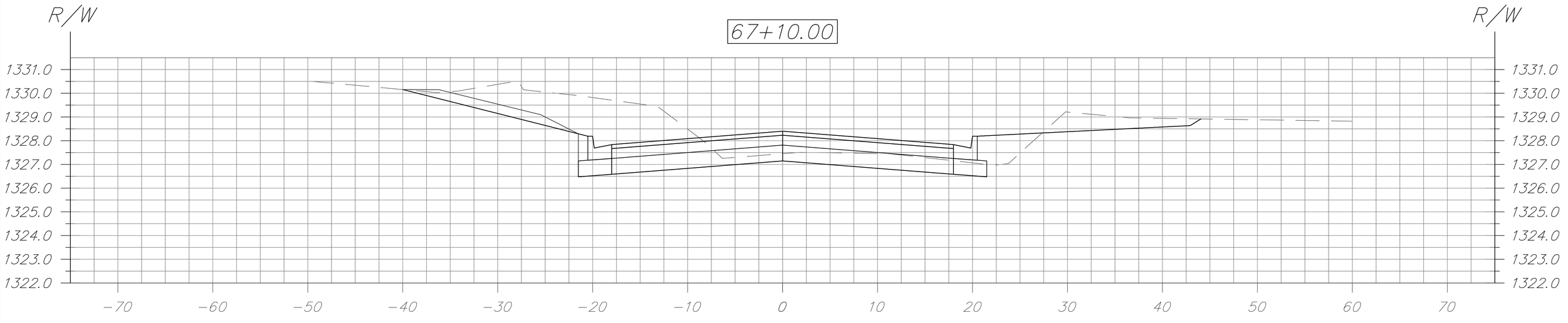
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 66+85.00 to Sta. 67+00.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 166 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





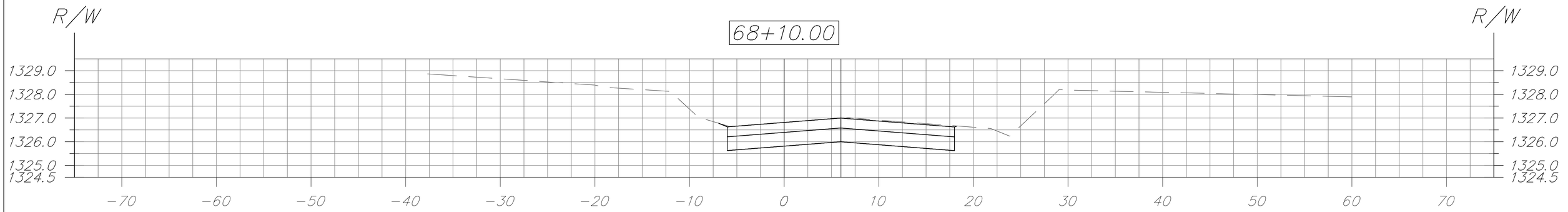
Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

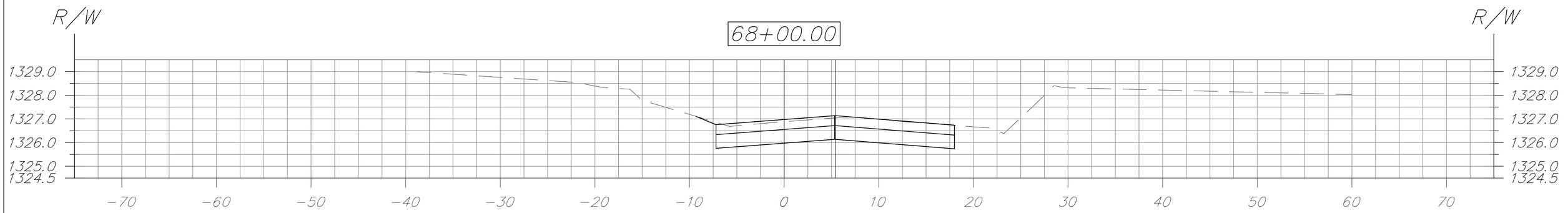
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT 29th St. Cross Sections Sta. 67+10.00 to Sta. 67+50.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

Project No. 09-09-E382

CAPITAL IMPROVEMENT PROJECT

29th St. Cross Sections
Sta. 68+00.00 to Sta. 68+10.00

29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

EARTHWORK QUANTITIES 29th Street									
Station	Cut Area	Compacted Fill Area = S.F.	Loose Fill Area = S.F.	Cut Vol C.Y.	Compacted Fill Volume C.Y.	Loose Fill Volume C.Y.	Cum Cut Vol	Cum Compacted Fill Volume C.Y.	Cum Loose Fill Volume C.Y.
13+21.96	71.35	0.00	0.00	0.00	----	----	0.00	----	----
13+50.00	189.60	0.00	0.00	135.48	0.00	0.00	135.48	0.00	0.00
13+74.82	166.21	0.00	0.26	163.57	0.00	0.12	299.05	0.00	0.12
14+00.00	164.65	0.00	0.00	154.25	0.00	0.12	453.30	0.00	0.24
14+25.00	162.01	0.00	0.13	151.23	0.00	0.06	604.54	0.00	0.31
14+50.00	147.10	0.00	0.77	143.11	0.00	0.42	747.64	0.00	0.73
14+80.00	136.15	0.00	2.03	157.35	0.00	1.56	904.99	0.00	2.28
15+00.00	114.87	0.00	2.01	92.98	0.00	1.50	997.97	0.00	3.78
15+30.00	104.28	0.00	0.91	121.74	0.00	1.62	1119.71	0.00	5.40
15+50.00	102.42	0.00	0.12	76.56	0.00	0.38	1196.27	0.00	5.70
16+00.00	91.61	2.53	6.05	179.66	2.34	5.71	1375.93	2.34	11.49
16+50.00	89.06	1.76	3.41	167.29	7.94	8.76	1543.21	10.28	20.25
16+80.00	91.17	3.55	6.16	100.13	2.95	5.31	1643.34	13.23	25.56
17+00.00	74.80	5.44	9.66	61.47	3.32	5.86	1704.81	16.55	31.42
17+50.00	62.82	8.68	26.61	127.43	13.07	33.58	1832.24	29.62	65.00
18+00.00	53.74	8.46	26.85	107.93	15.87	49.50	1940.17	45.49	114.50
18+30.00	48.07	4.22	21.78	56.56	7.04	27.02	1996.73	52.53	141.52
19+00.00	38.81	5.34	13.45	112.62	12.39	45.67	2109.36	64.92	187.19
19+10.00	36.33	8.68	20.26	13.91	2.60	6.25	2123.27	67.52	193.44
19+50.00	31.53	15.01	46.95	50.27	17.55	49.79	2173.54	85.07	243.23
20+00.00	35.65	8.13	34.61	62.20	21.43	75.52	2235.74	106.50	318.75
20+50.00	63.31	0.00	4.87	91.63	7.53	36.56	2327.37	114.03	355.31
20+60.00	68.75	0.00	1.80	24.47	0.00	1.24	2351.83	114.03	356.55
21+00.00	81.01	0.00	3.73	110.92	0.00	4.10	2462.75	114.03	360.65
21+50.00	104.56	0.00	1.49	171.82	0.00	4.83	2634.57	114.03	365.48
22+00.00	101.07	0.00	1.91	190.40	0.00	3.15	2824.97	114.03	368.63
22+50.00	83.88	0.00	5.07	171.25	0.00	6.46	2996.22	114.03	375.09
23+00.00	68.46	0.00	2.19	141.05	0.00	6.72	3137.27	114.03	381.81
23+50.00	74.99	0.00	1.12	132.82	0.00	3.06	3270.09	114.03	384.87
24+00.00	92.79	0.00	0.00	155.35	0.00	1.04	3425.44	114.03	385.91
24+50.00	112.23	0.00	0.00	189.83	0.00	0.00	3615.27	114.03	385.91
25+00.00	105.91	0.00	2.17	201.99	0.00	2.01	3817.26	114.03	387.92
25+51.00	109.36	0.00	0.14	203.31	0.00	2.18	4020.57	114.03	390.10
26+00.00	84.37	0.00	5.82	175.79	0.00	5.41	4196.36	114.03	395051
26+50.00	73.24	3.53	10.78	145.93	3.27	15.37	4342.29	117.30	410.88
27+00.00	53.16	12.27	47.52	117.04	14.63	53.98	4459.33	131.93	464.86
27+50.00	43.30	15.33	80.79	89.32	25.56	118.81	4548.65	157.49	583.67
28+00.00	42.76	22.72	90.73	79.68	35.23	158.82	4628.32	192.72	742.49
28+30.00	51.99	17.93	79.14	52.64	22.58	94.37	4680.96	215.30	836.86
28+50.00	58.08	24.13	45.80	40.77	15.58	46.27	4721.73	230.88	883.13
29+00.00	58.06	28.84	97.83	107.53	49.05	133.00	4829.27	279.93	1,016.13
29+50.00	54.39	33.79	65.81	104.12	58.00	151.52	4933.39	337.93	1,167.65
29+86.15	47.34	26.00	41.59	68.10	40.03	71.90	5001.49	377.96	1,239.55
31+28.44	38.58	25.76	42.58	226.40	Bridge	Bridge	5227.90	Bridge	Bridge
31+50.00	51.63	25.91	48.98	36.01	20.63	36.56	5263.90	398.59	1276.11
32+00.00	59.74	28.44	69.56	103.12	50.32	109.76	5367.02	448.91	1385.87
32+50.00	75.51	3.89	53.47	125.23	29.94	113.92	5492.25	478.85	1499.79
32+80.00	89.44	0.83	10.95	91.64	2.62	35.79	5583.89	481.47	1535.58
33+00.00	85.94	4.30	56.58	64.95	1.90	25.01	5648.84	483.37	1560.59
33+50.00	81.31	XXXX4.57.XX	46.83	154.86	8.21	95.75	5803.69	491.58	1656.34

EARTHWORK QUANTITIES 29th Street									
Station	Cut Area	Compacted Fill Area = S.F.	Loose Fill Area = S.F.	Cut Vol C.Y.	Compacted Fill Volume C.Y.	Loose Fill Volume C.Y.	Cum Cut Vol	Cum Compacted Fill Volume C.Y.	Cum Loose Fill Volume C.Y.
33+82.50	86.76	2.12	17.97	101.15	4.03	3.90	5904.85	495.61	1695.34
34+00.00	84.97	1.83	26.23	55.65	1.28	14.32	5960.50	496.89	1709.66
35+00.00	58.38	3.49	31.19	265.46	4.93	53.17	6225.96	501.82	1762.83
35+50.00	70.91	2.00	2.40	119.72	5.08	31.10	6345.67	506.90	1793.93
36+00.00	94.47	0.00	2.71	153.14	1.85	4.73	6498.81	508.75	1798.66
36+50.00	114.84	0.00	2.69	193.81	0.00	5.00	6692.62	508.75	1803.66
36+88.00	122.47	0.00	0.88	166.99	0.00	2.51	6859.61	508.75	1806.17
37+00.00	120.49	0.00	1.96	53.99	0.00	0.63	6913.61	508.75	1806.80
37+50.00	121.29	0.00	1.10	223.87	0.00	2.84	7137.47	508.75	1809.64
38+00.00	125.58	0.00	0.13	228.59	0.00	1.14	7366.06	508.75	1810.78
38+50.00	120.71	0.00	1.52	228.05	0.00	1.52	7594.11	508.75	1812.30
39+00.00	118.16	0.00	0.12	221.18	0.00	1.51	7815.28	508.75	1813.81
39+50.00	110.06	0.00	0.11	211.31	0.00	0.21	8026.60	508.75	1814.02
40+00.00	98.20	0.00	0.00	192.84	0.00	0.11	8219.43	508.75	1814.13
40+50.00	115.09	0.00	0.00	197.50	0.00	0.04	8416.93	508.75	1814.67
41+00.00	123.18	0.00	0.11	220.62	0.00	0.14	8637.55	508.75	1814.31
41+25.00	132.95	0.00	0.00	118.58	0.00	0.05	8756.13	508.75	1814.36
41+50.00	141.13	0.00	1.61	126.88	0.00	0.75	8883.02	508.75	1815.11
42+00.00	149.35	0.00	0.62	268.95	0.00	2.07	9151.96	508.75	1817.18
42+50.00	145.54	0.00	0.00	273.06	0.00	0.61	9425.02	508.75	1817.79
43+00.00	142.75	0.00	0.00	266.94	0.00	0.03	9691.96	508.75	1817.82
43+50.00	110.55	0.00	0.07	234.54	0.00	0.07	9926.50	508.75	1817.89
44+00.00	135.95	0.00	0.08	228.25	0.00	0.13	10154.75	508.75	1818.02
44+50.00	161.36	0.00	0.14	275.29	0.00	0.20	10430.04	508.75	1818.22
44+80.00	165.67	0.00	0.00	181.67	0.00	0.08	10611.71	508.75	1818.30
45+00.00	161.03	0.00	0.00	121.02	0.00	0.00	10732.72	508.75	1818.30
45+50.00	135.73	0.00	1.37	274.77	0.00	1.27	11007.50	508.75	1819.57
46+00.00	120.16	0.00	0.00	236.94	0.00	1.28	11244.43	508.75	1820.85
46+50.00	104.18	0.00	0.26	207.72	0.00	0.25	11452.16	508.75	1821.10
47+00.00	103.40	0.00	1.66	192.20	0.00	1.78	11644.36	508.75	1822.88
47+50.00	109.63	0.00	1.06	197.25	0.00	2.52	11841.61	508.75	1825.40
48+00.00	122.02	0.00	0.00	214.49	0.00	1.00	12056.10	508.75	1826.40
48+50.00	139.25	0.00	0.00	241.92	0.00	0.00	12298.01	508.75	1826.40
49+00.00	136.58	0.00	0.00	255.40	0.00	0.00	12553.41	508.75	1856.40
49+50.00	138.63	0.00	0.00	254.82	0.00	0.00	12808.23	508.75	1826.40
50+00.00	138.02	0.00	0.00	256.15	0.00	0.00	13064.38	508.75	1826.40
50+50.00	141.18	0.00	0.00	258.51	0.00	0.00	13322.90	508.75	1826.40
51+00.00	160.65	0.00	0.00	279.48	0.00	0.00	13602.37	508.75	1856.40
51+50.00	155.10	0.00	0.00	292.37	0.00	0.00	13894.74	508.75	1826.40
52+00.00	205.32	0.00	0.00	333.72	0.00	0.00	14228.46	508.75	1826.40
52+50.00	197.25	0.00	0.00	372.74	0.00	0.00	14601.20	508.75	1826.40
53+00.00	185.74	0.00	0.00	354.62	0.00	0.00	14955.82	508.75	1826.40
53+50.00	187.97	0.00	0.00	346.02	0.00	0.00	15301.85	508.75	1826.40
54+00.00	105.37	0.00	3.72	271.60	0.00	3.45	15573.45	508.75	1829.85
54+50.00	124.86	0.00	0.00	213.18	0.00	3.45	15786.63	508.75	1833.30
55+00.00	113.86	0.00	0.00	221.04	0.00	0.00	16007.67	508.75	1833.30
55+50.00	102.23	0.00	0.00	200.09	0.00	0.00	16207.76	508.75	1833.30
56+00.00	83.96	0.00	0.69	172.40	0.00	0.64	16380.16	508.75	1833.94
56+50.00	77.91	0.00	0.00	149.88	0.00	0.64	16530.04	508.75	1834.58
56+75.00	76.22	0.00	0.00	71.35	0.00	0.00	16601.38	508.75	1834.58

EARTHWORK QUANTITIES 29th Street									
Station	Cut Area	Compacted Fill Area = S.F.	Loose Fill Area = S.F.	Cut Vol C.Y.	Compacted Fill Volume C.Y.	Loose Fill Volume C.Y.	Cum Cut Vol	Cum Compacted Fill Volume C.Y.	Cum Loose Fill Volume C.Y.
57+00.00	78.42	0.00	0.19	71.60	0.00	0.09	16672.98	508.75	1834.67
57+50.00	85.97	0.00	0.00	152.21	0.00	0.18	16825.19	508.75	1834.85
58+00.00	99.14	0.00	0.00	171.40	0.00	0.00	16996.59	508.75	1834.85
58+43.00	87.39	0.00	0.00	148.53	0.00	0.00	17145.12	508.75	1834.85
58+50.00	92.40	0.00	0.00	23.30	0.00	0.00	17168.42	508.75	1834.85
59+00.00	118.07	0.00	0.00	194.88	0.00	0.00	17363.30	508.75	1834.85
59+50.00	126.33	0.00	0.00	226.29	0.00	0.00	17589.59	508.75	1834.85
60+00.00	124.42	0.00	0.00	232.17	0.00	0.00	17821.77	508.75	1834.85
60+50.00	104.30	0.00	0.00	211.78	0.00	0.00	18033.55	508.75	1834085
61+00.00	111.25	0.00	0.00	199.58	0.00	0.00	18233.13	508.75	1834.85
61+20.00	113.19	0.00	0.00	83.12	0.00	0.00	18316.25	508.75	1834.85
61+50.00	103.42	0.00	0.00	120.34	0.00	0.00	18436.60	508.75	1834.85
62+00.00	63.68	0.00	8.89	154.73	0.00	8.23	18591.32	508.75	1843.08
62+50.00	55.52	0.00	0.00	110.37	0.00	8.23	18701.69	508.75	1851.31
62+90.00	30.31	0.00	2.39	63.58	0.00	1.77	18765.27	508.75	1853.08
63+00.00	47.23	0.00	0.72	14.36	0.00	0.57	18779.63	508.75	1853.65
63+40.00	64.18	0.00	4.20	82.53	0.00	3.64	18862.16	508.75	1857.29
63+50.00	75.85	0.00	4.67	25.92	0.00	1.64	18888.08	508.75	1858.93
64+00.00	80.71	0.00	5.58	144.96	0.00	9.50	19033.05	508.75	1868.43
64+45.80	74.64	0.00	3.69	131.75	0.00	7.86	19164.80	508.75	1876.29
64+95.14	67.78	0.00	0.34	130.14	0.00	3.68	19294.94	508.75	1879.97
66+35.45	34.50	0.00	19.56	265.76	0.00	51.71	19560.70	508.75	1931.68
66+50.00	37.19	0.00	18.71	19.31	0.00	10.31	19580.02	508.75	1941.89
66+85.00	50.56	0.00	3.70	56.87	0.00	14.52	19636.89	508.75	1956.51
67+00.00	56.21	0.00	6.00	29.66	0.00	2.70	19666.55	508.75	1959.21
67+10.00	60.36	0.00	5.90	21.59	0.00	2.20	19688.14	508.75	1961.41
67+50.00	26.52	0.00	0.00	64.36	0.00	2.19	19752.50	508.75	1963.60
68+00.00	24.00	0.00	0.00	46.79	0.00	0.00	19799.28	508.75	1963.60
68+10.00	24.55	0.00	0.00	8.99	0.00	0.00	19808.27	508.75	1963.60

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

NOVEMBER, 2013

Design: KEK
Drawn: JDM
Approved: MWS
Scale: Noted

Project No. 09-09-E382

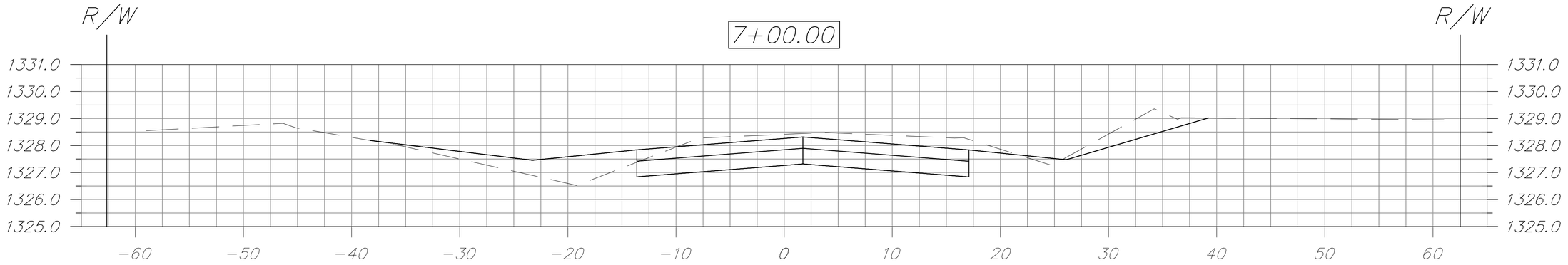
CAPITAL IMPROVEMENT PROJECT

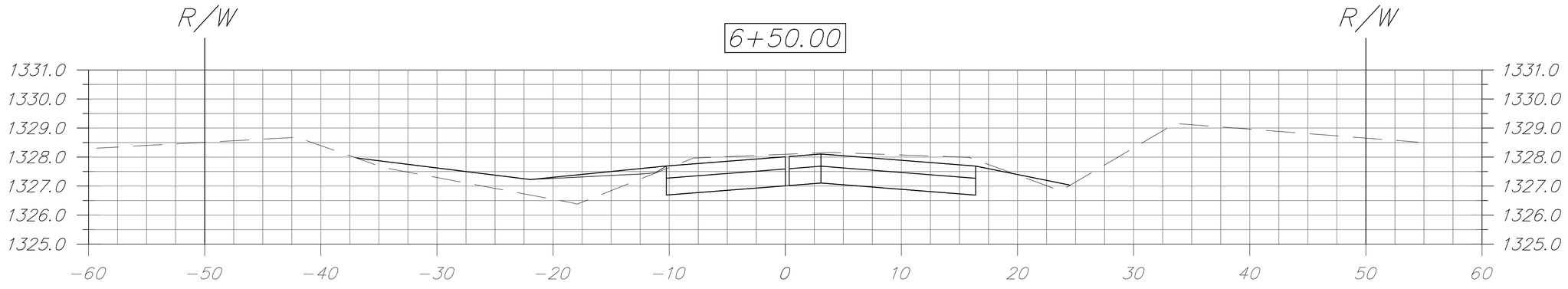
29th St. North Cross Sections
Earthwork Volume Tables

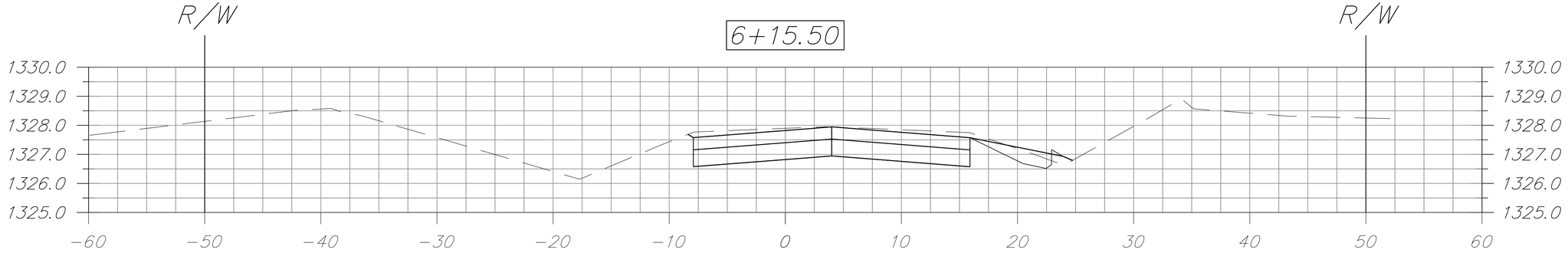
29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical







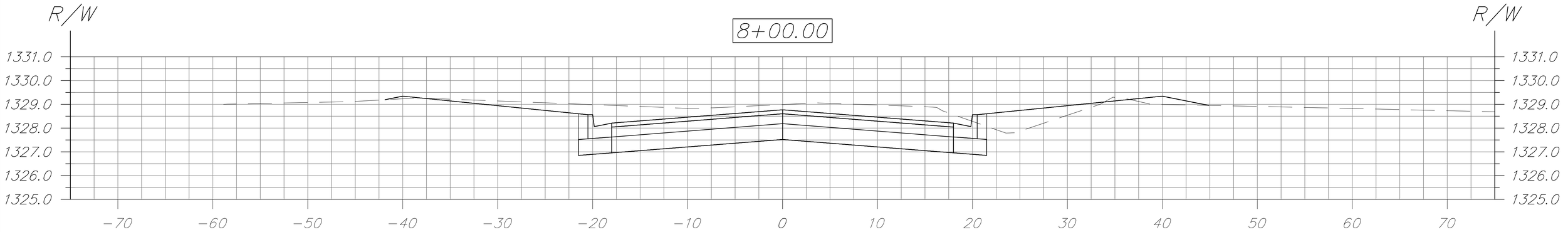
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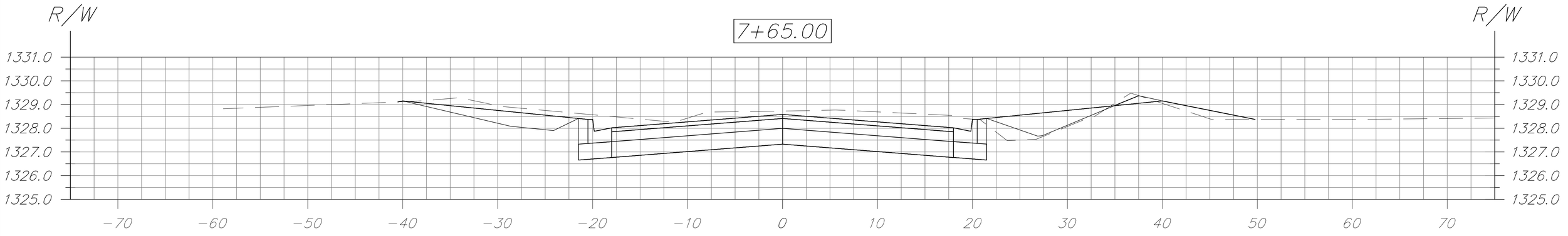
NOVEMBER, 2013

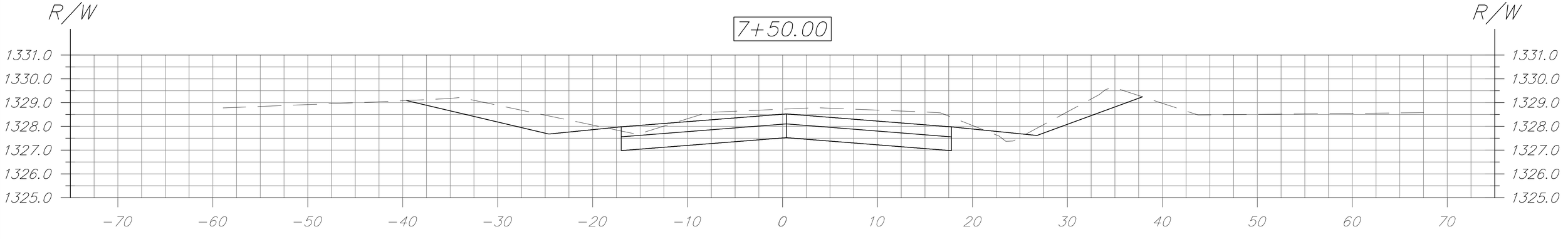
Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT Hoover Road Cross Sections Sta. 6+15.50 to Sta. 7+00.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 170 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





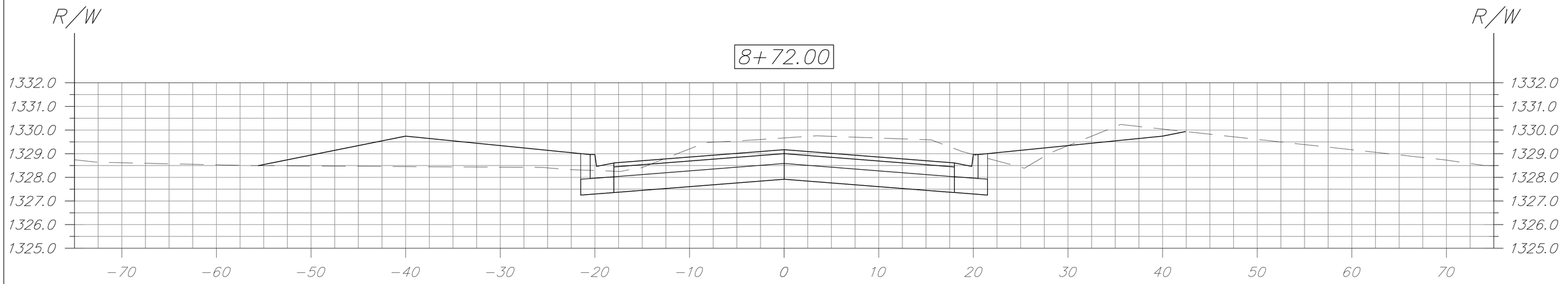


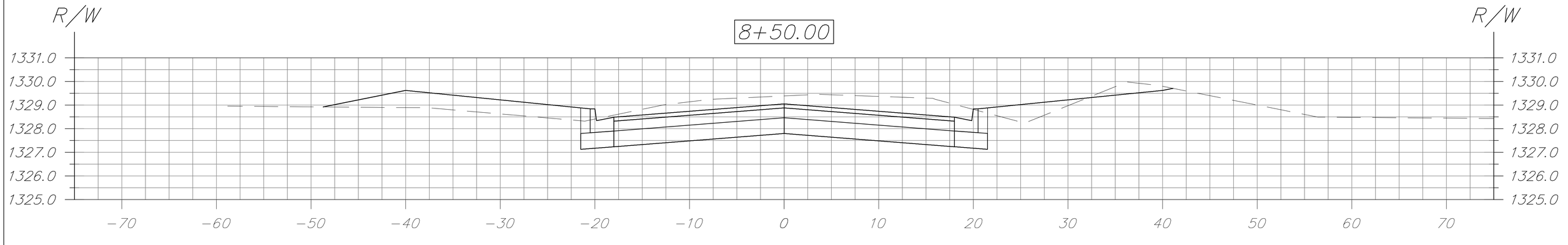
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NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT Hoover Road Cross Sections Sta. 7+50.00 to Sta. 8+00.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





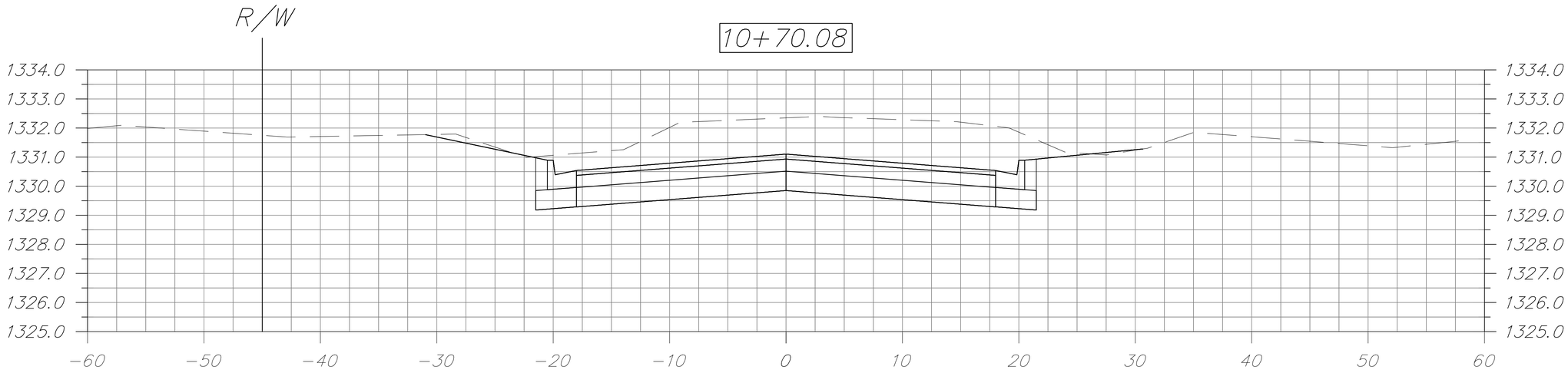
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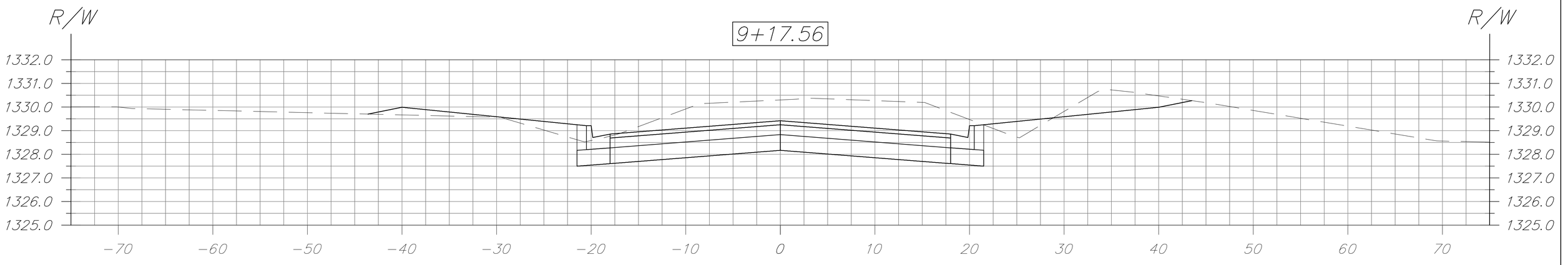
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT Hoover Road Cross Sections Sta. 8+50.00 to Sta. 8+72.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 172 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical



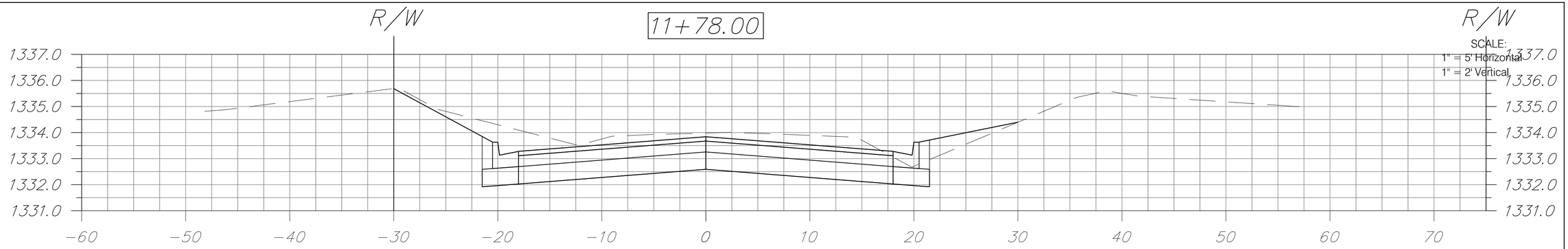


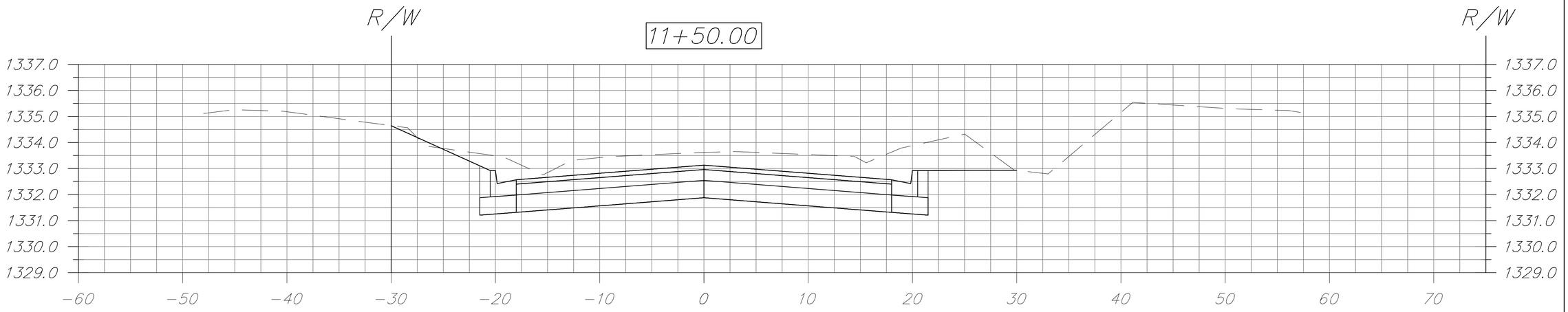
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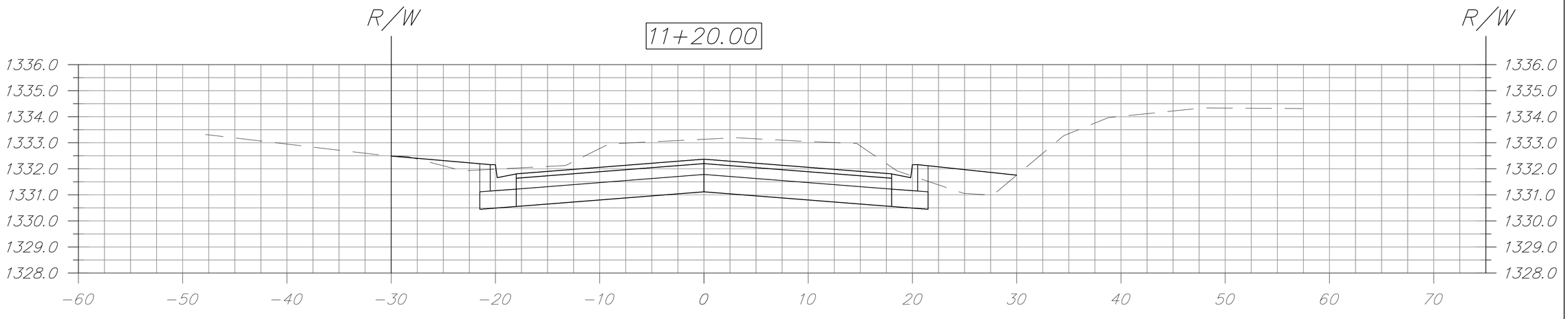
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382	CAPITAL IMPROVEMENT PROJECT Hoover Road Cross Sections Sta. 9+17.56 to Sta. 10+70.08 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 173 OF 177







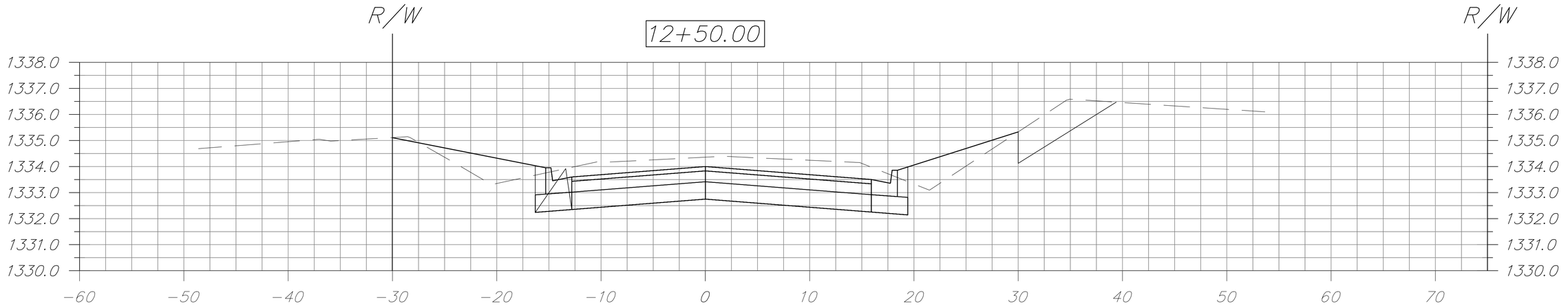
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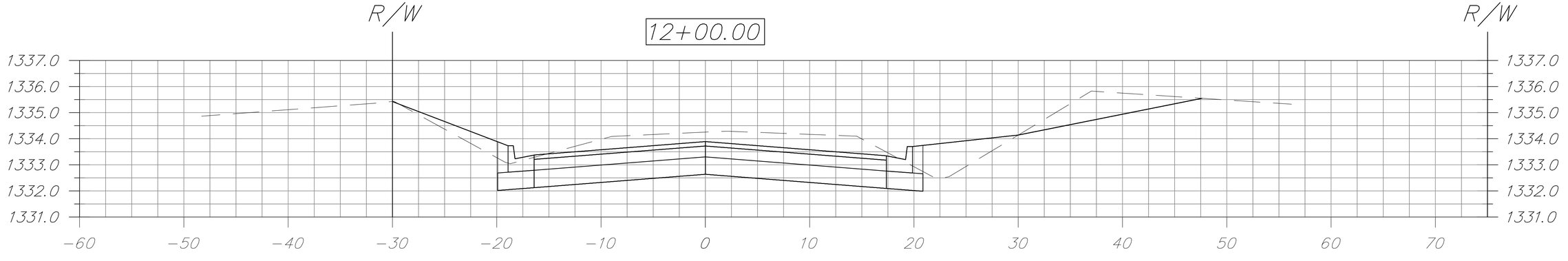
NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT Hoover Road Cross Sections Sta. 11+20.00 to Sta. 11+78.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 174 OF 177

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

NOVEMBER, 2013

Design:	KEK
Drawn:	JDM
Approved:	MWS
Scale:	Noted

Project No. 09-09-E382

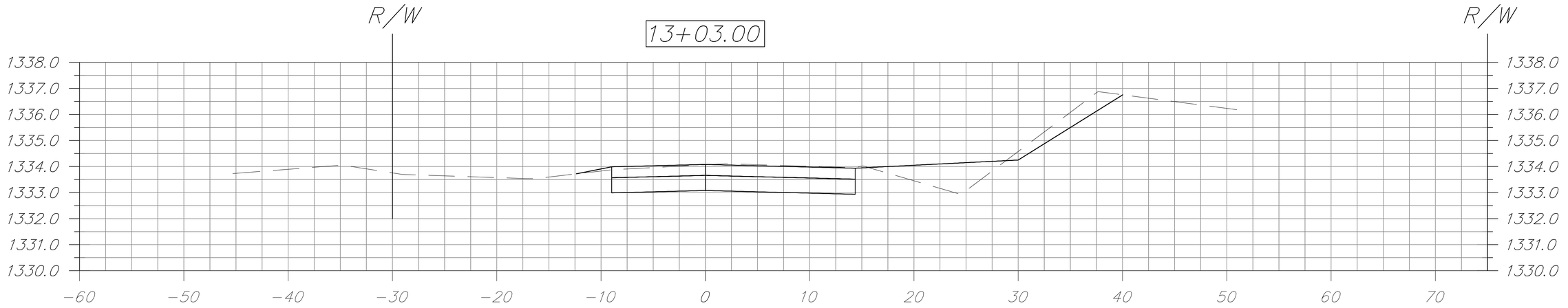
CAPITAL IMPROVEMENT PROJECT

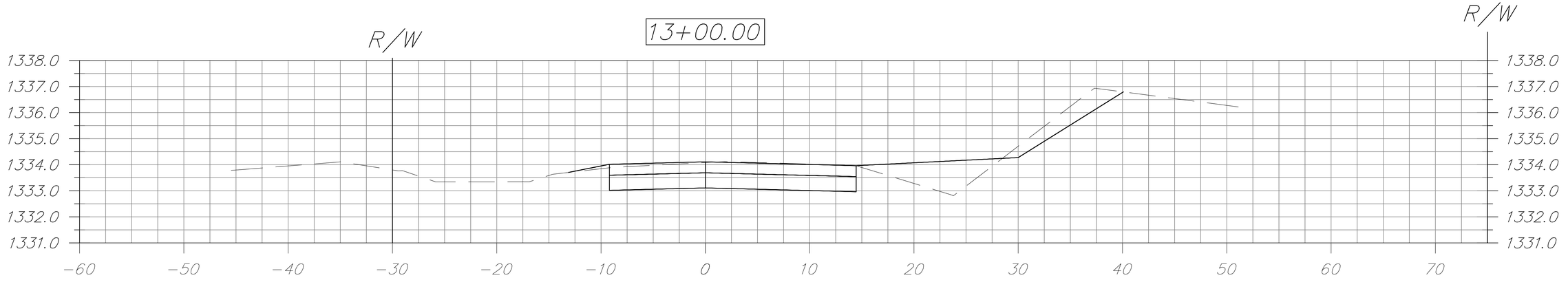
Hoover Road Cross Sections
Sta. 12+00.00 to Sta. 12+50.00

29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SCALE:
1" = 5' Horizontal
1" = 2' Vertical





Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

NOVEMBER, 2013

Design: KEK Drawn: JDM Approved: MWS Scale: Noted	Project No. 09-09-E382 CAPITAL IMPROVEMENT PROJECT Hoover Road Cross Sections Sta. 13+00.00 to Sta. 13+03.00 29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD	Baughman Company , P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 176 OF 177

EARTHWORK QUANTITIES Hoover Road									
Station	Cut Area	Compacted Fill Area = S.F.	Loose Fill Area = S.F.	Cut Vol C.Y.	Compacted Fill Volume C.Y.	Loose Fill Volume C.Y.	Cum Cut Vol	Cum Compacted Fill Volume C.Y.	Cum Loose Fill Volume C.Y.
6+15.50	0.46	0.00	0.00	0.00	----	----	0.00	----	----
6+50.00	11.70	0.00	10.90	7.77	0.00	6.96	7.77	0.00	6.96
7+00.00	12.07	0.00	9.83	22.02	0.00	19.23	29.79	0.00	26.19
7+50.00	0.97	0.00	1.20	12.08	0.00	10.21	41.86	0.00	36.40
7+65.00	4.80	0.00	9.00	1.60	0.00	2.85	43.46	0.00	39.23
8+00.00	8.56	0.00	6.62	8.66	0.00	10.12	52.12	0.00	49.33
8+50.00	18.99	0.00	19.14	25.51	0.00	23.85	77.64	0.00	73.20
8+72.00	31.14	0.00	33.17	20.42	0.00	21.31	98.06	0.00	94.51
9+17.56	7.52	0.00	10.22	32.62	0.00	36.62	130.68	0.00	131.13
10+70.08	0.23	0.00	0.00	21.88	29th St.	29th St.	152.56	29th St.	29th St.
11+20.00	7.30	0.00	15.45	6.97	0.00	14.28	159.53	0.00	145.41
11+50.00	0.20	0.00	10.43	4.17	0.00	14.38	163.70	0.00	159.79
11+78.00	3.19	0.00	5.00	1.76	0.00	8.57	165.45	0.00	168.36
12+00.00	10.41	0.00	11.40	5.54	0.00	6.68	171.00	0.00	175.04
12+50.00	13.28	0.00	13.25	21.94	0.00	22.82	192.93	0.00	197.86
13+00.00	9.63	0.00	9.42	21.22	0.00	21.00	214.15	0.00	218.86
13+03.00	8.18	0.00	8.70	0.99	0.00	1.01	215.14	0.00	219.87

Drawing File: E:\Projects\29th Ridge to Hoover\dwg\Street

NOVEMBER, 2013

Design: KEK
Drawn: JDM
Approved: MWS
Scale: Noted

Project No. 09-09-E382

CAPITAL IMPROVEMENT PROJECT

Hoover Road Cross Sections
Earthwork Volume Table

29TH STREET NORTH - RIDGE ROAD to HOOVER ROAD

Baughman Company , P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
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