2011073
Drainage

DRAINAGE AND TRANSPORTATION SHEET

(REV. 1/28/2003rd)

PROJECT TITLE: Bruckner's Truck Sales
DRB #: 1008585 EPC #:
ZONE MAP/DRG. FILE # J-09-Z
WORK ORDER #:

LEGAL DESCRIPTION: Tract 20 and Tract 21 of Town of Atrisco Grant, Unit 5
CITY ADDRESS:

ENGINEERING FIRM:	Tierra West, LLC	CONTACT:	Ron Bohannan
ADDRESS:	5571 Midway Park Place NE	PHONE:	(505) 858-3100
CITY, STATE:	Albuquerque, NM	ZIP CODE:	87109
OWNER:	Bruckner's Truck Sales, Inc.	CONTACT:	Chris Bruckner
ADDRESS:	8531 Amarillo Blvd. East	PHONE:	806-376-6273
CITY, STATE:	Amarillo, Texas	ZIP CODE:	79127
ARCHITECT:	Fitzgerald Associates	CONTACT:	Phil Fitzgerald
ADDRESS:	3900 N. Santa Fe Ave.	PHONE:	405-521-8999
CITY, STATE:	Oklahoma City, Oklahoma	ZIP CODE:	73118
SURVEYOR:	Precision Surveys, Inc.	CONTACT:	Larry Medrano
ADDRESS:	5571 Midway Park Place, NE	PHONE:	505-856-5700
CITY, STATE:	Albuquerque, NM	ZIP CODE:	87109
CONTRACTOR:	TBD	CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	

CHECK TYPE OF SUBMITTAL:

- ____ DRAINAGE REPORT
- ____ DRAINAGE PLAN 1st SUBMITTAL, ***REQUIRES TCL or equal***
- X DRAINAGE PLAN RESUBMITTAL
- ____ CONCEPTUAL GRADING & DRAINAGE PLAN
- X GRADING PLAN
- ____ EROSION CONTROL PLAN
- ____ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ____ CLOMR/LOMR
- ____ TRAFFIC CIRCULATION LAYOUT (TCL)
- ____ ENGINEERS CERTIFICATION (TCL)
- ____ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)
- ____ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ____ SIA / FINANACIAL GUARANTEE RELEASE
- ____ PRELIMINARY PLAT APPROVAL
- ____ S. DEV. PLAN FOR SUB'D. APPROVAL
- ____ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ____ SECTOR PLAN APPROVAL
- ____ FINAL PLAT APPROVAL
- ____ FOUNDATION PERMIT APPROVAL
- X BUILDING PERMIT APPROVAL
- ____ CERTIFICATE OF OCCUPANCY (PERM.)
- ____ CERTIFICATE OF OCCUPANCY (TEMP.)
- ____ GRADING PERMIT APPROVAL
- ____ PAVING PERMIT APPROVAL
- ____ WORK ORDER APPROVAL
- ____ SO-19

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- X YES
- ____ NO
- ____ COPY PROVIDED

RECEIVED
SEP 27 2012

DATE SUBMITTED: 9/26/2012 BY: Ronald R. Bohanann, PE

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines the degree of drainage detail. One or more of the following levels of sumbittal may be required based on the following:

1. **Conceptual Grading and Drainage Plans**: Required for approval of Site Development Plans greater than five (5) acres and Sector Plans.
2. **Drainage Plans**: Required for building permits, grading permits, paving permits and site plans less than five (5) acres.
3. **Drainage Report**: Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

TIERRA WEST, LLC

5571 Midway Park Place NE Albuquerque, NM 87109
(505) 858-3100 Fax (505) 858-1118 1-800-245-3102
tierrawestllc.com

September 20, 2012

Mr. Curtis Cherne
Principal Engineer, Planning Department
City of Albuquerque
PO Box 1293
Albuquerque, NM 87103

RE: BRUCKNER'S TRUCK SALES,
DRAINAGE REPORT AND GRADING PLAN COMMENT RESPONSE
ENGINEER'S STAMP DATED: 7/19/12 (J09/DO21)

Dear Mr. Cherne:

Per your correspondence dated August 3, 2012, regarding the above referenced property, please find the following responses addressing the comments listed below:

1. Include inlet capacity calculation.
   Attached with this letter, please find inlet capacity calculations for the onsite storm drain system, as requested.

2. Provide street flow capacity analysis and inlet capacity analysis for Daytona.
   Attached, please find street flow capacity and inlet capacity for Daytona, as requested.

3. Please provide erosion and scour analysis passed the enclosed riprap for the channel. Would scour wall be required at the end of the riprap?
   Attached, please find the channel analysis results for the area in question. The analysis shows that the velocities are within the acceptable range to prevent dangerous erosion and we have called out and detailed a cutoff wall for the end of the riprap and channel improvements.

4. What is the status of plugging the 48" storm drain pipe on the north side of I-40?
   Currently there is no plan in place to plug the 48" culvert. However, the design and analysis has accounted for the culverts' approximate maximum flow of 120 cfs. The design will accommodate the flow from the above mentioned culvert and if in the future AMAFCA chooses to plug the 48" culvert the downstream system will maintain its adequacy.

Accompanying this letter is the updated Grading and Drainage Plan set reflecting the changes noted above.

If you have any questions or need additional information regarding this matter, please do not hesitate to contact me.

Sincerely,

Ronald R. Bohannan, P.E.

Enclosure/s

RECEIVED
SEP 21 2012

JN: 2011073
RRB/PE/cla

Z:\2011\2011073 Bruckner Truck Sales\Correspondence\2011073 Curtis Cherne Drainage Response 09-20-2012.doc

DEVELOPED BASIN INLET CALCULATIONS (INCLUDING DAYTONA ROAD INLETS) - updated 9/25/2012

Basin Name	Basin Area (acre)	Inlet Name (per schematic)	Available Head (ft)	Basin Peak Flow (cfs)	Inlet Capacity (cfs) 50% clogg	Inlet Type
I40-3	1.22	Headwall Inlet 1	7.5	2.88	9.1	Headwall Inlet with grate
I40-4	0.77	Headwall Inlet 3	3	1.82	5.8	Headwall Inlet with grate
Basin A	1.56	DI5	1.5	6.09	13.4	Single Type D
Basin B	1.52	DI12	1	5.95	11.0	Single Type D
Basin C	1.66	DI7	1	6.5	11.0	Single Type D
Basin D	0.48	DI13	1	2.11	11.0	Dock Trench Drain
Basin E	0.92	DI14	1	3.58	11.0	Single Type D
Basin F	0.8	DI15	2	3.15	15.5	Single Type D
Basin G	0.57	DI8	1	2.23	11.0	Single Type D
Daytona 1	0.32	DI16	0.5	1.38	---	Grated Curb Inlet Type C
Basin H + Daytona 2	0.6	DI18	0.5	2.47	---	Grated Curb Inlet Type C

Equation:

Inlet Capacity $Q = CA(2gH)^{1/2}$

where; C = Unitless Coefficient = 0.6

A = Effective Area with 50% clogging factor, ft^2

$g = 32.2\ ft/s^2$

H = Available Head, ft

Notes:

- All inlet calculations include a 50% clogging factor for total effective inlet area.
- Single Type D Grate Effective Area = 2.28 sf with 50% clogging factor, based on area calculations from COA standard drawing.
- See Bentley Flowmaster reports for Inlet calculations for Curb Inlets in Daytona

RECEIVED
SEP 27 2012

Daytona Street Capacity Analysis

Project Description

Solve For	Spread

Input Data

Channel Slope	0.01400	ft/ft
Discharge	60.00	ft³/s
Gutter Width	2.00	ft
Gutter Cross Slope	0.06	ft/ft
Road Cross Slope	0.02	ft/ft
Spread	28.84	ft
Roughness Coefficient	0.013	

Cross Section Image

Under the ultimate developed condition the total flow in Daytona is unknown at this time. However, this analysis illustrates that Daytona has a flow capacity of 60 cfs for half of the analyzed cross section (or a total street capacity of 120 cfs) being maintained within the curb limits.

It is anticipated that Daytona would not experience flows above this limit.

V: 1
H: 1

Daytona Inlet Capacity Analysis

Project Description

Solve For	Efficiency

Input Data

Discharge		10.00	ft³/s
Slope		0.01400	ft/ft
Gutter Width		2.50	ft
Gutter Cross Slope		0.05	ft/ft
Road Cross Slope		0.02	ft/ft
Roughness Coefficient		0.013	
Local Depression		3.00	in
Local Depression Width		4.00	ft
Efficiency		55.03	%
Grate Width		2.50	ft
Grate Length		4.00	ft
Grate Type	P-50 mm (P-1-7/8")		
Clogging		50.00	%
Curb Opening Length		4.00	ft

Cross Section Image

V: 1
H: 1

Daytona Inlet Capacity Report

Project Description

Solve For	Efficiency

Input Data

Discharge		10.00	ft³/s
Slope		0.01400	ft/ft
Gutter Width		2.50	ft
Gutter Cross Slope		0.05	ft/ft
Road Cross Slope		0.02	ft/ft
Roughness Coefficient		0.013	
Local Depression		3.00	in
Local Depression Width		4.00	ft
Grate Width		2.50	ft
Grate Length		4.00	ft
Grate Type	P-50 mm (P-1-7/8")		
Clogging		50.00	%
Curb Opening Length		4.00	ft

Options

Calculation Option	Use Both
Grate Flow Option	Exclude None

Results

Efficiency		55.03	%
Intercepted Flow		5.50	ft³/s
Bypass Flow		4.50	ft³/s
Spread		14.33	ft
Depth		0.36	ft
Flow Area		2.15	ft²
Gutter Depression		0.08	ft
Total Depression		0.33	ft
Velocity		4.66	ft/s
Splash Over Velocity		8.13	ft/s
Frontal Flow Factor		1.00	
Side Flow Factor		0.04	
Grate Flow Ratio		0.46	
Equivalent Cross Slope		0.05709	ft/ft
Active Grate Length		2.00	ft
Length Factor		0.06	
Total Interception Length		33.09	ft

> 2.47 cfs, therefore okay

Channel Improvements Analysis

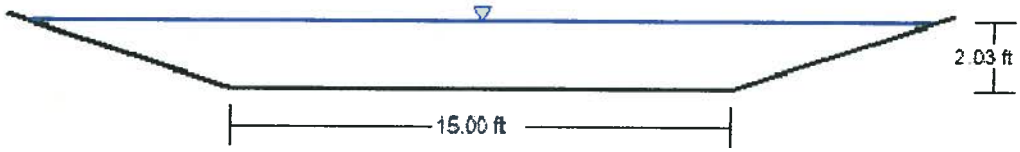
Project Description

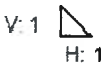
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.069	
Channel Slope	0.02100	ft/ft
Normal Depth	2.03	ft
Left Side Slope	3.00	ft/ft (H:V)
Right Side Slope	3.00	ft/ft (H:V)
Bottom Width	15.00	ft
Discharge	178.00	ft^3/s

Cross Section Image





Channel Improvements Analysis

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.069	
Channel Slope	0.02100	ft/ft
Left Side Slope	3.00	ft/ft (H:V)
Right Side Slope	3.00	ft/ft (H:V)
Bottom Width	15.00	ft
Discharge	178.00	ft^3/s

Results

Normal Depth	2.03	ft	
Flow Area	42.81	ft^2	
Wetted Perimeter	27.84	ft	
Hydraulic Radius	1.54	ft	
Top Width	27.18	ft	
Critical Depth	1.47	ft	
Critical Slope	0.06702	ft/ft	
Velocity	4.16	ft/s	< 5 fps, therefore okay
Velocity Head	0.27	ft	
Specific Energy	2.30	ft	
Froude Number	0.58		
Flow Type	Subcritical		

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

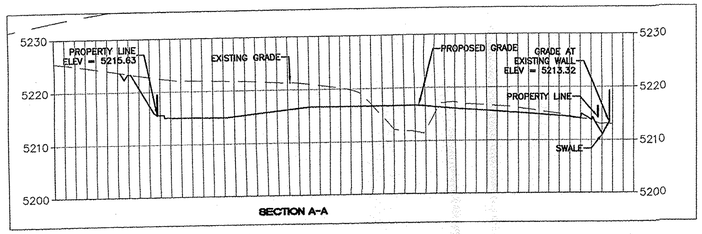
GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	2.03	ft
Critical Depth	1.47	ft
Channel Slope	0.02100	ft/ft

Channel Improvements Analysis

GVF Output Data

Critical Slope	0.06702 ft/ft

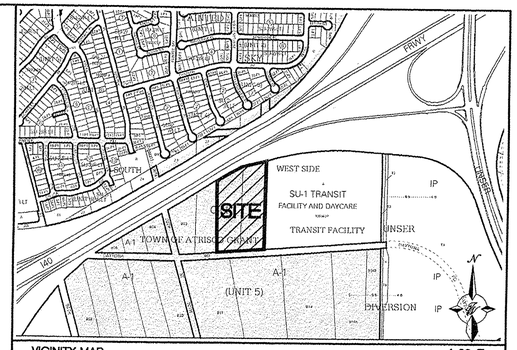


LEGEND

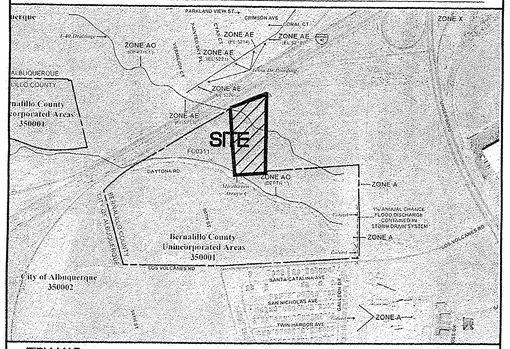
- CURB & GUTTER
- BOUNDARY LINE
- EASEMENT
- CENTERLINE
- RIGHT-OF-WAY
- BUILDING
- SIDEWALK
- SCREEN WALL
- RETAINING WALL
- 5010 CONTOUR MAJOR
- 5011 CONTOUR MINOR
- x 5048.25 SPOT ELEVATION
- FLOW ARROW
- EXISTING CURB & GUTTER
- EXISTING BOUNDARY LINE
- 5010 EXISTING CONTOUR MAJOR
- 5011 EXISTING CONTOUR MINOR
- x 5048.25 EXISTING SPOT ELEVATION

KEYED NOTE:

(A) CURB & GUTTER PER COA STD DWG #2415B
(B) 6" CURB & GUTTER (SEE DETAIL SHEET C6)
(C) UNIDIRECTIONAL RAMP (SEE DETAIL SHEET C7)
(D) WIRE ENCLOSED RIPRAP, CLASS "A" 1.0 FT. THICK OVER NON-WOVEN GEOTEXTILE CLASS "1"
(E) VALLEY GUTTER
(F) HC RAMP (SEE DETAIL SHEET C7)
(G) 2' CURB CUT (SEE DETAIL SHEET C7)
(H) CONCRETE V-DITCH (SEE DETAIL SHT C9)
(J) CUTOFF WALL (SEE DETAIL SHT C9)
(K) ADA RAMP "C" (SEE DETAIL SHT C7)



VICINITY MAP: J-09-Z



GRAPHIC SCALE
50 25 0 25 50
SCALE: 1"=50'

ROUGH GRADING APPROVAL DATE

ENGINEER'S SEAL
RONALD R. BOHANNAN
NEW MEXICO
7868
PROFESSIONAL ENGINEER
9/20/12
RONALD R. BOHANNAN
P.E. #7868

BRUCKNERS TRUCK SALES

GRADING AND DRAINAGE CONTOURS

TIERRA WEST, LLC
5571 MIDWAY PARK PLACE NE
ALBUQUERQUE, NM 87109
(505) 858-3100
www.tierrawestllc.com

DRAWN BY BJF
DATE 9/20/12
2011073_GRB
SHEET # C2.1
JOB # 2011073

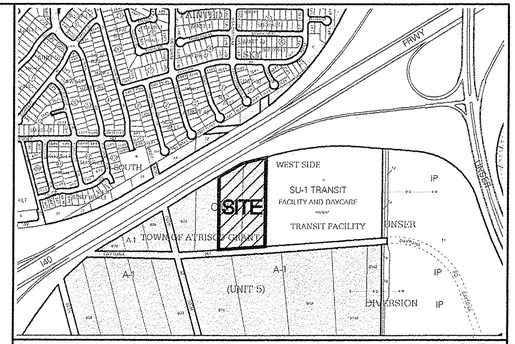
DRB SEP 27 2012

LEGEND

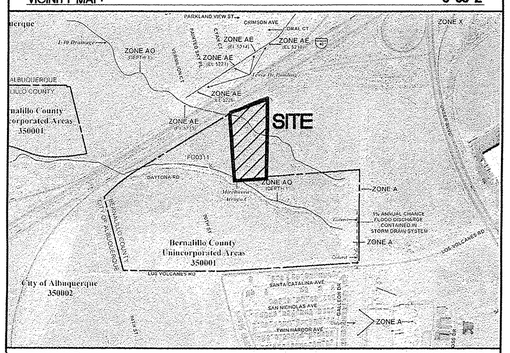
- CURB & GUTTER
- BOUNDARY LINE
- EASEMENT
- CENTERLINE
- RIGHT-OF-WAY
- BUILDING
- SIDEWALK
- SCREEN WALL
- RETAINING WALL
- 5010 CONTOUR MAJOR
- 5011 CONTOUR MINOR
- x 5048.25 SPOT ELEVATION
- FLOW ARROW
- EXISTING CURB & GUTTER
- EXISTING BOUNDARY LINE
- EXISTING CONTOUR MAJOR
- EXISTING CONTOUR MINOR
- x 5048.25 EXISTING SPOT ELEVATION

KEYED NOTE:

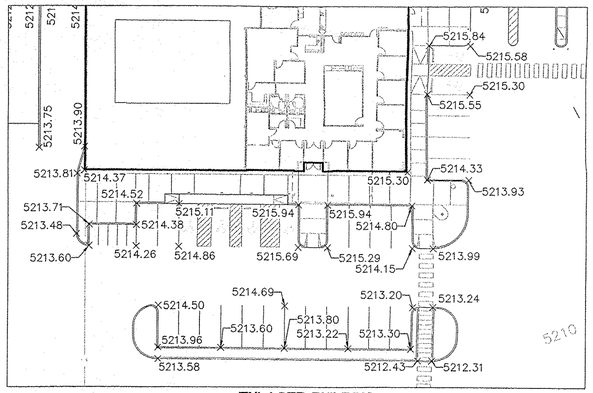
(A) CURB & GUTTER PER COA STD DWG #2415B
(B) 6" CURB & GUTTER (SEE DETAIL SHEET C6)
(C) UNIDIRECTIONAL RAMP (SEE DETAIL SHEET C7)
(D) WIRE ENCLOSED RIPRAP, CLASS "A" 1.0 FT. THICK OVER NON-WOVEN GEOTEXTILE CLASS "1"
(E) VALLEY GUTTER
(F) HC RAMP (SEE DETAIL SHEET C7)
(G) 2' CURB CUT (SEE DETAIL SHEET C7)
(H) CONCRETE V-DITCH (SEE DETAIL SHT C9)
(J) CUTOFF WALL (SEE DETAIL SHT C9)
(K) ADA RAMP "C" (SEE DETAIL SHT C7)



VICINITY MAP: J-09-Z



FIRM MAP: 35001C0328G



ENLAGED BUILDING
SIDEWALK AND PARKING DETAIL

GRAPHIC SCALE
50 25 0 25 50
SCALE: 1"=50'

ROUGH GRADING APPROVAL DATE

ENGINEER'S SEAL
RONALD R. BOHANNAN
NEW MEXICO
7868
PROFESSIONAL ENGINEER
RONALD R. BOHANNAN P.E. #7868

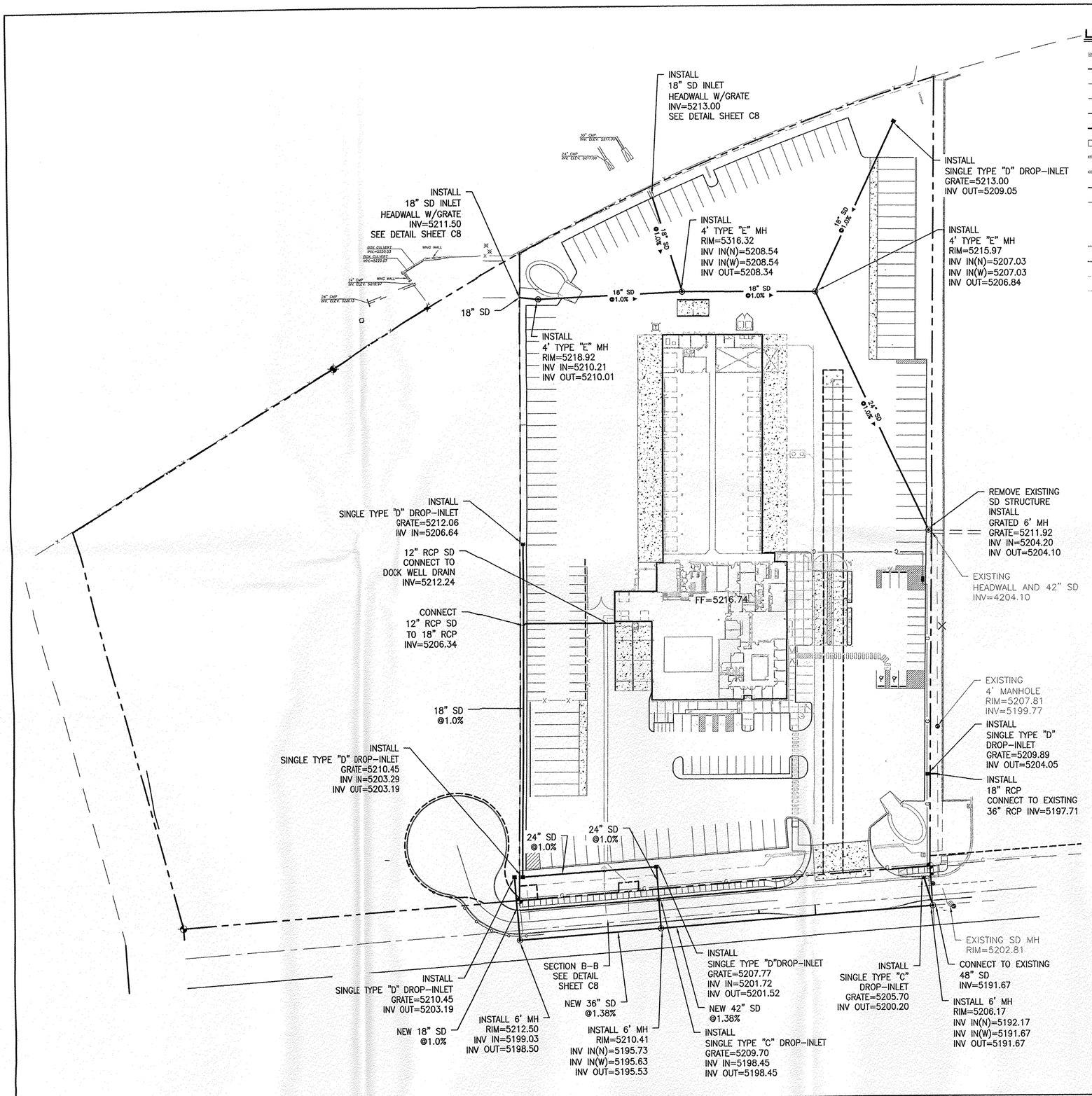
BRUCKNERS TRUCK SALES

GRADING AND DRAINAGE SPOT ELEVATIONS

TIERRA WEST, LLC
5571 MIDWAY PARK PLACE NE
ALBUQUERQUE, NM 87109
(505) 858-3100
www.tierrawestllc.com

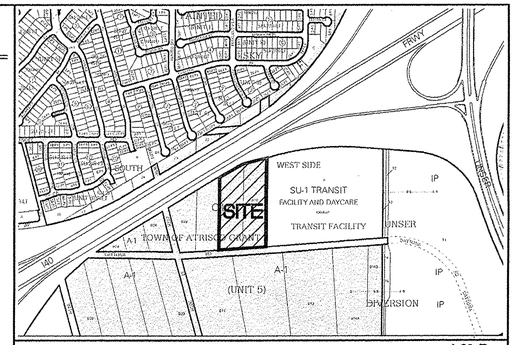
DRAWN BY BJF
DATE 9/20/12
2011073_GRB
SHEET # C2.2
JOB # 2011073

SEP 27

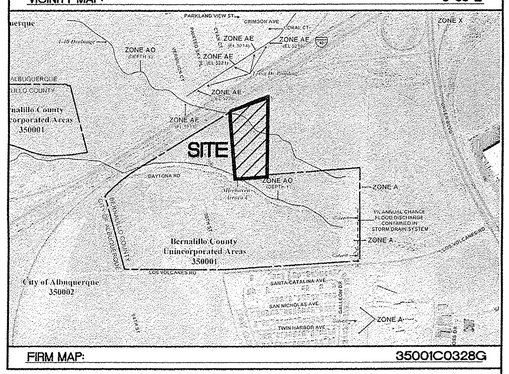


LEGEND

- CURB & GUTTER
- BOUNDARY LINE
- EASEMENT
- CENTERLINE
- RIGHT-OF-WAY
- BUILDING
- SIDEWALK
- SCREEN WALL
- RETAINING WALL
- 5010 — CONTOUR MAJOR
- 5011 — CONTOUR MINOR
- x 5048.25 — SPOT ELEVATION
- FLOW ARROW
- EXISTING CURB & GUTTER
- EXISTING BOUNDARY LINE
- 5010 — EXISTING CONTOUR MAJOR
- 5011 — EXISTING CONTOUR MINOR
- x 5048.25 — EXISTING SPOT ELEVATION



VICINITY MAP: J-09-Z



FIRM MAP: 35001C0328G

GRAPHIC SCALE

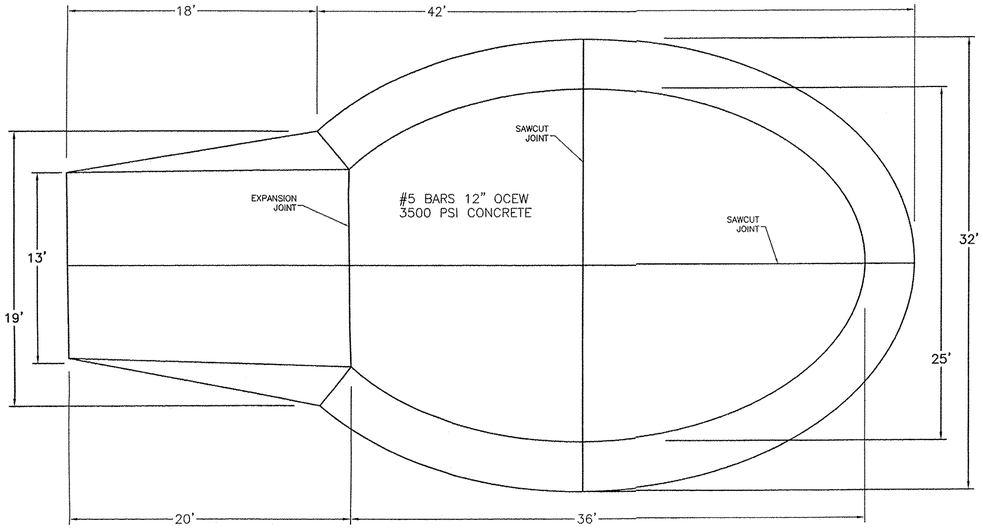
50 25 0 25 50

SCALE: 1"=50'

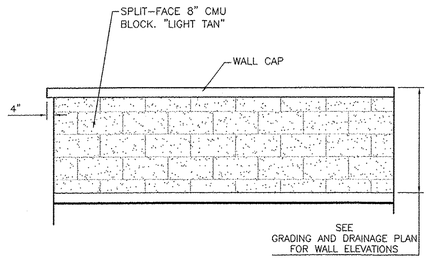
ROUGH GRADING APPROVAL DATE

ENGINEER'S SEAL RONALD R. BOHANNAN P.E. #7868 NEW MEXICO REGISTERED PROFESSIONAL ENGINEER	BRUCKNERS TRUCK SALES GRADING AND DRAINAGE STORM DRAIN	DRAWN BY BJF DATE 9/20/12 2011073_GRB SHEET # C2.3 JOB # 2011073
RONALD R. BOHANNAN P.E. #7868	TIERRA WEST, LLC 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NM 87109 (505) 858-3100 www.tierrawestllc.com	

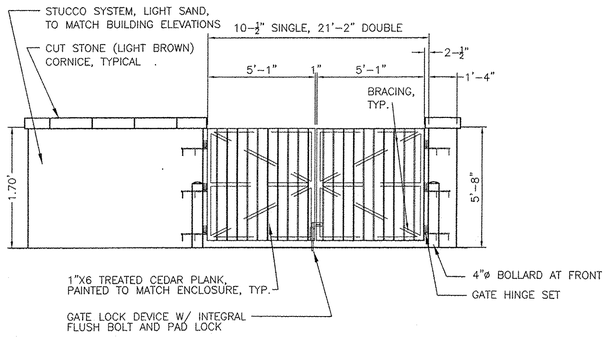
RECEIVED
SEP 27 2012



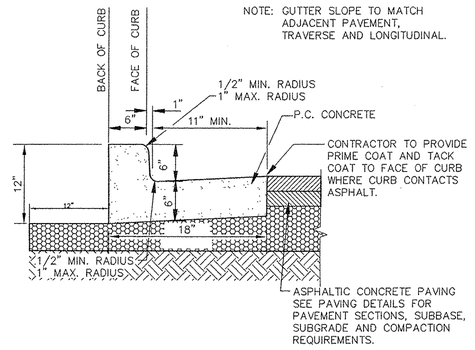
TRUCK DISPLAY - PLAN DETAIL



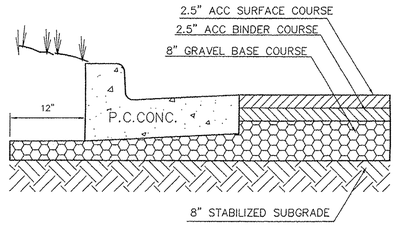
RETAINING/SCREEN WALL ELEVATION



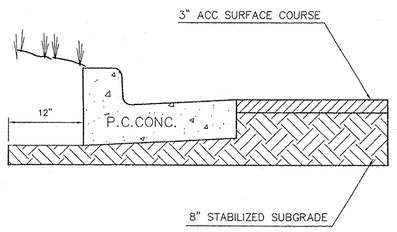
REFUSE ENCLOSURE ELEVATION
NTS
*SEE ARCHITECTURAL PLANS FOR DETAIL



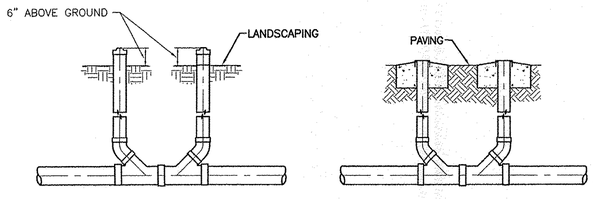
6" CURB / GUTTER



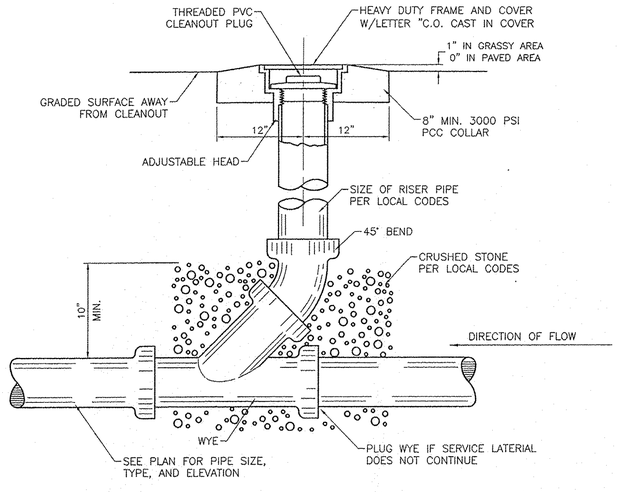
HEAVY DUTY ASPHALT PAVING



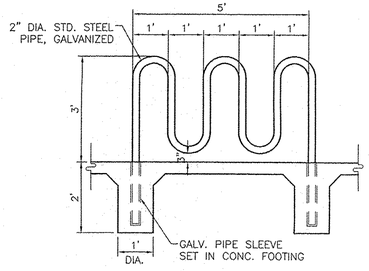
STANDARD DUTY ASPHALT PAVING



(1) **SANITARY SEWER DOUBLE CLEAN-OUTS**
NTS



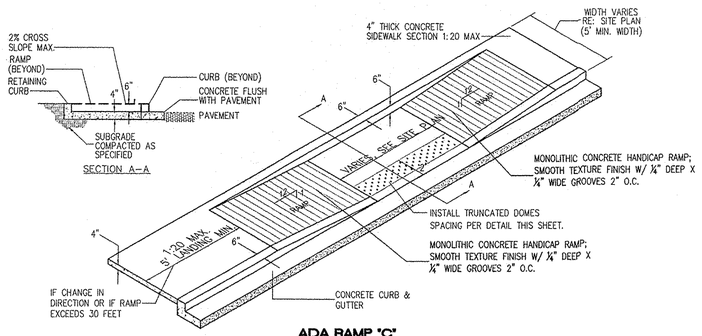
(2) **SANITARY SEWER CLEAN-OUT**
NTS



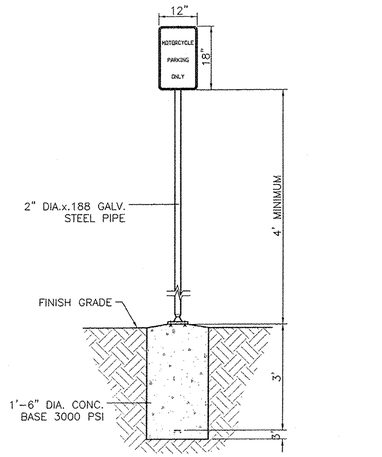
BIKE RACK DETAIL
SCALE: 1/2"=1'

ENGINEER'S SEAL RONALD R. BOHANNAN P.E. #7868	BRUCKNERS TRUCK SALES DETAIL SHEET	DRAWN BY BJF DATE 9/19/12 2011073_DTB SHEET # C6
	TIERRA WEST, LLC 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NM 87109 (505) 858-3100 www.tierrawestllc.com	JOB # 2011073

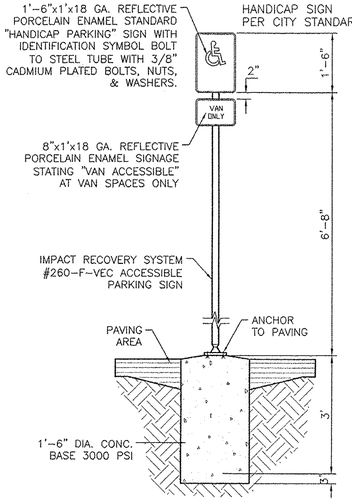
RECEIVED
SEP 27 2012



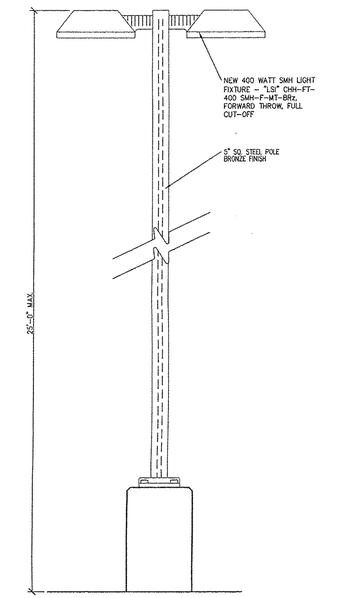
ADA RAMP "C"
SC: NTS



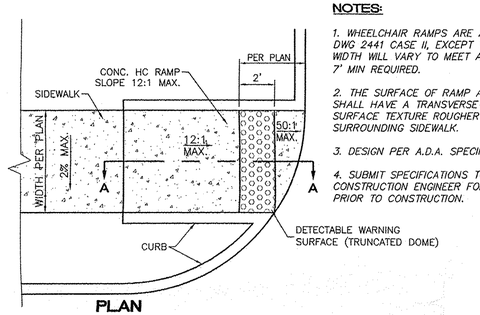
MOTORCYCLE PARKING SIGN
SCALE : NTS



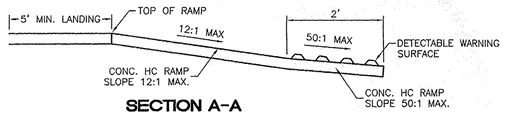
HANDICAP SIGN
SCALE : NTS



4 **AREA LIGHT ELEVATION**
SCALE : NTS



PLAN

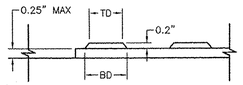


SECTION A-A

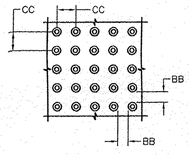
UNIDIRECTIONAL HC RAMP
NOT TO SCALE

NOTES:

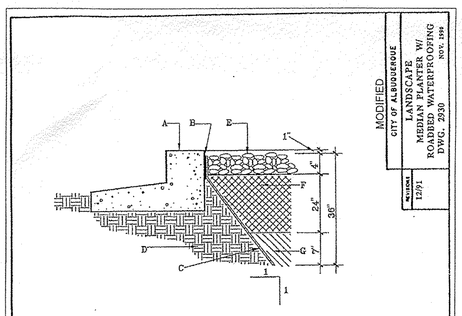
1. *WHEELCHAIR RAMPS ARE AS C.O.A. STD DWG 2441 CASE II, EXCEPT THE RAMP WIDTH WILL VARY TO MEET A 12:1 SLOPE; 7' MIN REQUIRED.*
2. *THE SURFACE OF RAMP AND SIDES SHALL HAVE A TRANSVERSE BROOMED SURFACE TEXTURE ROUGHER THAN THE SURROUNDING SIDEWALK.*
3. *DESIGN PER A.D.A. SPECIFICATIONS.*
4. *SUBMIT SPECIFICATIONS TO CITY CONSTRUCTION ENGINEER FOR EVALUATION PRIOR TO CONSTRUCTION.*



DOME SECTION
BD – BASE DIAMETER 0.9" MIN
TD – TOP DIAMETER 50% OF BD MIN TO 65% OF BD MAX



DOME SPACING
CC – CENTER TO CENTER SPACING 2.35"
BB – BASE TO BASE SPACING 1.48" MIN



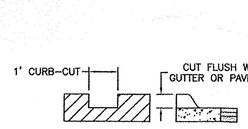
GENRAL NOTES:

1. THE WATERPROOF MEMBRANE SHALL BE A 30 MIL., PVC LINER MATERIAL.
2. THE WATERPROOF MEMBRANE SHALL BE ADHERED TO THE BACK OF THE CURB PER THE MANUFACTURER'S SPECIFICATIONS.
3. THE EXISTING SOIL WITHIN THE MEDIAN SHALL BE REMOVED AND REPLACED WITH THE SPECIFIED PLANTING SOIL MIXTURE.

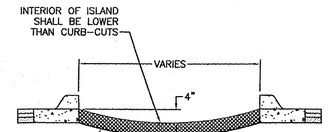
CONSTRUCTION NOTES:

A. EXISTING CURB AND GUTTER.
B. ADHESIVE PER MANUFACTURER'S SPECIFICATIONS.
C. WATERPROOF MEMBRANE, 38'.
D. SUBGRADE COMPACTED TO 95%. (SEE SECTION 301).
E. SEE LANDSCAPE PLAN FOR TREATMENT TYPE.
F. PLANTING SOIL MIXTURE. (REFERENCE THE SPECIFICATIONS).
G. LOOSEN THE SOIL TO A DEPTH OF 6'.

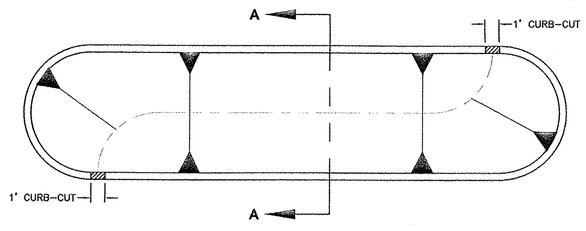
DETAIL "A"



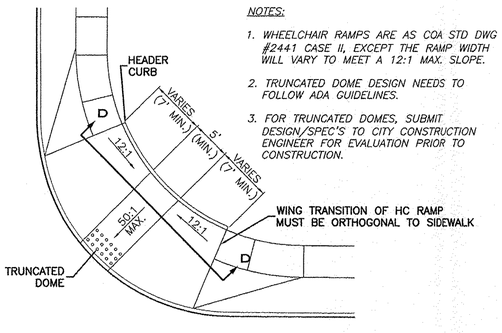
1' CURB-CUT
NTS



SECTION A-A
NTS



1 **LANDSCAPE AREA WATER HARVESTING DETAIL**
FOR REFERENCE ONLY - BUILD ISLAND GEOMETRY PER SITE AND GRADING PLAN

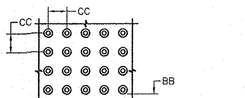


SECTION D-D
NTS

NOTES:

1. *WHEELCHAIR RAMPS ARE AS COA STD DWG #2441 CASE II, EXCEPT THE RAMP WIDTH WILL VARY TO MEET A 12:1 MAX. SLOPE.*
2. *TRUNCATED DOME DESIGN NEEDS TO FOLLOW ADA GUIDELINES.*
3. *FOR TRUNCATED DOMES, SUBMIT DESIGN/SPEC'S TO CITY CONSTRUCTION ENGINEER FOR EVALUATION PRIOR TO CONSTRUCTION.*

WHEELCHAIR RAMP DETAIL (TYP.)
NTS

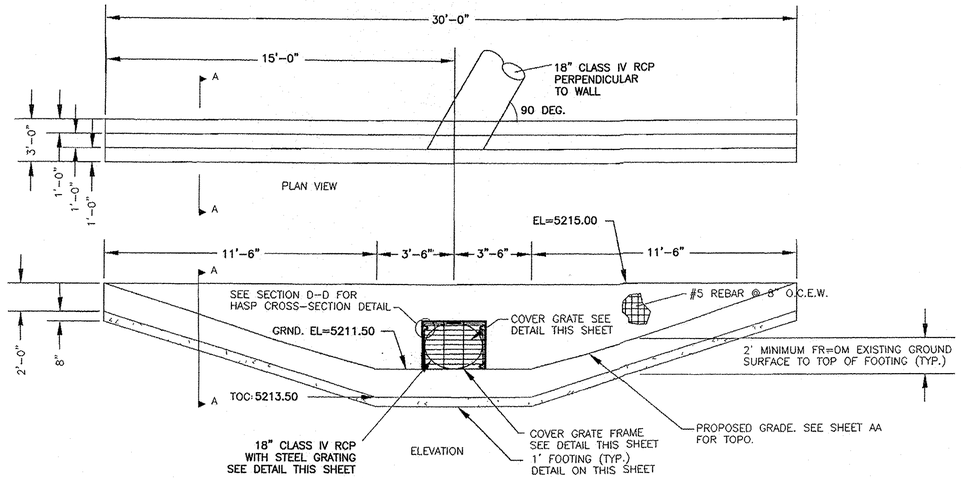


DOME SECTION
BD – BASE DIAMETER 0.9" MIN
TD – TOP DIAMETER 50% OF BD MIN TO 65% OF BD MAX

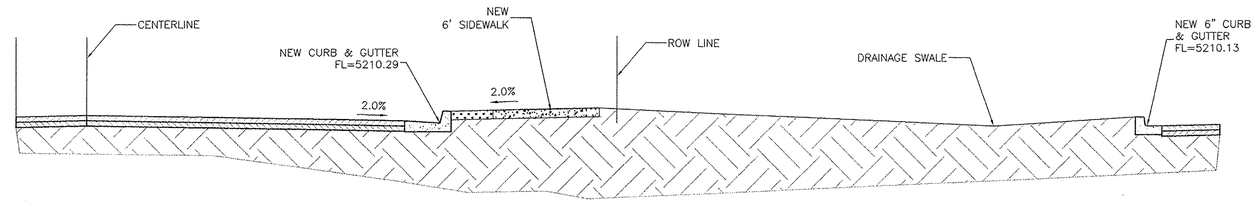
DOME SPACING
CC – CENTER TO CENTER SPACING 2.35"
BB – BASE TO BASE SPACING 1.48" MIN

ENGINEER'S SEAL RONALD RAY BOHANNAN NEW MEXICO 7868 PROFESSIONAL ENGINEER RONALD R. BOHANNAN P.E. #7868	BRUCKNERS TRUCK SALES DETAIL SHEET TIERRA WEST, LLC 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NM 87109 (505) 858-3100 www.tierrawestllc.com	DRAWN BY BJF DATE 9/19/12 2011073_DTB SHEET # C7 JOB # 2011073

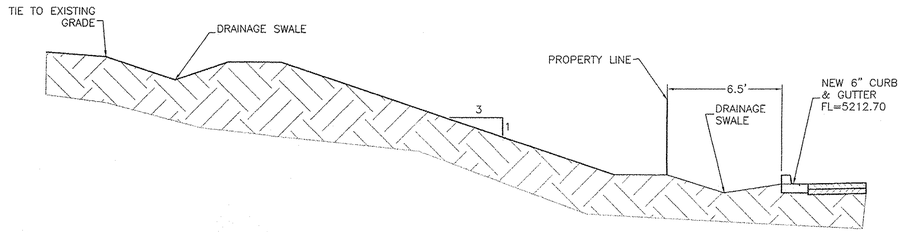
RECEIVED
SEP 2 / 2012



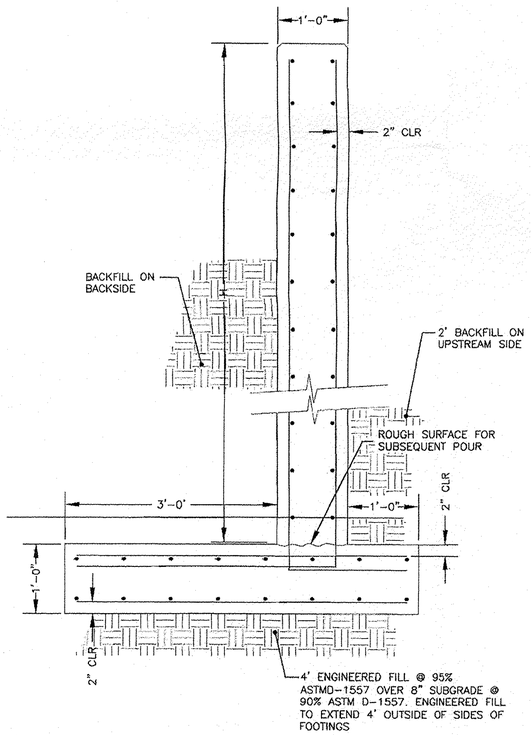
18" SD HEAD WALL - SECTION A-A



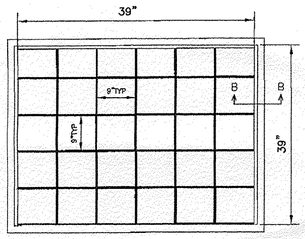
SECTION B-B



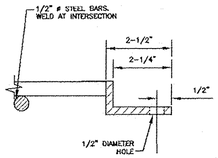
SECTION C-C



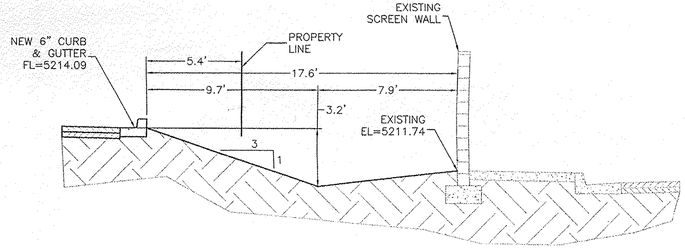
36" SD HEAD WALL - SECTION A-A



18" SD HEAD WALL - COVER GRATE



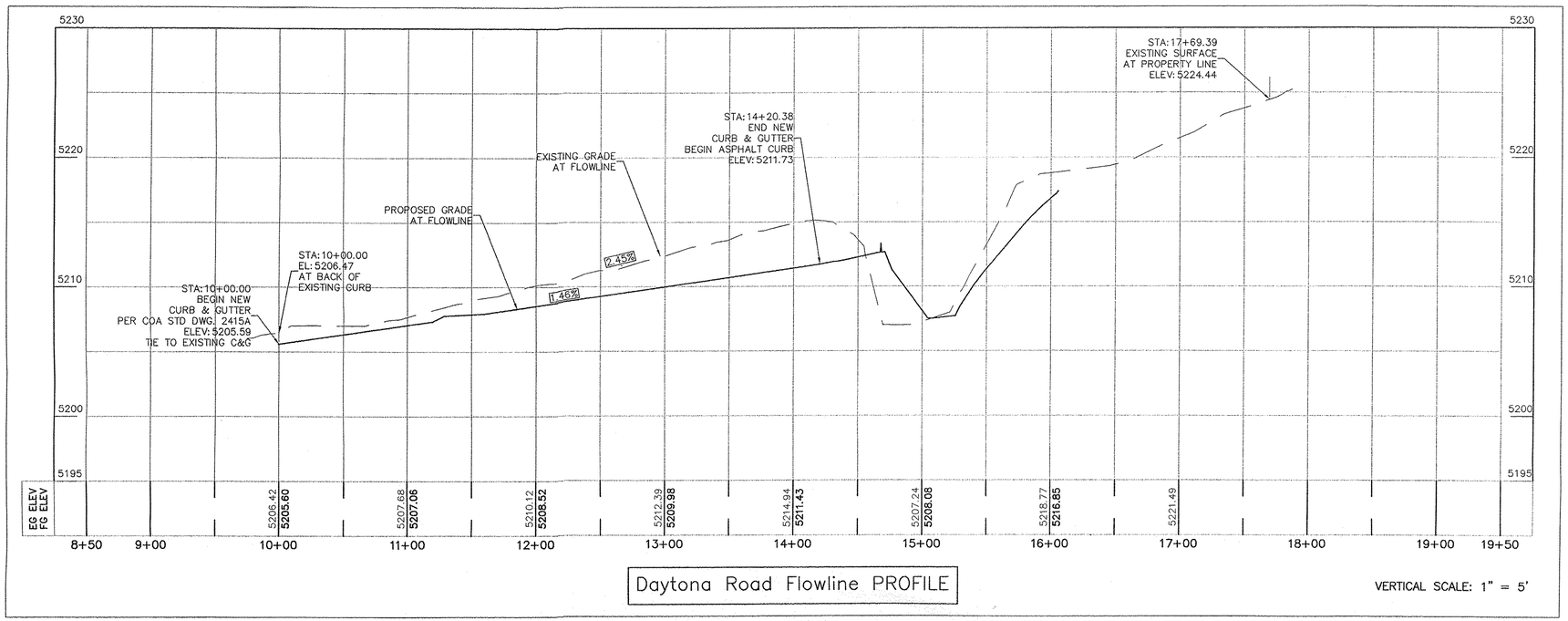
36" SD HEAD WALL - SECTION B-B



SECTION D-D

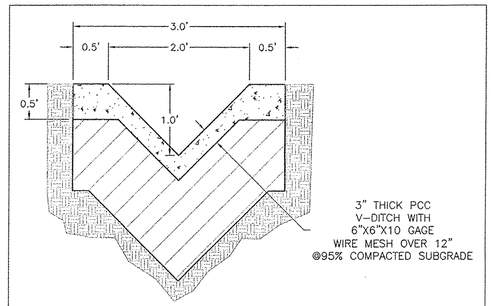
ENGINEER'S SEAL RONALD R. BOHANNAN NEW MEXICO 7868 PROFESSIONAL ENGINEER RONALD R. BOHANNAN P.E. #7868	BRUCKNERS TRUCK SALES DETAIL SHEET TIERRA WEST, LLC 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NM 87109 (505) 858-3100 www.tierrawestllc.com	DRAWN BY BJF DATE 9/19/12 2011073_DTB SHEET # C8 JOB # 2011073

RECEIVED
SEP 21 2012

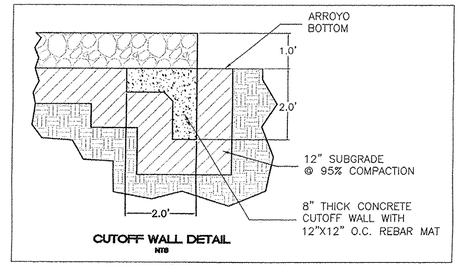


Daytona Road Flowline PROFILE

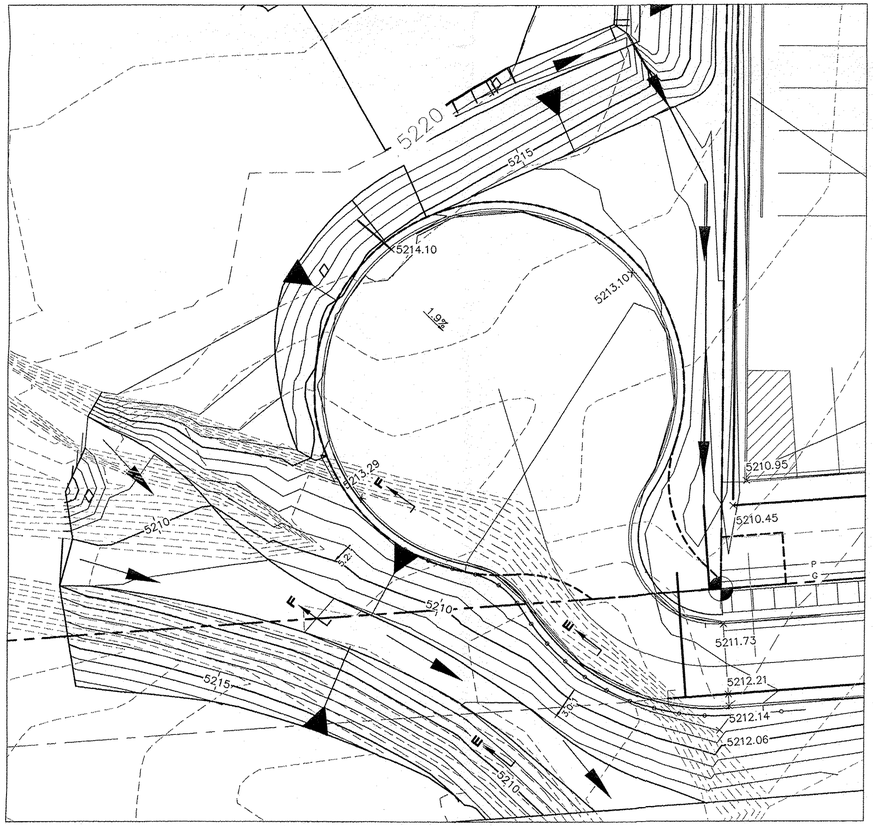
VERTICAL SCALE: 1" = 5'



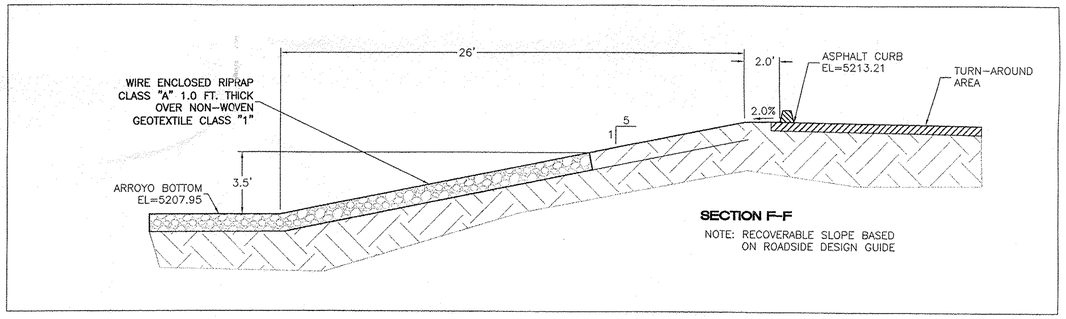
CONCRETE V-DITCH DETAIL
NTS



CUTOFF WALL DETAIL
NTS

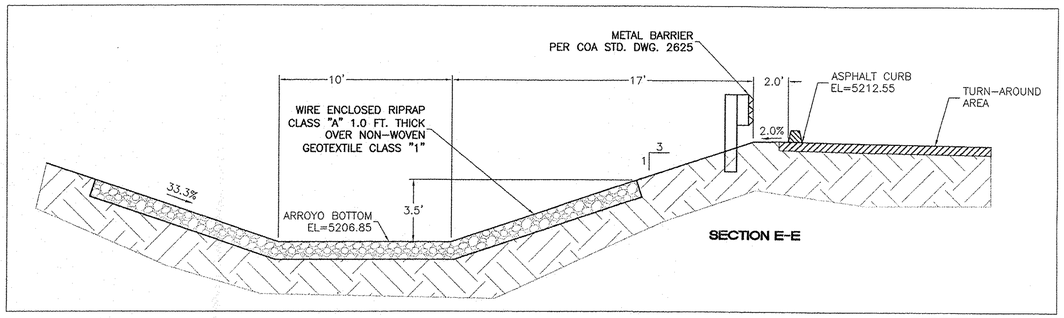


TURN-AROUND AND ARROYO
DETAIL
SCALE: 1"=20'



SECTION F-F

NOTE: RECOVERABLE SLOPE BASED
ON ROADSIDE DESIGN GUIDE



SECTION E-E

ENGINEER'S SEAL

RONALD R. BOHANNAN
P.E. #7868

BRUCKNERS TRUCK SALES

DETAIL SHEET

TIERRA WEST, LLC
5571 MIDWAY PARK PLACE NE
ALBUQUERQUE, NM 87109
(505) 858-3100
www.tierrawestllc.com

DRAWN BY: BJF

DATE: 9/20/12

2011073_GRB

SHEET # C9

JOB # 2011073

RECEIVED
SEP 21 2012