

### LOCATION MAP

SCALE: 1"=1000'±  
ZONE ATLAS MAP D-16-Z

## I. EXECUTIVE SUMMARY

THIS PLAN SERVES TO SUPPORT THE PROPOSED DEVELOPMENT FOR COORDINATED VISION, INC. THE SITE IS LOCATED IN THE CITY OF ALBUQUERQUE AND IS KNOWN AS LOT 11 OF THE LAS LOMITAS BUSINESS PARK SUBDIVISION. THIS SUBDIVISION IS LOCATED SOUTH OF PASEO DEL NORTE AND APPROXIMATELY 850 FEET WEST OF THE NORTH DIVERSION CHANNEL. THE SITE ADDRESS IS 1320 CUESTA ABAJO COURT. THE PROPOSED CONSTRUCTION CONSISTS OF NEW BUILDINGS, UTILITIES, GRADING & DRAINAGE IMPROVEMENTS, PARKING LOT, WALKWAYS, LANDSCAPE AND OTHER AMENITIES AS REQUIRED FOR A FULLY FUNCTIONAL SITE. OFF-SITE CONSTRUCTION WILL INCLUDE SIDEWALK, SIDEWALK CULVERT, DRIVE PAD AND FIRE LINE CONNECTION. MOST LOTS WITHIN THIS SUBDIVISION ARE NOT DEVELOPED EXCEPT FOR BERMS AT MOST LOT LINES. HOWEVER, THE LOT DIRECTLY TO THE SOUTH OF THE PROPOSED SITE IS FULLY DEVELOPED. ALSO, STREET PAVEMENT, CURB AND GUTTER, PUBLIC UTILITIES AND DRAINAGE STRUCTURES FOR THE SUBDIVISION ARE IN PLACE. DUE TO THESE DEVELOPMENTS, OFF-SITE STORMWATER SHOULD NOT IMPACT THIS SITE. IT IS PROPOSED THAT STORMWATER GENERATED ON-SITE WILL BE STRATEGICALLY CONTROLLED AND CONVEYED TO THE SUBDIVISION'S MAIN RETENTION BASIN LOCATED APPROXIMATELY 500 FEET WEST OF THE SITE. THE TOTAL RUN-OFF GENERATED ON-SITE DURING A 100 YEAR, 24-HOUR EVENT IS DETERMINED TO BE 2.85 CFS. THIS RUN-OFF WILL BE DIRECTED TOWARD THE RIGHT-OF-WAY THEN TO THE SUBDIVISION'S MAIN RETENTION BASIN. THE RUN-OFF DIRECTED TO THE RIGHT-OF-WAY (2.85 CFS) DOES NOT EXCEED THE ALLOWABLE 4.79 CFS AS ACCORDING TO DRAINAGE REPORT D-16/D002C ON FILE WITH COA.

## II. PROJECT DESCRIPTION

AS SHOWN ON THE LOCATION MAP THE SITE (61,864 SF = APPROXIMATELY 1.4 ACRES) IS LOCATED IN THE CITY OF ALBUQUERQUE AT 1320 CUESTA ABAJO COURT. CURRENTLY THE SITE IS UNDEVELOPED. THE SITE IS PLATTED AS "LAS LOMITAS BUSINESS PARK SUBDIVISION WITHIN THE ELENA GALLEGOS GRANT, PROJECTED SECTIONS 22 & 27, TOWNSHIP 11N, RANGE 3E, NMPM, CITY OF ALBUQUERQUE, BERNALILLO COUNTY NEW MEXICO, MAY 2005," WHICH IS RECORDED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO ON OCTOBER 27, 2007. IN BOOK 20050, PAGE 357. FURTHERMORE, THE SITE IS LOCATED IN FLOOD ZONE X AS INDICATED BY FIRM NUMBER 35001C0136G, RECORDED ON SEPTEMBER 26, 2008 BY THE FEMA.

## III. BACKGROUND DOCUMENTS

THERE IS A FULL DRAINAGE REPORT AND ASSOCIATED ANALYSIS FOR THIS SUBDIVISION ON FILE WITH THE COA. SAID REPORT IS DETERMINED TO BE FILED AS D-16/D002C AND SEALED BY A N.M. PROFESSIONAL ENGINEER ON 9/06/07. THE PLAT, THE FIRM, THE COA DEVELOPMENT PROCESS MANUAL, THE SITE SURVEY, AND THE PROPOSED GRADING AND DRAINAGE PLAN WERE UTILIZED FOR THE EXECUTION OF THIS HYDROLOGY AND HYDRAULIC ANALYSIS.

## IV. EXISTING CONDITIONS

CURRENTLY THE SITE IS UNDEVELOPED EXCEPT FOR EARTHEN BERMS ALONG LOT LINES. IN FACT IT HAS BEEN OBSERVED THAT ALL LOTS WITHIN THIS BUSINESS PARK SUBDIVISION HAVE BEEN CONSTRUCTED WITH BERMS ALONG ADJACENT LOT LINES. THERE IS VERY LITTLE VEGETATION ON THE PROJECT SITE. THE SITE NATURALLY DRAINS NORTHWESTERLY.

## V. DEVELOPED CONDITIONS

THE PROPOSED ON-SITE CONSTRUCTION CONSISTS OF NEW BUILDINGS, UTILITIES, GRADING & DRAINAGE GRAVEL PARKING LOT, WALKWAYS, LANDSCAPE AND OTHER AMENITIES. OFF-SITE CONSTRUCTION WILL INCLUDE SIDEWALK, SIDEWALK CULVERT, DRIVE PAD AND FIRE LINE CONNECTION. IT'S PROPOSED THAT STORMWATER RUNOFF GENERATED ON-SITE WILL BE CONTROLLED AND CONVEYED TOWARDS THE SUBDIVISION'S MAIN RETENTION BASIN. THE PROPOSED DEVELOPED CONDITIONS INCLUDES A DETENTION BASIN, WHICH WILL BE DERESSED 12-INCHES BELOW THE SIDEWALK CULVERT TO CREATE RETENTION FOR FIRST FLUSH. FIRST FLUSH RETENTION IS SIZED APPROPRIATELY IN ORDER TO MANAGE THE RUNOFF FROM PRECIPITATION WHICH OCCURS DURING 90TH PERCENTILE STORM EVENT (0.44in). THE SITE IS DESIGNED TO FACILITATE DRAINAGE TOWARDS THE DETENTION/RETENTION BASIN, AND ULTIMATELY TO THE SIDEWALK CULVERT. ROOF RUN-OFF WILL BE CONVEYED UTILIZING ROOF GUTTERS AND WILL BE DIRECTED TOWARDS WATER HARVESTING TANKS. PROPOSED DRAINAGE STRUCTURES ARE SIZED TO ACCOMMODATE THE 100-YR 24-HOUR EVENT.

## VI. EROSION CONTROL

CURRENTLY NO HARD SURFACES EXIST AT THE SITE. HOWEVER, AFTER DEVELOPMENT APPROXIMATELY 17.3% OF THE SITE WILL BE MADE-UP OF CONCRETE AND ROOFTOP. THE PROPOSED CONSTRUCTION WILL INCREASE THE AMOUNT OF IMPERVIOUS AREA. PERMANENT EROSION CONTROL AT CULVERT OUTLET, PIPE OUTLET, AND SWALES WILL CONSIST OF 6-INCH ANGULAR RIP-RAP. GRAVEL AND GRASSY LANDSCAPED AREAS WILL BE USED TO PROVIDE SEDIMENT AND EROSION CONTROL WITHIN THE DETENTION/RETENTION BASIN. A 4-INCH THICK GRAVEL BED WILL MAKE UP THE PARKING LOT, AND WILL PROVIDE VOLUME TO RETAIN THE FIRST FLUSH GENERATED FROM DIRECT PARKING LOT RAINFALL.

## VII. WATER QUALITY ENHANCEMENTS

NO WATER QUALITY ENHANCEMENTS ARE PROPOSED.

## VIII. GRADING PLAN

THE GRADING PLAN ON SHEET C101 SHOWS:  
1. EXISTING GRADE SPOT ELEVATION AS TAKEN FROM RECENT TOPOGRAPHY  
2. PROPOSED GRADES INDICATED BY SPOT ELEVATIONS AND CONTOUR LINES  
3. THE LIMITS AND CHARACTER OF THE EXISTING FEATURES  
4. THE LIMITS AND CHARACTER OF THE PROPOSED IMPROVEMENTS  
5. CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES

## IX. CALCULATIONS

THE CALCULATIONS HEREON ANALYZE THE HYDROLOGY FOR BOTH THE EXISTING AND DEVELOPED CONDITIONS UPON A 100 YEAR, 24-HOUR RAINFALL EVENT. PROCEDURE FOR 40 ACRES AND SMALLER BASINS, AS SET FORTH IN CHAPTER 22 OF THE DEVELOPMENT PROCESS MANUAL (DPM), VOLUME 1, 1997 REVISIONS, AND AHYMO ARE USED TO QUANTIFY THE PEAK RATE OF DISCHARGE (Q) AND VOLUME (V) OF ON-SITE STORMWATER RUN-OFF. ALL DATA UTILIZED FOR EACH PROCEDURE CAN BE FOUND IN TABLES 1 AND 2. RESULTS OF CALCULATIONS FOR HYDROLOGY AND HYDRAULIC CALCULATIONS ARE PRESENTED BELOW.

### HYDROLOGY ANALYSIS FOR PEAK RATE OF DISCHARGE (Q) AND PEAK VOLUME (V):

SITE CHARACTERISTICS:

DRAINAGE AREA = (SEE PRE AND POST-DEVELOPMENT MAP)

LAND TREATMENT (DPM CH. 22, TABLE A-4)

IMPERVIOUS = D

PERVIOUS = C

PRECIPITATION ZONE = 2 (DPM CH. 22, TABLE A-1)

FOR ADDITIONAL DATA USED, SEE TABLE 1 ON THIS SHEET.

DRAINAGE AREA - PRE-DEVELOPMENT

61,864 sf = 100% PERVIOUS

ANALYSIS RESULTS

Q = 4.40 cfs

V = 5,743 cf

DRAINAGE AREA - POST DEVELOPMENT

NOTE: 6,000 SF OF ROOFTOP RUNOFF WILL BE HARVESTED ON-SITE

THEREFORE, (61,864 SF - 6,000 SF = 54,864 SF ~ 1.26 AC)

(15,512 SF - 6,000 SF) = 9,512 sf = 17.3% IMPERVIOUS

45,352 sf = 82.7% PERVIOUS

ANALYSIS RESULTS

Q = 4.30 cfs (RUN-OFF WILL BE ROUTED THROUGH SITE)

V = 6,268 cf

Vff = 1,753 cf (FIRST FLUSH WILL BE RETAINED ON SITE)

### HYDRAULIC ANALYSIS FOR CAPACITY (Q) OF SITE DRAINAGE AMENITIES:

OFF-SITE CULVERT CAPACITY (Q):

INLET OPEN AREA (A) = 1.00 sf

SUBMERGED HEAD (h) = 0.04 ft

Q = (0.67A)[(2gh)<sup>0.5</sup>] = 1.08 cfs

ROOF DRAIN CAPACITY (Q):

PIPE ROUGHNESS (n) = 0.012

PIPE FLOW AREA (A) = 0.196 sf

HYDRAULIC RADIUS (R) = 0.125

PIPE SLOPE (S) = .0208 ft/ft

Q = (1.49/n)(A)(R<sup>0.667</sup>)(S<sup>0.5</sup>) = 0.88 cfs

ROOFTOP DRAINAGE AREA:

6,000 sf = 100% IMPERVIOUS

ANALYSIS RESULTS

Q = 0.65 cfs

V = 1,260 cf

Vff = 220 cf

### DETENTION BASIN DESCRIPTION AND VOLUME (V) CALCULATIONS:

DETENTION BASIN IS DESIGNED WITH 3H:1V SIDE SLOPES.

THE TOTAL VOLUME IS CALCULATED AS FOLLOWS;

POLYGONAL CHARACTERISTICS:  
BOTTOM PERIMETER AREA = 640 sf  
TOP PERIMETER AREA = 1,572 sf  
DEPTH = 1.5' ft

V = (1/2)[(640 SF + 1,572 SF)(1.5 FT)] = 1,659 cf

## X. STORM WATER CONTROL MEASURES

TO MANAGE THE FIRST FLUSH IN ORDER TO PREVENT A HIGH CONCENTRATION OF POLLUTANTS FROM RUNNING OFF-SITE AND TO COMPLY WITH THE CITY MS4, A RETENTION BASIN AND WATER HARVESTING TANKS ARE PROPOSED ON-SITE. THE FIRST FLUSH VOLUME IS AS FOLLOWS;

FIRST FLUSH VOL. = 61,864 sf X [(0.44 in - 0.10 in)/12] = 1,753 cf  
RETENTION BASIN = 1,659 cf  
HARVEST TANKS = (2) AT 515 GAL. = 137 cf

(1,753 cf) - (1,659 cf + 137 cf) < 0 (FIRST FLUSH RETENTION MET)

## XI. CONCLUSION

THIS PLAN SUPPORTS THE PROPOSED DEVELOPMENT. THE PROPOSED STORM DRAINAGE FACILITIES WILL ADEQUATELY CONVEY STORMWATER GENERATED ON-SITE BY A 100 YEAR, 24-HOUR STORM EVENT. ALSO, IF CONSTRUCTED IN ACCORDANCE WITH THE ASSOCIATED GRADING AND DRAINAGE PLAN, THE SITE HYDRAULICS WILL ALLOW 2.85 CFS OF STORMWATER TO RUN OFF INTO THE RIGHT-OF-WAY. ALSO, THE PROPOSED DEVELOPMENT WILL PROVIDE 1,659 CF OF STORMWATER DETENTION ON-SITE, 1,796 CF OF RETENTION ON-SITE, AND 137 CF OF HARVESTED WATER. FURTHERMORE, THE RUN-OFF DIRECTED TO THE RIGHT-OF-WAY (2.85 CFS) DOES NOT EXCEED THE ALLOWABLE 4.79 CFS AS ACCORDING TO DRAINAGE REPORT D-16/D002C ON FILE WITH COA. ALL ON-SITE STORM DRAINAGE FACILITIES WILL BE PRIVATELY OWNED, OPERATED AND MAINTAINED.

### TABLE 1: DATA USED FOR CALCULATIONS (DPM):

(TAKEN FROM CHAPTER 22 OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 1, 1997 REVISIONS.)

(Q) = C<sub>IA</sub> = 100-YR. PEAK DISCHARGE FOR ZONE 2;

PERVIOUS;

C = 0.61 (DPM CH. 22, TABLE A-11)

i = 5.05 ((DPM CH. 22, TABLE A-10)

IMPERVIOUS;

C = 0.93 (DPM CH. 22, TABLE A-11)

i = 5.05 (DPM CH. 22, TABLE A-10)

100-YR., 24-HOUR VOLUME (V) =

[6 HOUR VOL. + IMPERVIOUS AREA]\*[24-HOUR PRECIP. - 6 HOUR PRECIP.]  
12in/ft

FOR ZONE 2;

6 HOUR VOL. = (WEIGHTED EXCESS PRECIPITATION)\*(LAND TREATMENT)  
EXCESS PRECIPITATION FOR THE 100-YR. 6-HOUR STORM CAN BE FOUND IN TABLE A-8 OF DPM, CH. 22.

24-HOUR PRECIPITATION = 2.75 (DPM CH. 22, TABLE A-2)

6-HOUR PRECIPITATION = 2.35 (DPM CH. 22, TABLE A-2)

A SPREADSHEET WAS USED TO FACILITATE THESE CALCULATIONS. RESULTS CAN BE FOUND IN "IX. CALCULATIONS" SHOWN ON THIS SHEET.

### TABLE 2: CALCULATIONS (AHYMO):

INPUT DATA:

\* FILENAME: (AHYMO PC VERSION)

\* 100-YEAR STORM

\* ASSUMPTIONS:

1. 100 YR 24 HR RAINFALL = 2.75 INCHES.

START RAINFALL TYPE=2 RAIN QUARTER=0.00

RAIN ONE=2.01 RAIN SIX=2.35

RAIN DAY=2.75 DT=0.033333 HRS

\*S\* HYDROGRAPH FOR BASIN

COMPUTE NM HYD ID=1 HYD=100.00 DA=.0022

PER A=0 PER B=0 PER C=100 PER D=0

TP=-.10 MASS RNFL=-1

ID=1 CODE=10

PRINT HYD

\*S\* ROUTE FLOWS THROUGH PROPOSED POND

ROUTE RESERVOIR ID=5 HYD=100.05 INFLOW ID=1 CODE=10

OUTFLOW STORAGE ELEVATION

(CFS) (AC-FT) (FT)

0.001 0.000 36.10

0.002 0.016 36.35

0.003 0.033 36.60

0.196 0.043 36.75

0.640 0.056 36.93

1.193 0.069 36.10

1.851 0.082 37.27

\*S\* PRINT HYD ID=5 CODE=10

FINISH

OUTPUT DATA:

AHYMO PROGRAM (AHYMO-S4) - Version: S4.01a - Rel: 01a

RUN DATE (MON/DAY/YR) = [DATE]

START TIME (HR:MIN:SEC) = 14:24:46 USER NO. =

AHYMO\_Temp\_User:Joe

INPUT FILE = K:\Joe\Pond.HYM

\* FILENAME: (AHYMO PC VERSION)

\* 100-YEAR STORM

\* ASSUMPTIONS:

1. 100 YR 24 HR RAINFALL = 2.75 INCHES.

START RAINFALL TYPE=2 RAIN QUARTER=0.00

RAIN ONE=2.01 RAIN SIX=2.35

RAIN DAY=2.75 DT=0.033333 HRS

24-HOUR RAINFALL DIST. - BASED ON NOAA ATLAS 14 FOR

CONVECTIVE AREAS (NM & AZ) - D1

DT = 0.033333 HOURS END TIME = 23.999763 HOURS

\*S\* HYDROGRAPH FOR BASIN

COMPUTE NM HYD ID=1 HYD=100.00 DA=.0022

PER A=0 PER B=0 PER C=82.7 PER D=17.3

TP=-.10 MASS RNFL=-1

ID=1 CODE=10

RUNOFF VOLUME = 2.16695 INCHES = 0.0809 ACRE-FEET

PEAK DISCHARGE RATE = 2.85 CFS AT 1.467 HOURS

Basin Area = 0.0022 SQ. MI.

\*S\* ROUTE FLOWS THROUGH PROPOSED POND

PEAK DISCHARGE = 0.489 CFS - PEAK OCCURS AT HOUR 1.80

MAXIMUM WATER SURFACE ELEVATION = 38.00

MAXIMUM STORAGE = 0.0516 AC-FT INCREMENTAL TIME= 0.033333HRS

\*S\* PRINT HYD ID=5 CODE=10

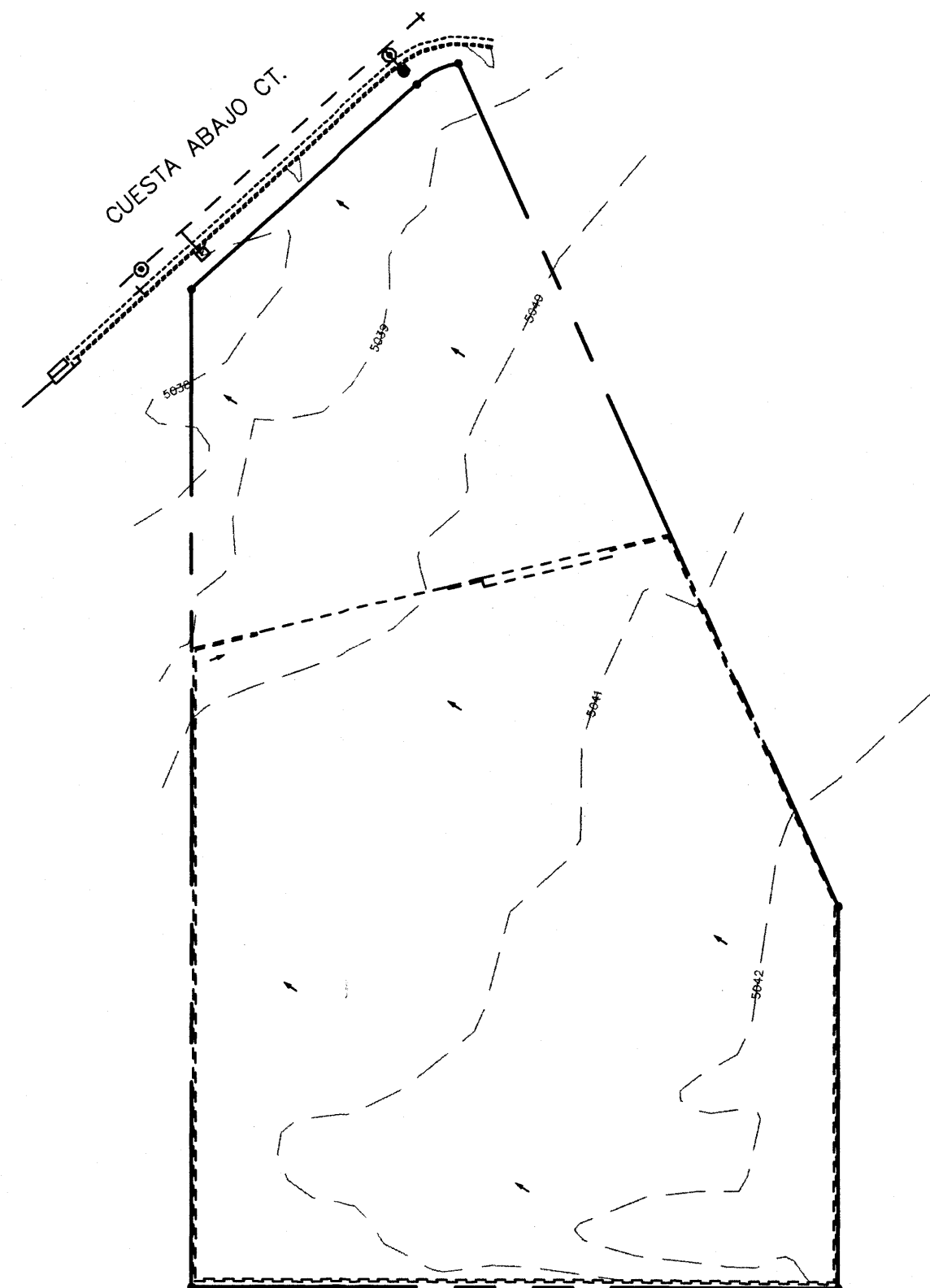
PARTIAL HYDROGRAPH 100.05

RUNOFF VOLUME = 1.84487 INCHES = 0.0689 ACRE-FEET

PEAK DISCHARGE RATE = 0.49 CFS AT 1.800 HOURS

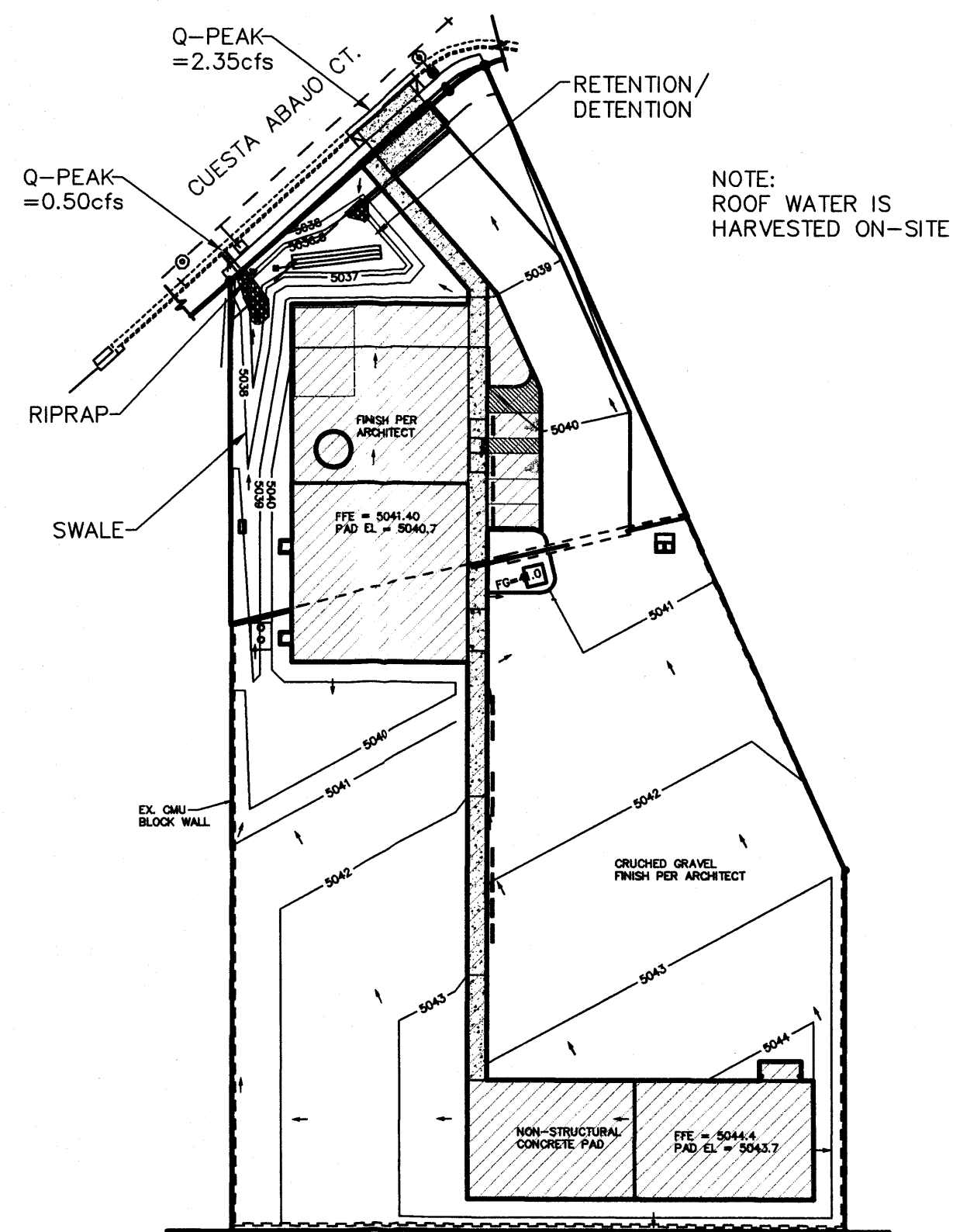
Basin Area = 0.0007 SQ. MI.

FINISH



### DRAINAGE AREA PRE-DEVELOPMENT

MAP SCALE: 1" = 50'



### DRAINAGE AREA PRE-DEVELOPMENT

MAP SCALE: 1" = 50'

IMPERVIOUS AREA



JCII Group, LLC.  
DEVELOPMENT SERVICES

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COORDINATED VISION, INC.

1320 CUESTA ABAJO ALBUQUERQUE, NEW MEXICO

HYDROLOGY ANALYSIS

REV:

PHASE: 100% CONSTRUCTION DOCUMENT

DATE: JUNE 17, 2016

C100



## GRADING & DRAINAGE GENERAL NOTES

1. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER THIS CONTRACT, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, AND THE CITY OF ALBUQUERQUE SPECIFICATIONS.

2. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM (260-1990), FOR LOCATION OF EXISTING UTILITIES. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES.

3. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL UTILITIES AND OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR WILL NOTIFY THE ARCHITECT IMMEDIATELY SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. THIS WORK IS CONSIDERED INCIDENTAL TO THE PROJECT AND NO DIRECT PAYMENT WILL BE MADE THEREFOR.

4. ALL EXCAVATION SHALL BE GOVERNED BY FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH, OSHA 29 CFR 1926.650, ALL EXCAVATION, TRENCHING, AND SHORING ACTIVITIES MUST BE CARRIED OUT IN ACCORDANCE WITH OSHA 29 CFR 1926.650 SUBPART P.

5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO KNOW AND COMPLY WITH THE "OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970".

6. CONTRACTOR SHALL SCARIFY TO A DEPTH OF 8" AND RECOMPACT SUBGRADE TO 95% MAX. DENSITY AS DETERMINED BY ASTM D-1557 UNLESS NOTED OTHERWISE.

7. CONTRACTOR WILL BE RESPONSIBLE FOR FURNISHING BORROW MATERIAL OR HAULING OFF EXCESS MATERIAL. THE TRANSPORTATION AND/OR DISPOSAL OF THESE MATERIALS SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION OF THE PROJECT. ALL EXCAVATED MATERIAL THAT IS NOT REQUIRED TO BE REUSED MUST BE REMOVED FROM THE PROJECT AREA WITHIN FOUR (4) DAYS OF EXCAVATION.

8. NO SEPARATE PAYMENT WILL BE MADE FOR ANY HAULING OR DISPOSAL OF MATERIALS. THE TRANSPORTATION AND/OR DISPOSAL OF MATERIAL SHALL BE CONSIDERED INCIDENTAL TO PROJECT.

9. WHEN ABUTTING NEW CONCRETE TO EXISTING, CUT BACK EXISTING TO A NEAT STRAIGHT LINE AS REQUIRED TO REMOVE ANY BROKEN OR CRACKED CONCRETE, AND MATCH NEW TO EXISTING. COORDINATE WITH CONSTRUCTION NOTES. NO SEPARATE PAYMENT SHALL BE MADE FOR SAW CUTTING OF EXISTING PAVEMENT OR CONCRETE BUT SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT. CUTTING OF PAVEMENT OR CONCRETE SHALL BE IN CONFORMANCE WITH PROJECT SPECIFICATIONS.

10. EXERCISE CARE TO AVOID DISTURBING EXISTING UTILITIES. COORDINATE WITH THE UTILITY COMPANIES FOR ANY REQUIRED RELOCATIONS, AND IN ORDER TO PREVENT ANY SERVICE DISRUPTION.

12. CONTRACTOR SHALL PROVIDE REASONABLE ACCESS TO TEMPORARY FACILITIES WITHIN THE PROJECT AREA DURING CONSTRUCTION.

13. WATERING FOR DUST CONTROL, AS REQUIRED, SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND NO MEASUREMENT OR PAYMENT SHALL BE MADE THEREFOR. CONSTRUCTION AREAS SHALL BE WATERED OR OTHERWISE KEPT DUST FREE. THE CONTRACTOR SHALL USE WATERING EQUIPMENT FOR DUST POLLUTION ABATEMENT AS DIRECTED BY THE ARCHITECT.

14. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL DEMOLITION DEBRIS. WORK MATERIALS SHALL BE DISPOSED OF IN A CITY APPROVED WASTE AREA, IN ACCORDANCE WITH ALBUQUERQUE SPECIFICATIONS, SECURED BY AND AT THE EXPENSE OF THE CONTRACTOR.

15. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ABANDONED UTILITY LINES THAT ARE EXPOSED AS A RESULT OF CONSTRUCTION UNLESS OTHERWISE DIRECTED BY THE ARCHITECT.

16. THE CONTRACTOR SHALL PROVIDE THE ARCHITECT WITH "AS-BUILT" PLANS. THE MAINTENANCE OF THESE PLANS INCLUDE AN UP TO DATE SET OF AS-BUILT PLANS FOR THE PROJECT. THESE PLANS SHALL BE KEPT CURRENT, WITHIN ONE WEEK, AT ALL TIMES AND SHALL BE SUBJECT TO REVIEW BY THE PROJECT MANAGER AND ARCHITECT THROUGHOUT THE PROJECT. THE FINAL AS-BUILT PLANS SHALL BE SUBMITTED TO THE ARCHITECT BEFORE FINAL PAYMENT IS MADE.

17. THE CONTRACTOR AGREES TO TAKE NECESSARY SAFETY PRECAUTIONS AS REQUIRED BY FEDERAL, STATE AND LOCAL AUTHORITIES TO PROTECT PEDESTRIAN AND VEHICULAR TRAFFIC IN THE CONSTRUCTION AREA, WHICH INCLUDE BUT ARE NOT LIMITED TO: MAINTAINING ADEQUATE WARNING SIGNS, BARRICADES, LIGHTS, GUARD FENCES, WALKS AND BRIDGES.

18. CONTRACTOR SHALL ADJUST CLEANOUT RIMS, VALVE CANS, GRATES AND MH COVERS LIDS AS NEEDED TO MATCH FINISHED ELEVATIONS.

19. CONTRACTOR'S YARD, AND ANY OTHER AREAS DISTURBED BY THE CONTRACTOR NOT INCLUDED ON THE PLANS, SHALL BE RE-ESTABLISHED TO OWNERS SATISFACTION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO MEASUREMENT OR PAYMENT WILL BE MADE THEREFOR.

20. CONTRACTOR IS RESPONSIBLE FOR GEOTECHNICAL EVALUATION BY A REGISTERED GEOTECHNICAL ENGINEER. COORDINATE WITH GEOTECHNICAL INVESTIGATION REPORT, AND IF ANY CRITERIA WITHIN THIS REPORT CANNOT BE MET, CONTACT THE GEOTECHNICAL ENGINEER FOR SUPPLEMENTAL RECOMMENDATIONS. IF NO GEOTECHNICAL EVALUATION REPORT IS PROVIDED, OWNER ASSUMES ALL RESPONSIBILITY OF GEOTECHNICAL CONDITIONS.

21. CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND ADHERING TO A STORMWATER POLLUTION PREVENTION PLAN.

22. SAFETY RAILS ARE REQUIRED AT ALL LOCATION ADJACENT TO A PEDESTRIAN WALKWAY WHERE A VERTICAL DROP OF 24" OR MORE EXISTS, OR AS APPLICABLE PER GOVERNING BUILDING CODE. SEE ARCHITECTS PLAN FOR SAFETY RAIL DETAILS.

23. THIS PROJECT IS TO ADHERE TO THE DEVELOPMENT GUIDELINES PROVIDED FOR THE LAS LOMITAS INDUSTRIAL PARK.

24. ALL LANDSCAPED AREAS SHALL BE DEPRESSED APPROXIMATELY 6" BELOW ADJACENT CONCRETE.

25. ALL SIDEWALKS AND RAMPS TO BE APPROXIMATELY 4" ABOVE ADJACENT LANDSCAPE FINISH.

26. COORDINATE IMPROVEMENTS SHOWN ON THIS PLAN WITH THE ARCHITECTS'S SITE PLAN. COORDINATE ANY DEPENDENCIES WITH THE ARCHITECT.

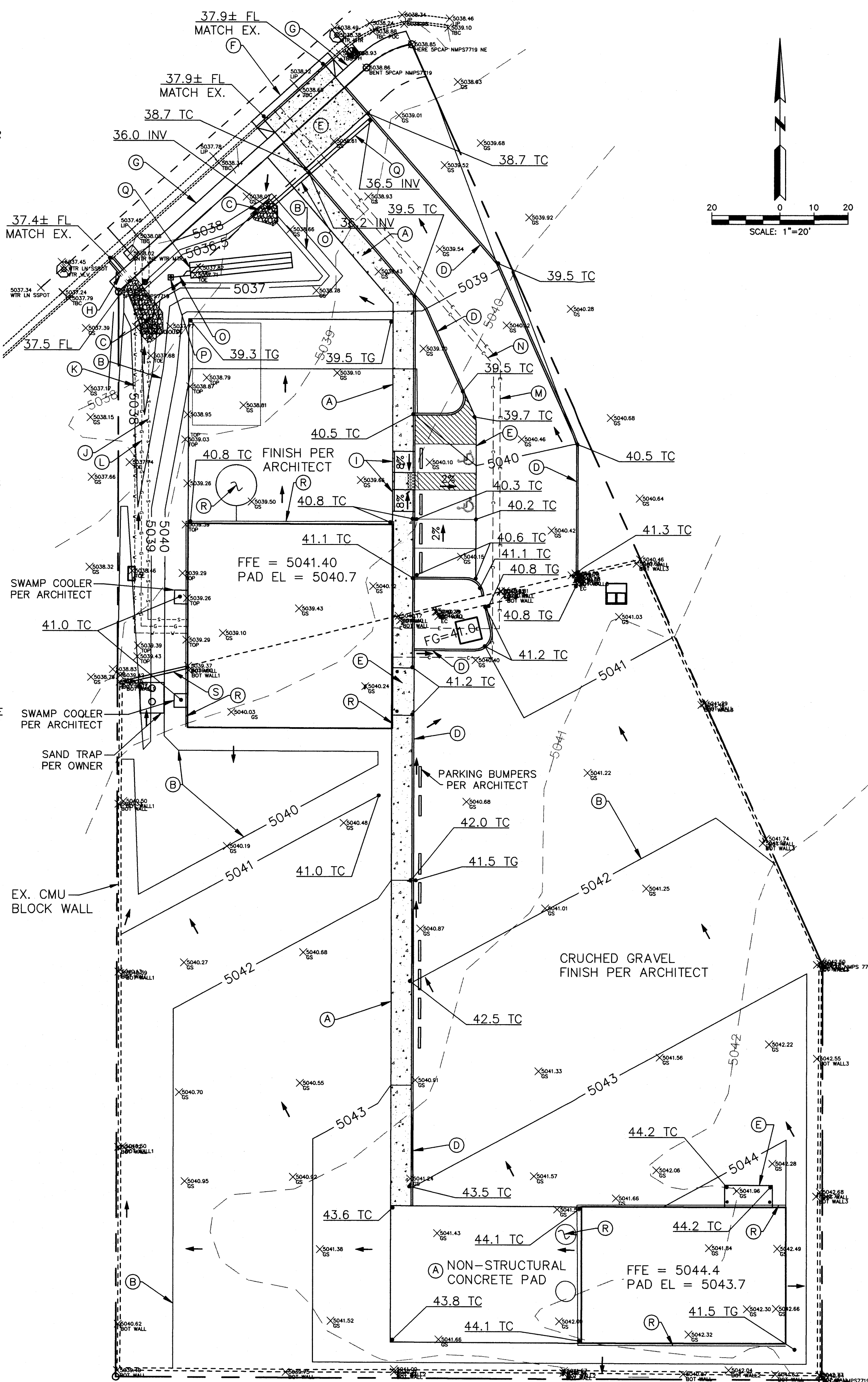
27. SITE SURVEY IS BASED FROM CITY OF ALBUQUERQUE CONTROL POINT #--442. AUTOCAD FILE WILL BE MADE AVAILABLE FOR CONSTRUCTION STAKING UPON REQUEST.

## DRAINAGE FACILITIES WITHIN THE ROW

### NOTICE TO CONTRACTOR (SO-19)

1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN THE RIGHT-OF-WAY.
2. ALL WORK IN THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT THE LINE LOCATING SERVICE, NEW MEXICO ONE CALL 260-1990 (NM ONE CALL "811") FOR THE LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH MINIMUM AMOUNT OF DELAY.
5. BACKFILL COMPACTION SHALL BE ACCORDING TO STREET USE.
6. MAINTENANCE OF THE FACILITY SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY BEING SERVED.
7. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.

APPROVALS	NAME	DATE
INSPECTOR		

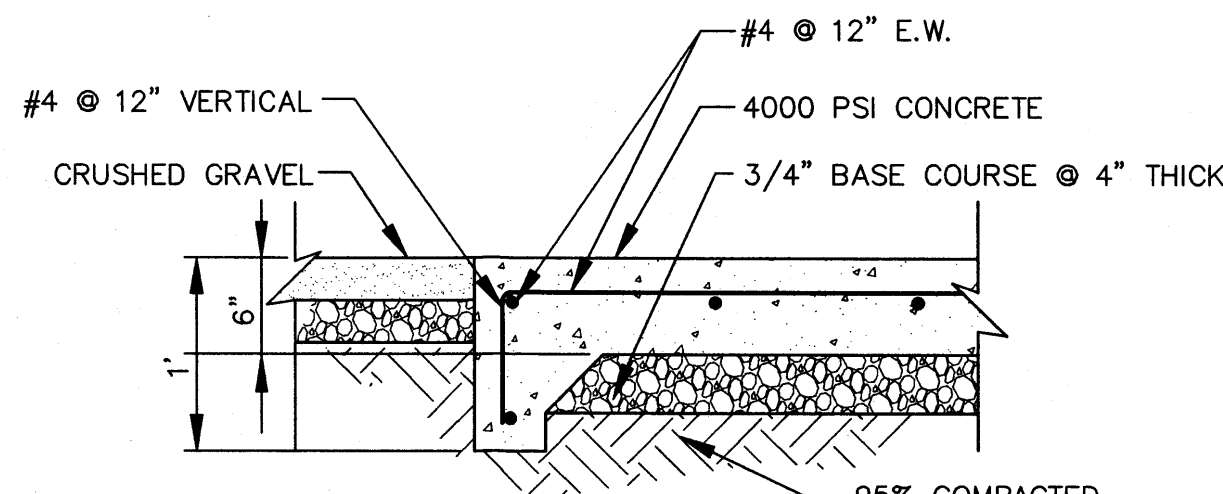


## LEGEND

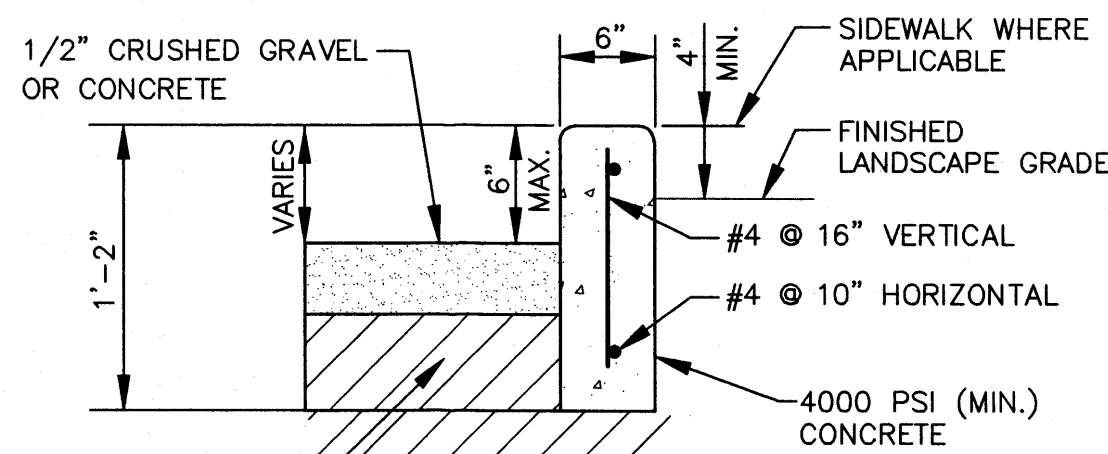
× 5039.50	EXISTING ELEVATION	—C—	EXISTING COMMUNICATIONS LINE
39.7 TC	PROPOSED ELEVATION TC = TOP OF CURB/CONCRETE TA = TOP OF CRUSHER FINES FG = FINAL FINISHED GRADE (INCLUDES LANDSCAPING)	—SD—	STORM DRAIN LINE
⊕	EXISTING FIRE HYDRANT	⊙	EXISTING WATER VALVE
—E—	UNDERGROUND ELECTRIC	□	NEW CONCRETE
—G—	UNDERGROUND GAS LINE	▨	NEW RIPRAP
—SAS—	SANITARY SEWER LINE		
—W—	WATER LINE		
—C—	UNDERGROUND COMMUNICATION		

## KEYED CONSTRUCTION NOTES

- CONSTRUCT 4" THICK CONCRETE (2500 PSI) WITH 6"x6"x#10. WIRE MESH. PROVIDE 5' (MAX. SPACING) SCORED CONTROL JOINTS. ALSO PROVIDE 20' (MAX. SPACING) EXPANSION JOINTS. SURFACE FINISH AS DIRECTED BY THE ARCHITECT/OWNER.
- GRADE AREA PER CONTOUR ELEVATIONS SHOWN. 4H:1V MAX. AT DETENTION BASIN AND SWALE. FINISHED CONTOUR LINES SHOWN ARE AT TOP OF FINISHED LANDSCAPE SURFACE.
- INSTALL ANGULAR RIPRAP (4" TO 6") WITHIN AREA AS SHOWN ON PLAN, EMBED RIPRAP AND PROVIDE NON-WOVEN GEOTEXTILE FABRIC AT RIPRAP-TO-SUBGRADE INTERFACE.
- CONSTRUCT HEADER CURB PER DETAIL BELOW.
- CONSTRUCT CONCRETE DRIVE PAD WITH CONCRETE TURN DOWN EDGE PER DETAIL BELOW.
- CONSTRUCT CONCRETE DRIVE PAD PER COA DETAIL 2425.
- CONSTRUCT RIGHT-OF-WAY SIDEWALK PER COA DETAIL 2430.
- CONSTRUCT 12" WIDE SIDEWALK CULVERT PER COA DETAIL 2236.
- CONSTRUCT CONCRETE ADA COMPLIANT RAMP AT 8% MAX. SLOPE. PROVIDE DETECTABLE WARNING PLATES AS SHOWN (TYP.).
- INSTALL 4" PVC SEWER SERVICE AND CONNECT TO EXISTING STUB. PROVIDE PIPE BEDDING PER PIPE MANUFACTURER'S RECOMMENDATIONS.
- INSTALL 2" WATER SERVICE IN LOCATION AS SHOWN ON PLAN.
- INSTALL UNDERGROUND DOMESTIC GAS SERVICE. COORDINATE WITH UTILITY COMPANY.
- INSTALL UNDERGROUND ELECTRICAL SERVICE. COORDINATE WITH UTILITY COMPANY.
- INSTALL UNDERGROUND COMMUNICATION SERVICE. COORDINATE WITH UTILITY COMPANY.
- INSTALL NEW HDPE STORM DRAIN PIPE (ADS N12-ST OR APPROVED EQUAL). SLOPE AT 1/8" PER FOOT, UNLESS NOTED OTHERWISE. PROVIDE BEDDING PER PIPE MANUFACTURER'S SPECIFICATIONS.
- INSTALL 8" IN-LINE DRAIN BASIN (NYLOPLAST OR EQUAL) WITH 8" DOMED GRATE. PROVIDE 18" REINFORCED CONCRETE SQUARE PAD TO SUPPORT IN-LINE DRAIN BASIN AND GRATE.
- INSTALL FRENCH DRAIN SYSTEM (INFILTRATOR SYSTEMS, INC., PRODUCT 1203-H OR EQUAL). THREE PARALLEL BUNDLES AT 30 LINEAR FEET EACH.
- INSTALL 4" ROOF DRAIN PIPING AND DOWNSPOUTS CONNECTED TO 515 GAL. WATER HARVESTING TANK. PROVIDE ALL BENDS AND APPURTENANCE. COORDINATE WITH BUILDING PLANS AS NECESSARY.
- REMOVE AND RECONSTRUCT CMU BLOCK WALL TO NEW GRADE. PROVIDE TWO BLOCKS TURNED ON SIDE FOR DRAINAGE OPENING, CENTER ON DRAINAGE SWALE. NEW CMU WALL TO MATCH EX. COLOR AND HEIGHT.



CONCRETE TURNDOWN EDGE  
NO SCALE



PROVIDE 8" SUBGRADE PREPARATION COMPACTED TO 95% MAX. DRY DENSITY AND PER ASTM D-1557 OR PER SOILS REPORT

## HEADER CURB DETAIL

NO SCALE

JC-II Group, LLC.

DEVELOPMENT SERVICES

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COORDINATED VISION, INC.  
1320 CUESTA ABAJO ALBUQUERQUE, NEW MEXICO  
GRADING AND DRAINAGE PLAN &  
STORMWATER CONTROL

REV:

PHASE: 100% CONSTRUCTION DOCUMENT  
DATE: MAY 11, 2016

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