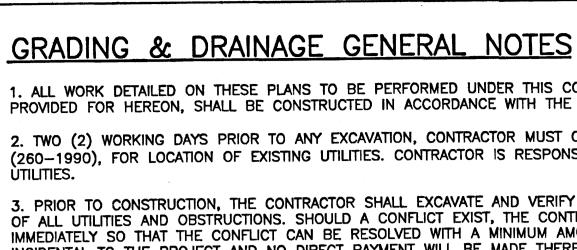


1311 Cuesta Arriba Ct. NE Albuquerque, NM 87113

SAM STERLING ARCHITECTURE, LLC albuquerque new mexico 87102 P 505 232-2520 F 505 232-2521

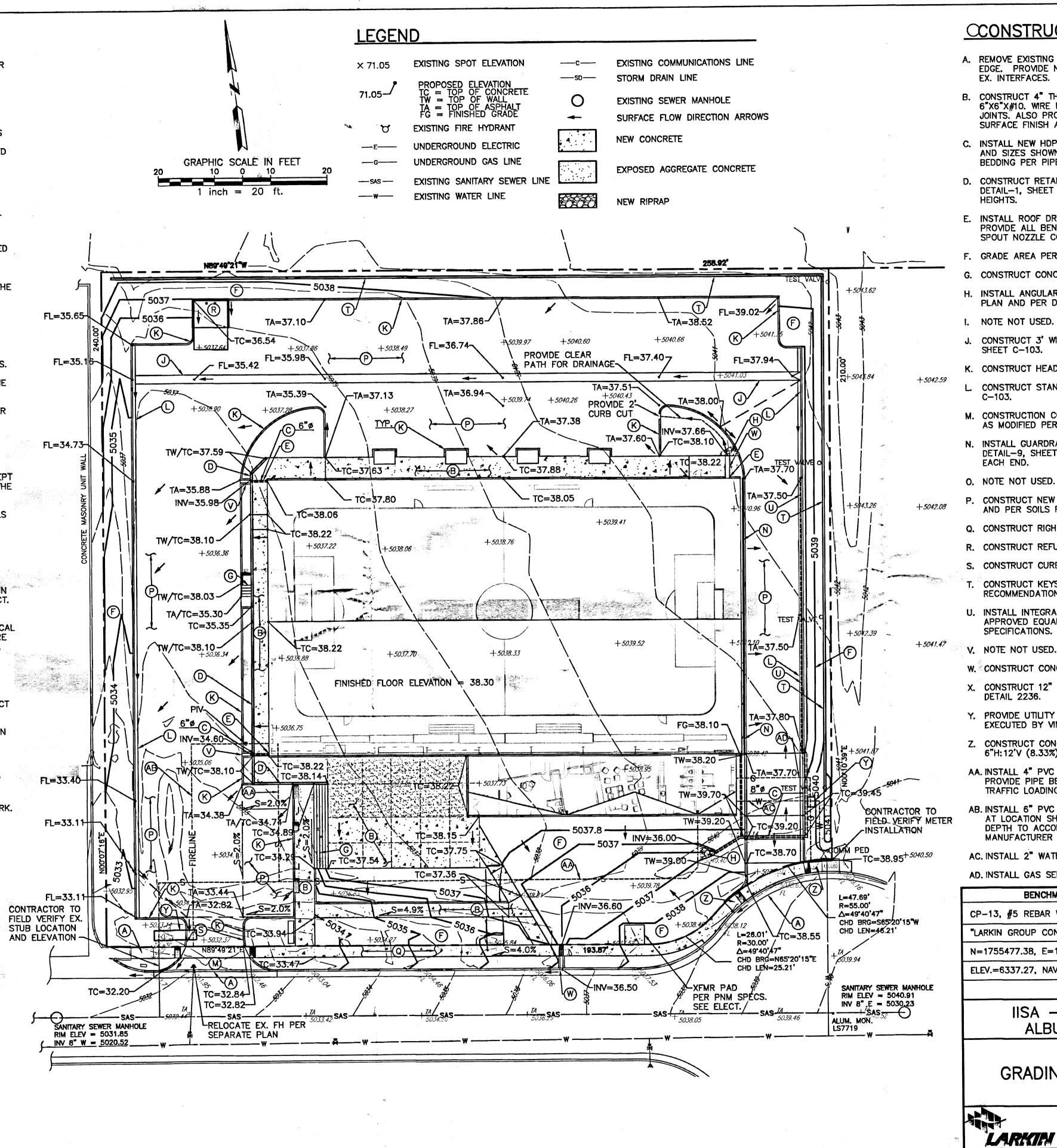
dailydesign, llc
924 2nd st nw, suite c, albuquerque nm 87102
t 505.980.0389 f 505.232.2521



- 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.
- 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
- 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 THE
- 10. EXERCISE CARE TO AVOID DISTURBING EXISTING UTILITIES, AND COORDINATE WITH THE UTILITY COMPANIES 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
- 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.

Market Market State of the Control o

- 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 TWO WEEKS, AT ALL TIMES AND SHALL BE SUBJECT TO REVIEW BY THE PROJECT MANAGER 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. COORDINATE WITH GEOTECHNICAL INVESTIGATION CONDUCTED BY FLORENTINO ENGINEERING, IF ANY CRITERIA WITHIN THIS REPORT CANNOT BE MET, CONTACT THE GEOTECHNICAL ENGINEER FOR SUPPLEMENTAL RECOMMENDATIONS.
- 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 30" OR MORE EXISTS, OR AS APPLICABLE PER GOVERNING BUILDING CODE.
- 23. THIS PROJECT IS TO ADHERE TO THE DEVELOPMENT GUIDELINES PROVIDED FOR THE LAS LOMITAS INDUSTRIAL PARK.



CONSTRUCTION NOTES

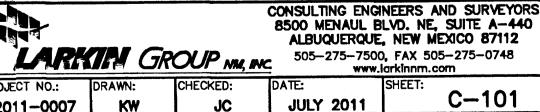
- A. REMOVE EXISTING CONCRETE TO THE NEAREST JOINT, SCORE, OR EDGE. PROVIDE NEAT, STRAIGHT SAWCUT EDGES AT ALL NEW TO EX. INTERFACES.
- B. CONSTRUCT 4" THICK CONCRETE (2500 PSI) WALKWAY WITH 6"X6"X#10. WIRE MESH. PROVIDE 6' (MAX. SPACING) SCORE JOINTS. ALSO PROVIDE 20' (MAX SPACING) EXPANSION JOINTS. SURFACE FINISH AS DIRECTED BY THE ARCHITECT.
- C. INSTALL NEW HDPE STORM DRAIN PIPE PER INVERT ELEVATIONS AND SIZES SHOWNN (ADS N12-ST OR APPROVED EQUAL). PROVIDE BEDDING PER PIPE MANUFACTURER'S SPECIFICATIONS.
- D. CONSTRUCT RETAINING WALL PER ELEVATIONS SHOWN AND PER DETAIL-1, SHEET C-103. SEE STRUCTURAL PLANS FOR ADDITIONAL
- E. INSTALL ROOF DRAIN NOZZLE PER DETAIL-2, SHEET C-103. PROVIDE ALL BENDS AND APPURTENANCE TO CONNECT TO DOWN SPOUT NOZZLE COORDINATE WITH BUILDING PLANS AS NECESSARY.
- F. GRADE AREA PER CONTOUR ELEVATIONS SHOWN.
- G. CONSTRUCT CONCRETE STAIRS PER DETAIL-3, SHEET C-103.
- H. INSTALL ANGULAR RIPRAP (4" TO 6") WITHIN AREA AS SHOWN ON PLAN AND PER DETAIL-4, SHEET C-103.
- I. NOTE NOT USED.
- J. CONSTRUCT 3' WIDE CONCRETE VALLEY GUTTER PER DETAIL-5,
- K. CONSTRUCT HEADER CURB PER DETAIL-6, SHEET C-103.
- L. CONSTRUCT STANDARD CURB AND GUTTER PER DETAIL-7, SHEET
- M. CONSTRUCTION CONCRETE DRIVE PAD PER COA DETAIL 2426 AND AS MODIFIED PER DETAIL-8, SHEET C-103.
- N. INSTALL GUARDRAIL ENTIRE LENGTH OF BUILDING AND PER DETAIL-9, SHEET C-103. PROVIDE CURVED END SECTIONS AT EACH END.
- P. CONSTRUCT NEW ASPHALT SECTION PER DETAIL-10, SHEET C-103, AND PER SOILS REPORT RECOMMENDATION.
- Q. CONSTRUCT RIGHT-OF-WAY SIDEWALK PER COA DETAIL 2430.
- R. CONSTRUCT REFUSE ENCLOSURE PER DETAIL-11, SHEET C-103.
- S. CONSTRUCT CURB TERMINATION PER DETAIL-12, SHEET C-103.
- CONSTRUCT KEYSTONE RETAINING WALL PER MANUFACTURER
- RECOMMENDATIONS.
- U. INSTALL INTEGRATED CURB SLOT DRAIN, SLOPED (DRAINTECH OR APPROVED EQUAL) PER DETAIL-7 AND MANUFACTURERS SPECIFICATIONS.
- V. NOTE NOT USED.
- W. CONSTRUCT CONCRETE SCUPPER PER DETAIL-13, SHEET C-103.
- X. CONSTRUCT 12" WIDE SIDEWALK CULVERT WITH SCUPPER PER COA **DETAIL 2236.**
- Y. PROVIDE UTILITY VENT PER DETAIL IN ""LANDFILL GAS SURVEY" EXECUTED BY VINEYARD AND ASSOC. #011-1-078.
- Z. CONSTRUCT CONCRETE ADA COMPLIANT RAMP AT MAX. SLOPE OF 6"H:12'V (8.33%), PROVIDE DETECTABLE WARNING PLATES (TYP.).
- AA. INSTALL 4" PVC SEWER SERVICE AND CONNECT TO EXISTING STUB. PROVIDE PIPE BEDDING AND ADEQUATE DEPTH TO ACCOMMODATE TRAFFIC LOADING, COORDINATE WITH PIPE MANUFACTURER.
- AB. INSTALL 6" PVC FIRELINE. PROVIDE POST INDICATOR VALVE (PIV) AT LOCATION SHOWN AND PROVIDE PIPE BEDDING AND ADEQUATE DEPTH TO ACCOMMODATE TRAFFIC LOADING. COORDINATE WITH PIPE MANUFACTURER
- AC. INSTALL 2" WATER SERVICE IN LOCATION AS SHOWN ON PLAN.
- AD. INSTALL GAS SERVICE. COORDINATE WITH UTILITY COMPANY.

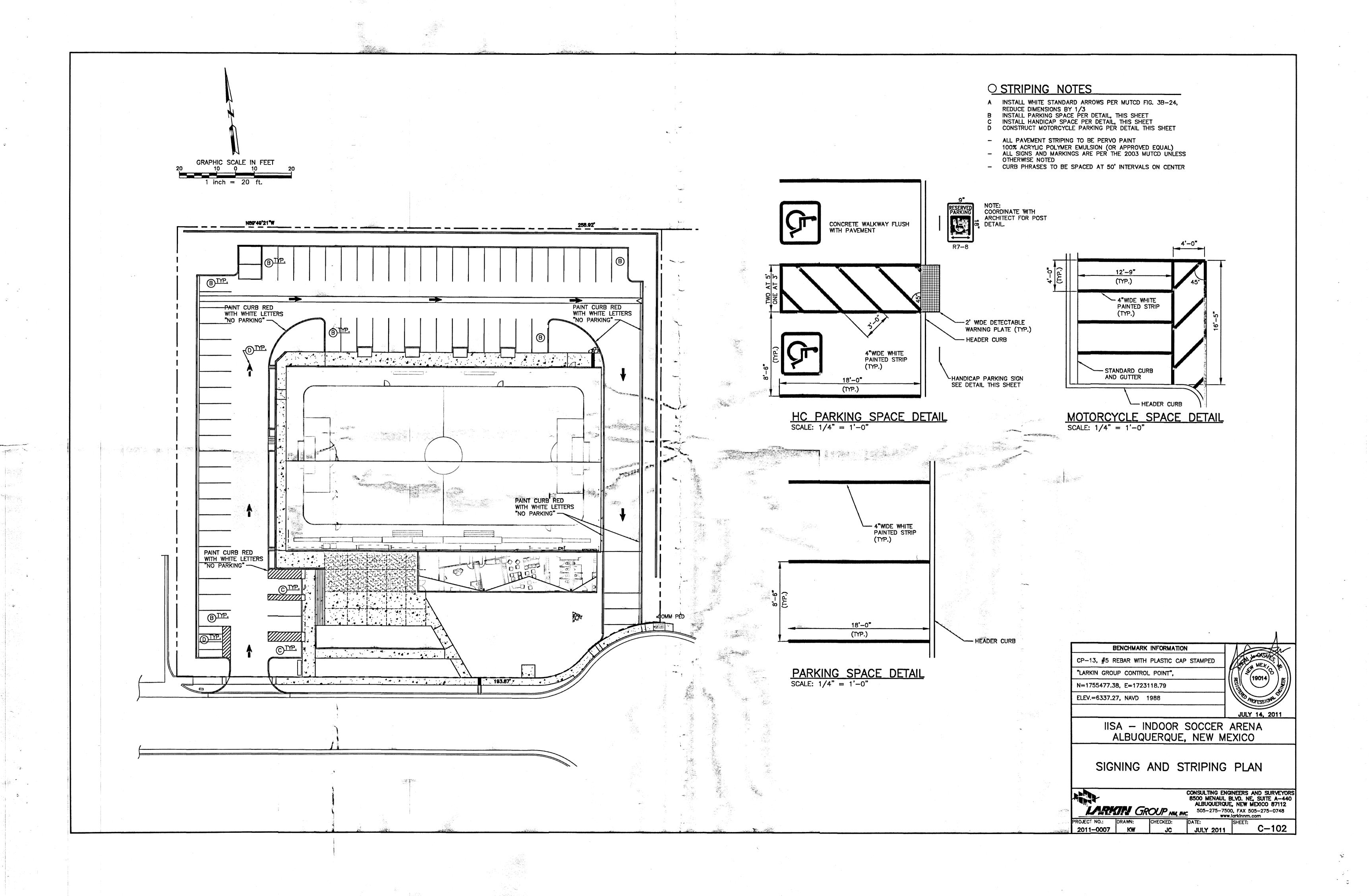
BENCHMARK INFORMATION CP-13, #5 REBAR WITH PLASTIC CAP STAMPED "LARKIN GROUP CONTROL POINT". (19014)N=1755477.38, E=1723118.79 ELEV.=6337.27, NAVD 1988 JULY 14, 2011

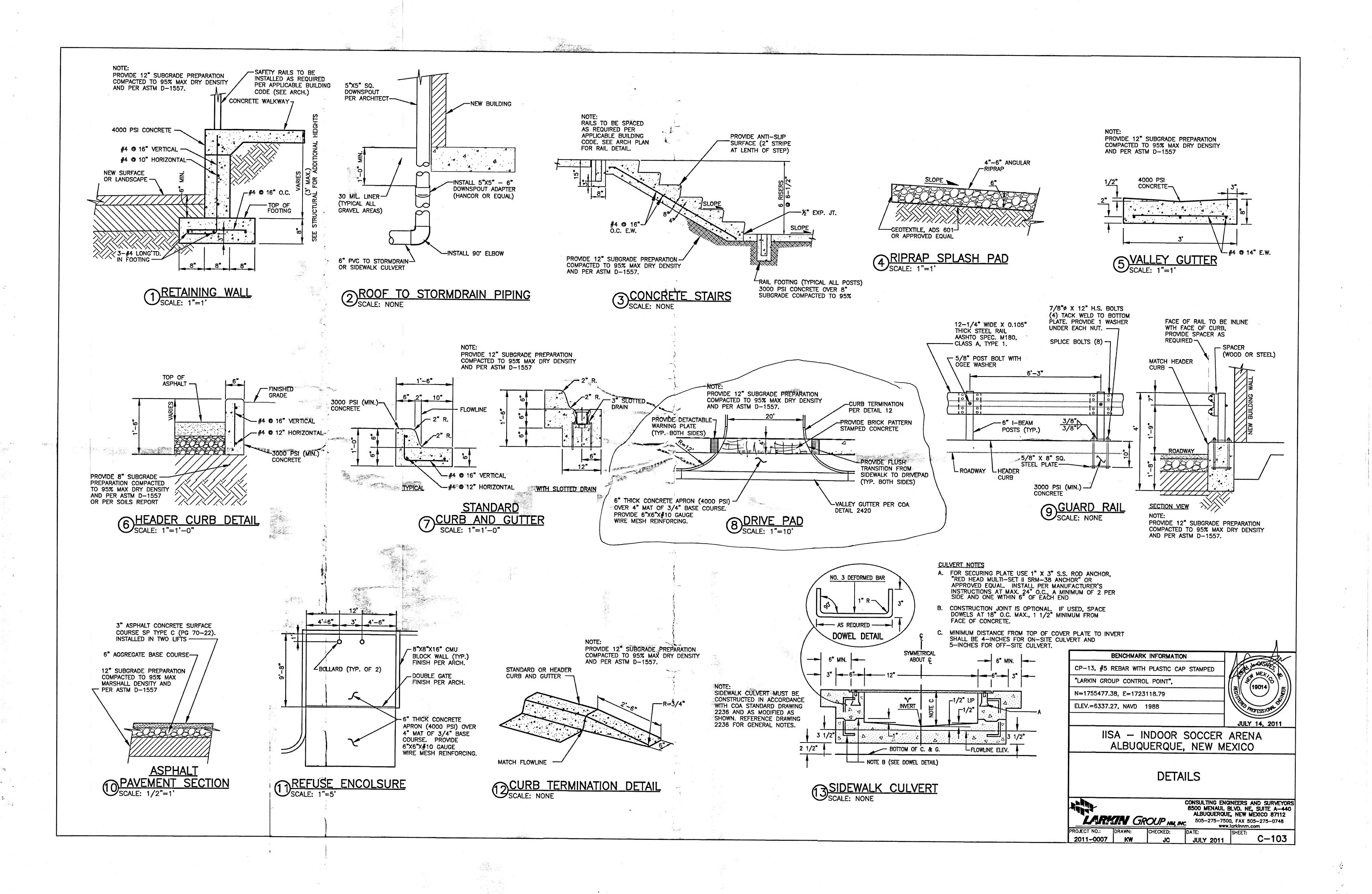
> IISA - INDOOR SOCCER ARENA ALBUQUERQUE, NEW MEXICO

> > C-101

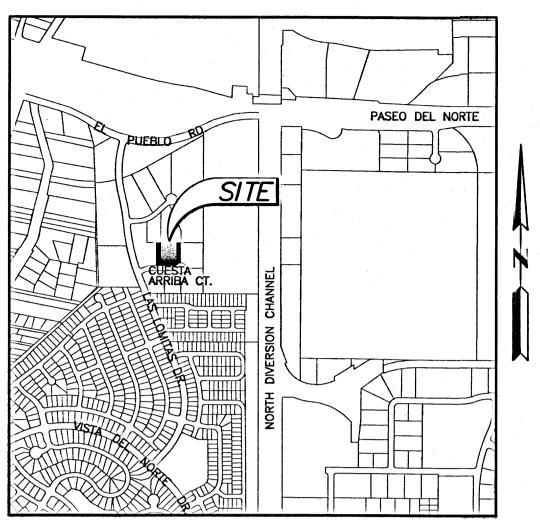
GRADING AND DRAINAGE PLAN







ere francise .



LOCATION MAP

SCALE: 1"=1000'±

ZONE ATLAS MAP D-16-Z

. EXECUTIVE SUMMARY

THIS PLAN SERVES TO SUPPORT THE DEVELOPMENT OF THE INTERNATIONAL INDOOR SOCCER ASSOCIATION'S (IISA) NEW ARENA. THE SITE IS LOCATED IN THE CITY OF ALBUQUERQUE AND IS KNOWN AS LOT 15 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 1321 CUESTA ARRIBA COURT. THE PROPOSED CONSTRUCTION CONSISTS OF NEW BUILDING, UTILITIES, DRAINAGE STRUCTURES PARKING LOT, WALKWAYS, LANDSCAPE AND OTHER AMENITIES AS REQUIRED FOR A FULLY FUNCTIONAL INDOOR SOCCER ARENA. OFF-SITE CONSTRUCTION WILL INCLUDE SIDEWALK, SIDEWALK CULVERT DRIVE PADS AND FIRE LINE CONNECTION. THE SITE WILL BE DEVELOPED CONCURRENTLY AND NO PHASING IS PROPOSED. MOST LOTS WITHIN THIS SUBDIVISION ARE NOT DEVELOPED EXCEPT FOR BERMS AT ALL LOT LINES. HOWEVER, THE LOT DIRECTLY TO THE WEST 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 100% OF THE STORMWATER GENERATED ON-SITE WILL BE STRATEGICALLY CONTROLLED AND CONVEYED TO THE SUBDIVISION'S MAIN RETENTION BASIN. SOME STORMWATER WILL FALL IN LANDSCAPED AREAS AND WILL SLOWLY PERCOLATE INTO THE GROUND. STORMWATER GENERATED ON-SITE WILL BE SURFACE ROUTED TOWARDS THE PUBLIC RIGHT-OF-WAY.

PROJECT DESCRIPTION ****

AS SHOWN ON THE LOCATION MAP THE SITE (60,984 SF = APPROXIMATELY 1.4 ACRES) IS LOCATED IN THE CITY OF ALBUQUERQUE AT 1321 CUESTA ARRIBA 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, 2005, IN BOOK 2005C, 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. 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 ALL 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 SOUTHWESTERLY.

V. DEVELOPED CONDITIONS

THE PROPOSED ON—SITE CONSTRUCTION CONSISTS OF NEW BUILDING, UTILITIES, DRAINAGE STRUCTURES PARKING LOT, WALKWAYS, LANDSCAPE AND OTHER AMENITIES. OFF—SITE CONSTRUCTION WILL INCLUDE SIDEWALK, SIDEWALK CULVERT, DRIVE PADS AND FIRE LINE CONNECTION. IT IS PROPOSED THAT 100% OF THE STORMWATER GENERATED ON—SITE WILL BE STRATEGICALLY CONTROLLED AND CONVEYED TO THE SUBDIVISION'S MAIN RETENTION BASIN. SOME STORMWATER WILL FALL IN LANDSCAPED AREAS AND MAY SLOWLY PERCOLATE INTO THE GROUND AND SURROUNDING VEGETATION. STORMWATER GENERATED ON—SITE WILL BE SURFACE ROUTED TOWARDS THE PUBLIC ROW. A SMALL AREA ALONG THE EAST PROPERTY LINE IS DESIGN TO COLLECT STORMWATER AND ROUTE IT UNDER THE DRIVE LANE VIA AN 8" PIPE. ROOF RUN—OFF WILL BE CONVEYED UTILIZING ROOF SCUPPERS AND DOWNSPOUTS. DOWNSPOUTS WILL BE PIPED UNDER WALKWAYS AND WILL OUTLET ALONG THE ON—SITE CURBS. ALL DRAINAGE STRUCTURES ARE SIZED TO ACCOMODATE THE 100—YR 10—DAY EVENT.

VI. EROSION CONTROL

CURRENTLY NO HARD SURFACES EXIST AT THE SITE. HOWEVER, AFTER DEVELOPMENT APPROXIMATELY 77% OF THE SITE WILL BE MADE—UP OF CONCRETE, ASPHALT AND ROOFTOP. THE PROPOSED CONSTRUCTION WILL INCREASE THE AMOUNT OF IMPERVIOUS AREA. PERMANENT EROSION CONTROL AT PIPE OUTLETS AND SURFACE FLOW CONCENTRATION POINTS WILL CONSIST OF RIP—RAP.

VII. WATER QUALITY ENHANCEMENTS NO WATER QUALITY ENHANCEMENTS ARE PROPOSED.

VIII. GRADING PLAN

THE GRADING PLAN ON SHEET C-101 SHOWS:

1. EXISTING GRADE SPOT ELEVATION AS TAKEN FROM THE TOPOGRAPHY SURVEY CONDUCTED BY LARKIN GROUP NM, INC.

5. CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES

SURVEY CONDUCTED BY LARKIN GROUP NM, INC.

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

IX. CALCULATIONS

THE CALCULATIONS HEREON ANALYZE THE HYDROLOGY FOR BOTH THE EXISTING AND DEVELOPED CONDITIONS UPON A 100 YEAR, 10 DAY RAINFALL EVENT. THE PROCEDURE FOR 40 ACRES AND SMALLER BASINS, AS SET FORTH IN CHAPTER 22 OF THE DEVELOPMENT PROCESS MANUAL (DPM), VOLUME 1, 1997 REVISIONS, IS USED TO QUANTIFY THE PEAK RATE OF DISCHARGE (Q) AND VOLUME (V) OF ON—SITE STORMWATER RUN—OFF. CALCULATIONS FOR HYDRAULIC CAPACITIES (Q) OF ALL SITE DRAINAGE AMENITIES ARE ALSO PRESENTED HEREON.

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

SITE CHARACTERISTICS:

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

LAND TREATMENT (PER VOL. I, CHAPTER 22 OF DPM);

IMPERVIOUS = D

PERVIOUS = C
PRECIPITATION ZONE = 2 (PER VOL. I, CHAPTER 22 OF DPM)

DRAINAGE AREA - PRE-DEVELOPMENT
60,984 sf = 100% PERVIOUS
ANALYSIS RESULTS
Q = 4.4 cfs

V = 5,743 cf

V = 8,405 cf

*Q = 1.8 cfs*V = 5,118 cf

V = 1,196 cf

Q = 0.6 cfs

V = 1,217 cf

DRAINAGE AREA "A" — POST DEVELOPMENT
24,336 sf = 74% IMPERVIOUS
8,763 sf = 26% PERVIOUS
ANALYSIS RESULTS
Q = 3.3 cfs

*DRAINAGE AREA "ROOF" — POST DEVELOPMENT *16,522 sf = 100% IMPERVIOUS ANALYSIS RESULTS

DRAINAGE AREA "B" — POST—DEVELOPMENT
3,363 sf = 67% IMPERVIOUS
1,657 sf = 33% PERVIOUS
ANALYSIS RESULTS
Q = 0.5 cfs

DRAINAGE AREA "C" — POST—DEVELOPMENT 2,861 sf = 45% IMPERVIOUS 3,482 sf = 55% PERVIOUS ANALYSIS RESULTS

HYDRAULIC ANALYSIS FOR CAPACITY (Q) OF SITE DRAINAGE AMENITIES

SLOT DRAIN CAPACITY (Q):

CLOGGING FACTOR (SF) = 50%

GRATE OPEN AREA (A) = 2 sf

SUBMERGED HEAD (h) = 0.08 ft

 $Q = (SF)(0.67A)[(2gh)^0.5] = 1.5 cfs$

EIGHT-INCH STORM DRAIN CAPACITY (Q):

PIPE ROUGHNESS (n) = 0.012

PIPE FLOW AREA (A) = 0.349 sf

HYDRAULIC RADIUS (R) = 0.1667

PIPE SLOPE (S) = .0104 ft/ft

 $Q = (1.49/n)(A)(R^0.667)(S^0.5) = 1.3 cfs$

OFF-SITE CULVERT CAPACITY (Q):

ROUGHNESS (n) = 0.015

CULVERT FLOW AREA (A) = 0.5 sf

HYDRAULIC RADIUS (R) = 0.25

CHANNEL SLOPE (S) = .0115 ft/ft

 $Q = (1.49/n)(A)(R^0.667)(S^0.5) = 2.1 cfs$

SIX-INCH 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 $Q = (1.49/n)(A)(R^0.667)(S^0.5) = 0.88 cfs$ ON-SITE CULVERT CAPACITY (Q):

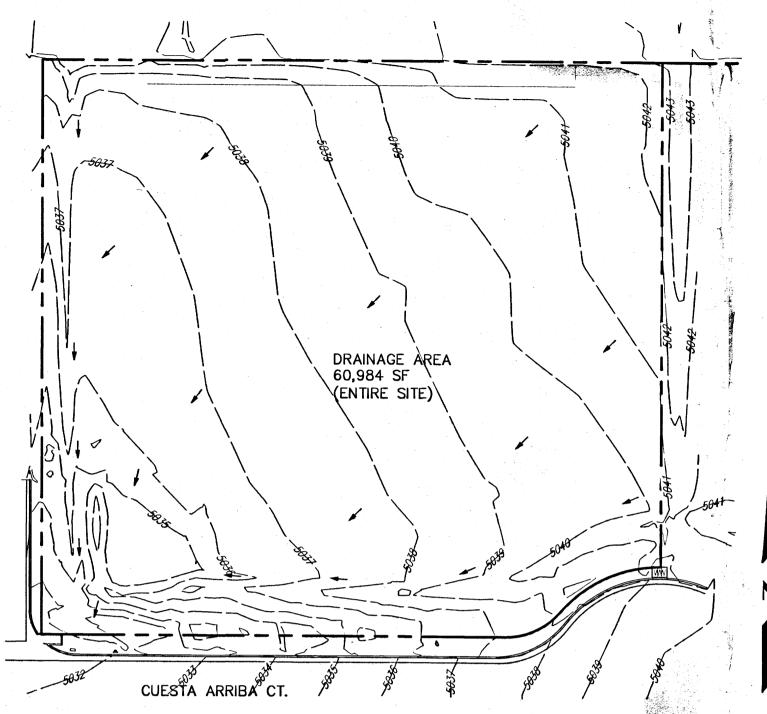
ROUGHNESS (n) = 0.015CULVERT FLOW AREA (A) = 0.5 sf HYDRAULIC RADIUS (R) = 0.25PIPE SLOPE (S) = .02 ft/ft

 $Q = (1.49/n)(A)(R^0.667)(S^0.5) = 2.8 \text{ cfs}$

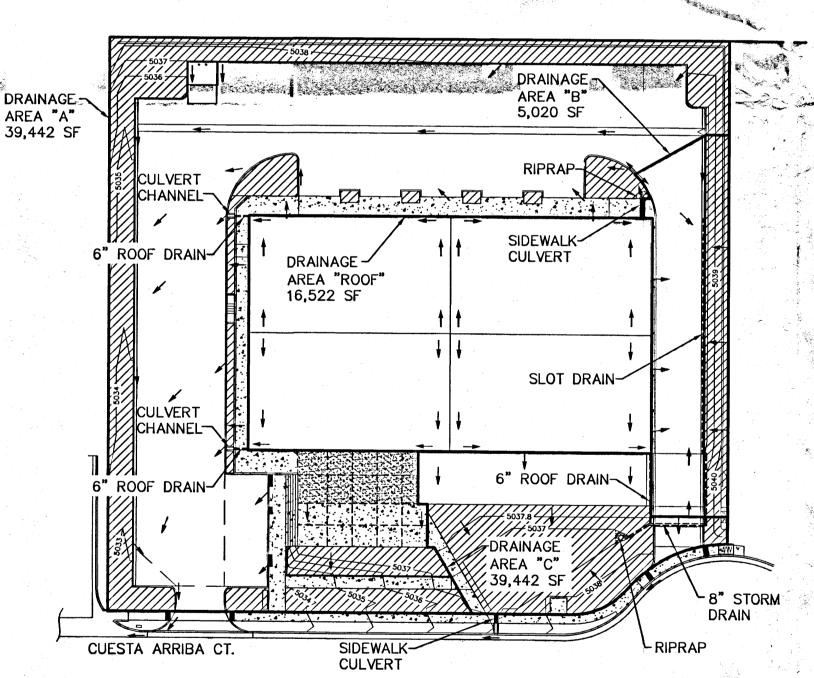
X. CONCLUSION

THIS PLAN SUPPORTS THE PROPOSED IMPROVEMENTS TO THE IISA'S NEW ARENA. THE PROPOSED STORM DRAINAGE FACILITIES WILL ADEQUATELY CONVEY STORMWATER GENERATED ON—SITE BY A 100 YEAR, 10 DAY STORM EVENT. ALL ON—SITE STORM DRAINAGE FACILITIES WILL BE PRIVATELY OWNED, OPERATED AND MAINTAINED.

* NOTE:
TOTAL ROOF AREA IS BROKEN INTO
FOUR EQUAL AREAS. THEREFORE
EACH SIX-INCH ROOF DRAIN SHALL
HANDLE ONE-FORTH THE FLOW
(Q/4 = 1.8cfs/4 = 0.45cfs).



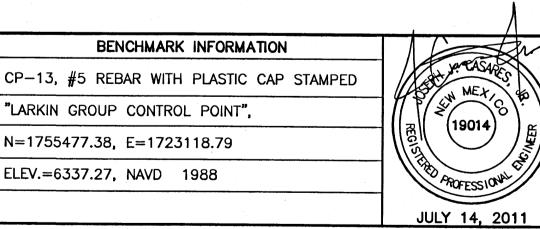
DRAINAGE AREA PRE-DEVELOPMENT
MAP SCALE: 1" = 40'



DRAINAGE AREA POST—DEVELOPMENT

MAP SCALE: 1" = 40'

= PERVIOUS AREA



IISA - INDOOR SOCCER ARENA ALBUQUERQUE, NEW MEXICO

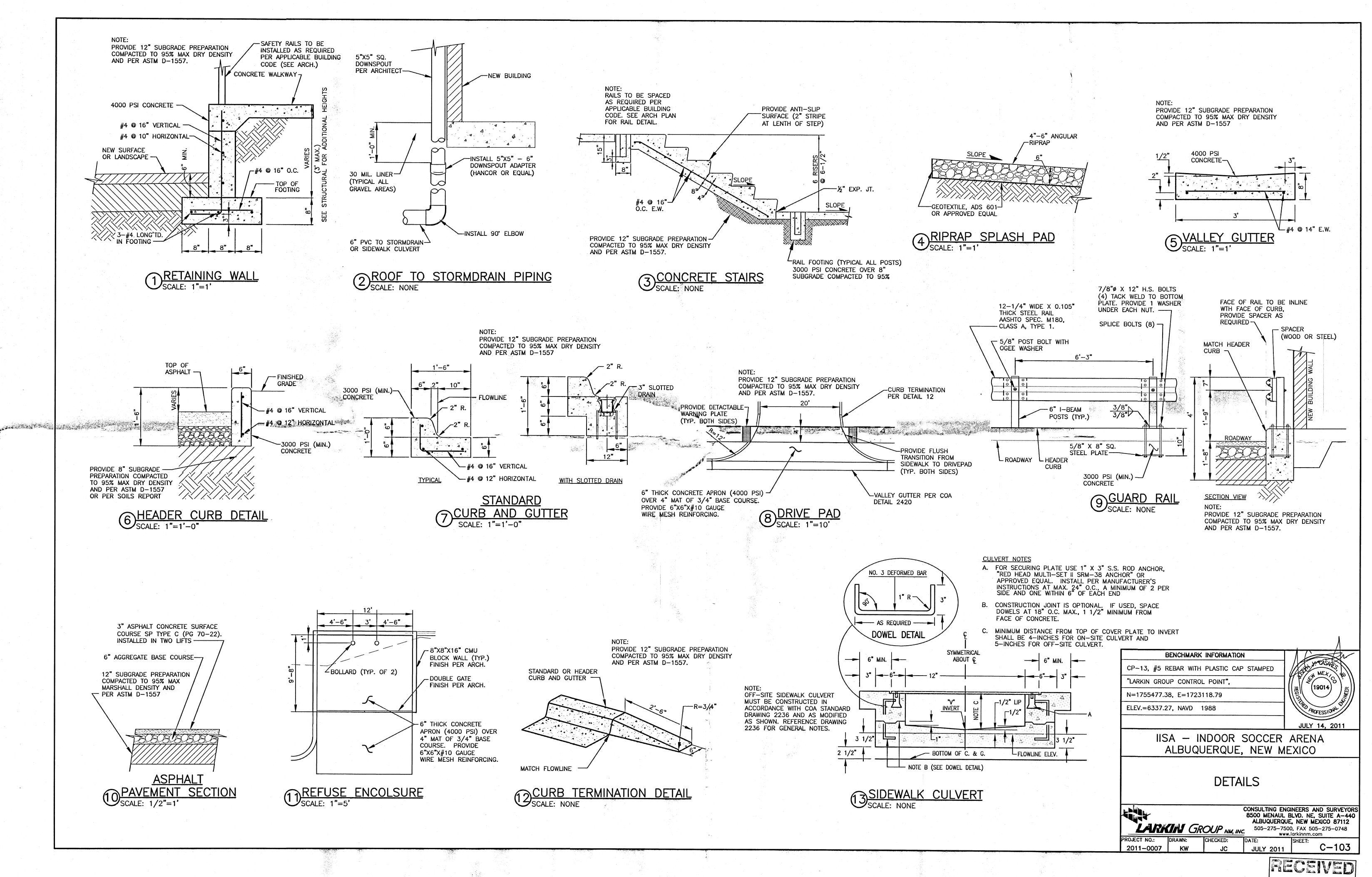
HYDROLOGY & HYDRAULIC ANALYSIS

ROJECT NO.: DRAWN: CHECKED: D. 2011-0007 KW JC

CONSULTING ENGINEERS AND SURVEYORS
8500 MENAUL BLVD. NE, SUITE A-440
ALBUQUERQUE, NEW MEXICO 87112
505-275-7500, FAX 505-275-0748
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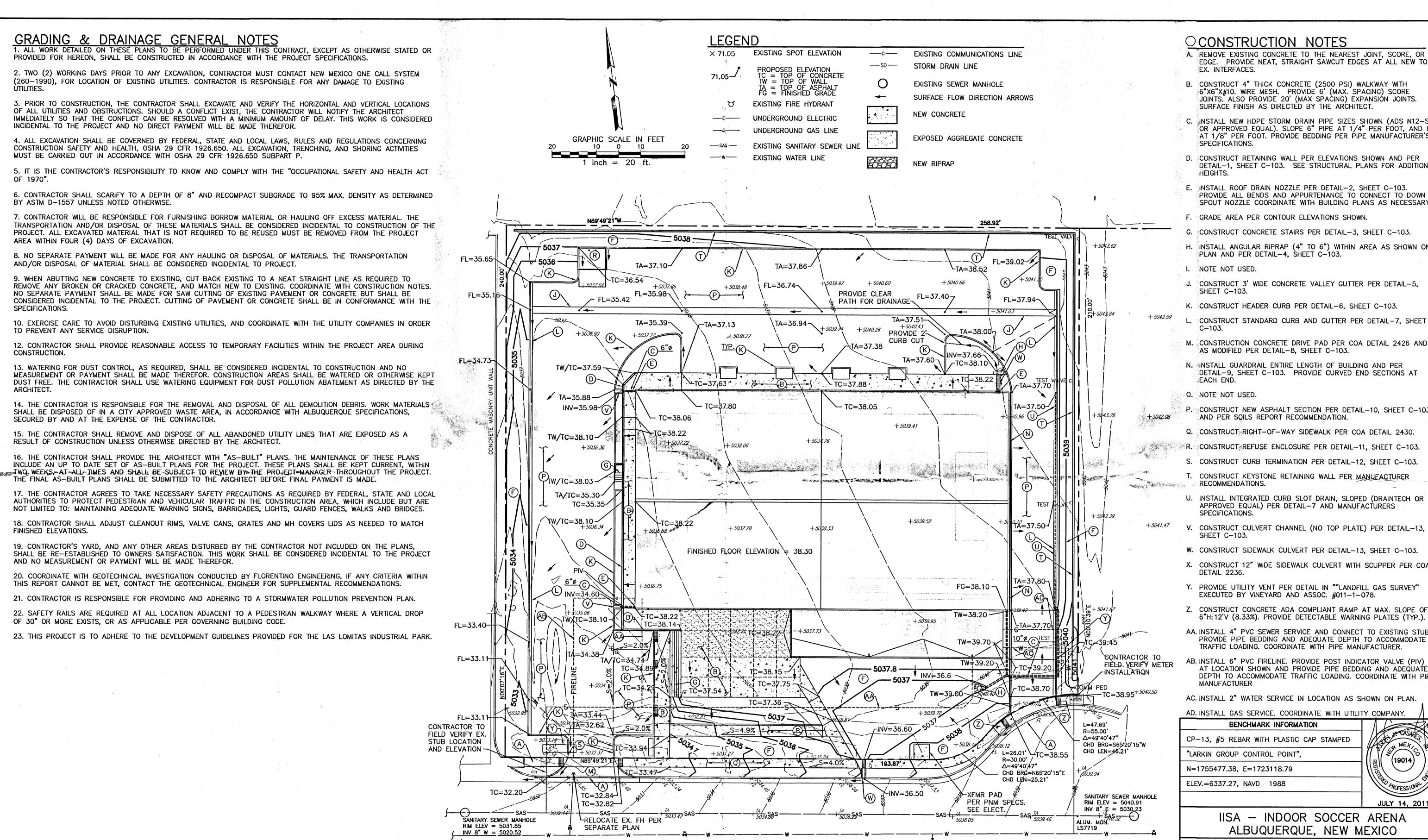
> HYDROLOGY SECTION

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HYDROLOGY
SECTION



OCONSTRUCTION NOTES

- A. REMOVE EXISTING CONCRETE TO THE NEAREST JOINT, SCORE, OR EDGE. PROVIDE NEAT, STRAIGHT SAWCUT EDGES AT ALL NEW TO
- B. CONSTRUCT 4" THICK CONCRETE (2500 PSI) WALKWAY WITH 6"X6"X#10. WIRE MESH. PROVIDE 6' (MAX. SPACING) SCORE JOINTS. ALSO PROVIDE 20' (MAX SPACING) EXPANSION JOINTS. SURFACE FINISH AS DIRECTED BY THE ARCHITECT.
- C. INSTALL NEW HDPE STORM DRAIN PIPE SIZES SHOWN (ADS N12-ST OR APPROVED EQUAL). SLOPE 6" PIPE AT 1/4" PER FOOT, AND 8" AT 1/8" PER FOOT. PROVIDE BEDDING PER PIPE MANUFACTURER'S
- D. CONSTRUCT RETAINING WALL PER ELEVATIONS SHOWN AND PER DETAIL-1, SHEET C-103. SEE STRUCTURAL PLANS FOR ADDITIONAL
- E. INSTALL ROOF DRAIN NOZZLE PER DETAIL-2, SHEET C-103. PROVIDE ALL BENDS AND APPURTENANCE TO CONNECT TO DOWN SPOUT NOZZLE COORDINATE WITH BUILDING PLANS AS NECESSARY.
- F. GRADE AREA PER CONTOUR ELEVATIONS SHOWN.
- G. CONSTRUCT CONCRETE STAIRS PER DETAIL-3, SHEET C-103.
- H. INSTALL ANGULAR RIPRAP (4" TO 6") WITHIN AREA AS SHOWN ON PLAN AND PER DETAIL-4, SHEET C-103.
- J. CONSTRUCT 3' WIDE CONCRETE VALLEY GUTTER PER DETAIL-5,
- K. CONSTRUCT HEADER CURB PER DETAIL—6, SHEET C—103.
- CONSTRUCT STANDARD CURB AND GUTTER PER DETAIL-7, SHEET
- M. CONSTRUCTION CONCRETE DRIVE PAD PER COA DETAIL 2426 AND AS MODIFIED PER DETAIL-8, SHEET C-103.
- N. INSTALL GUARDRAIL ENTIRE LENGTH OF BUILDING AND PER DETAIL-9, SHEET C-103. PROVIDE CURVED END SECTIONS AT
- P. CONSTRUCT NEW ASPHALT SECTION PER DETAIL-10, SHEET C-103, **SAND PER SOILS REPORT RECOMMENDATION.**
- Q. CONSTRUCT RIGHT-OF-WAY SIDEWALK PER COA DETAIL 2430.
- R. CONSTRUCT REFUSE ENCLOSURE PER DETAIL-11, SHEET C-103.
- CONSTRUCT KEYSTONE RETAINING WALL PER MANUFACTURER
- V. CONSTRUCT CULVERT CHANNEL (NO TOP PLATE) PER DETAIL-13,
- W. CONSTRUCT SIDEWALK CULVERT PER DETAIL-13, SHEET C-103.
- X. CONSTRUCT 12" WIDE SIDEWALK CULVERT WITH SCUPPER PER COA
- Y. PROVIDE UTILITY VENT PER DETAIL IN ""LANDFILL GAS SURVEY" EXECUTED BY VINEYARD AND ASSOC. #011-1-078.
- Z. CONSTRUCT CONCRETE ADA COMPLIANT RAMP AT MAX. SLOPE OF
- AA. INSTALL 4" PVC SEWER SERVICE AND CONNECT TO EXISTING STUB.
- PROVIDE PIPE BEDDING AND ADEQUATE DEPTH TO ACCOMMODATE TRAFFIC LOADING. COORDINATE WITH PIPE MANUFACTURER. AB. INSTALL 6" PVC FIRELINE. PROVIDE POST INDICATOR VALVE (PIV)
- AT LOCATION SHOWN AND PROVIDE PIPE BEDDING AND ADEQUATE DEPTH TO ACCOMMODATE TRAFFIC LOADING. COORDINATE WITH PIPE
- AC. INSTALL 2" WATER SERVICE IN LOCATION AS SHOWN ON PLAN.

AD. INSTALL GAS SERVICE. COORDINATE WITH UTILITY COMPANY. BENCHMARK INFORMATION CP-13, #5 REBAR WITH PLASTIC CAP STAMPED MEX (19014) PROFESSION P JULY 14, 2011

> IISA - INDOOR SOCCER ARENA ALBUQUERQUE, NEW MEXICO

GRADING AND DRAINAGE PLAN

LARKIN GROUP NM, INC. 2011-0007

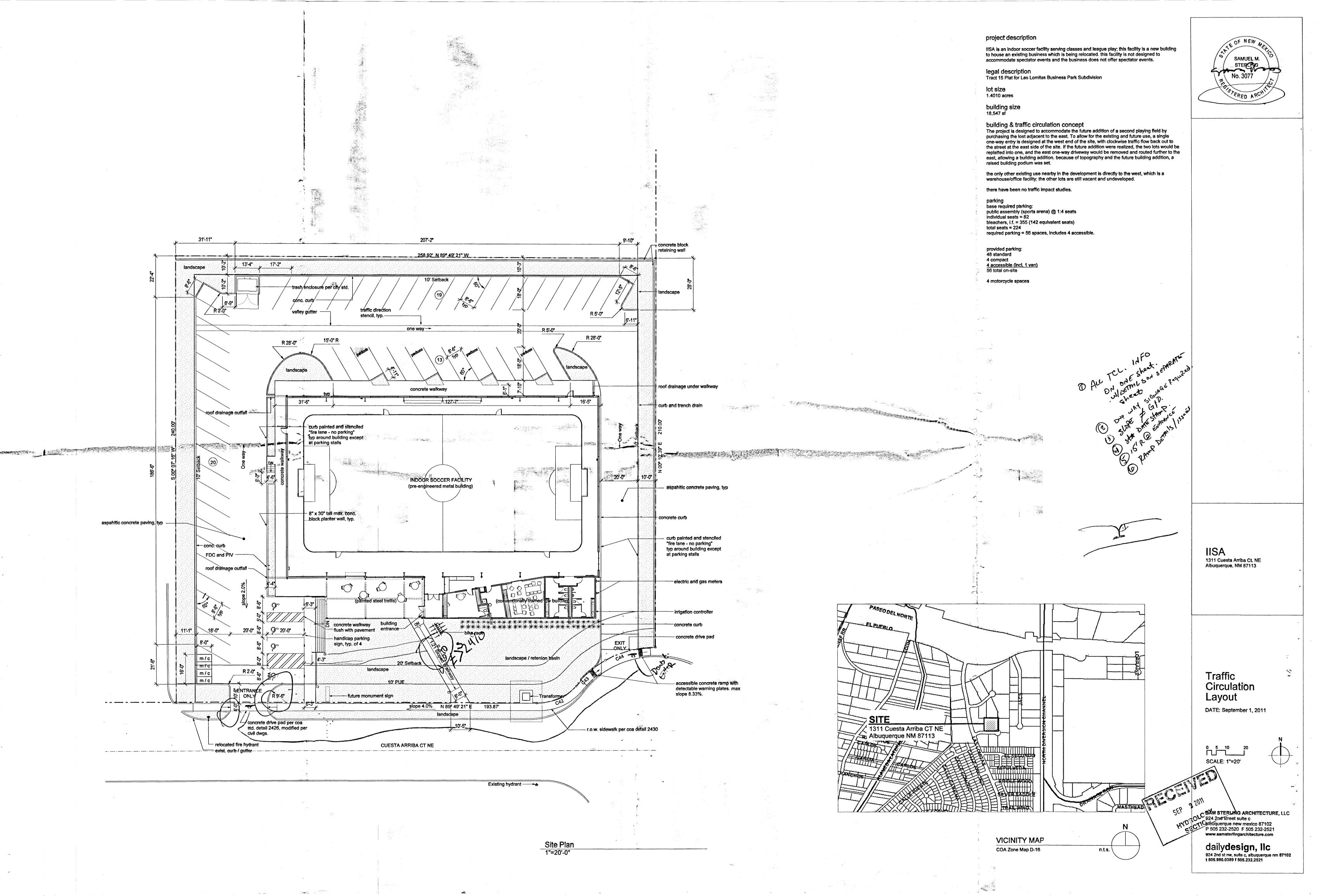
CONSULTING ENGINEERS AND SURVEYORS 8500 MENAUL BLVD. NE, SUITE A-440 ALBUQUERQUE, NEW MEXICO 87112 505-275-7500, FAX 505-275-0748

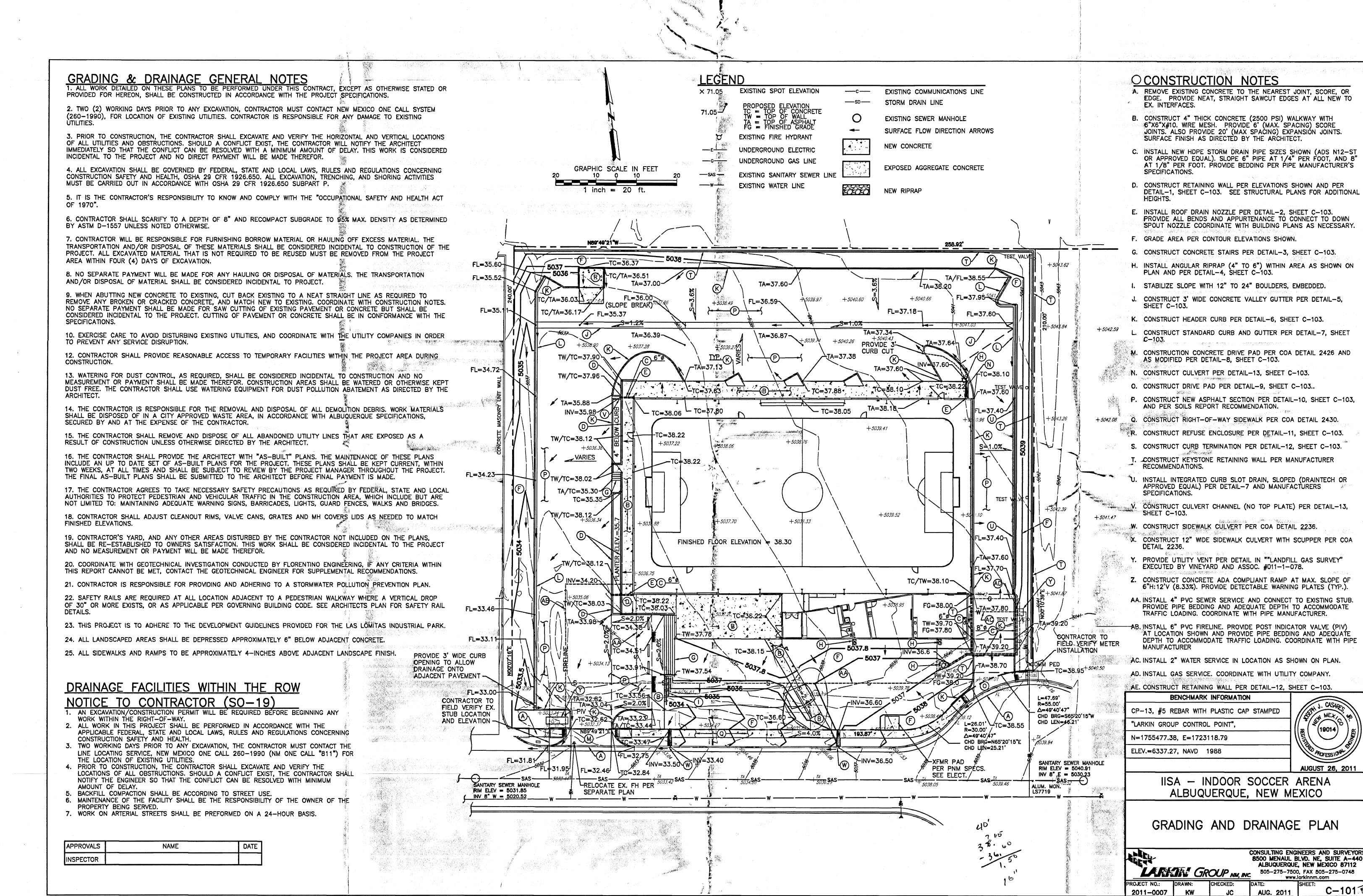
www.larkinnm.com

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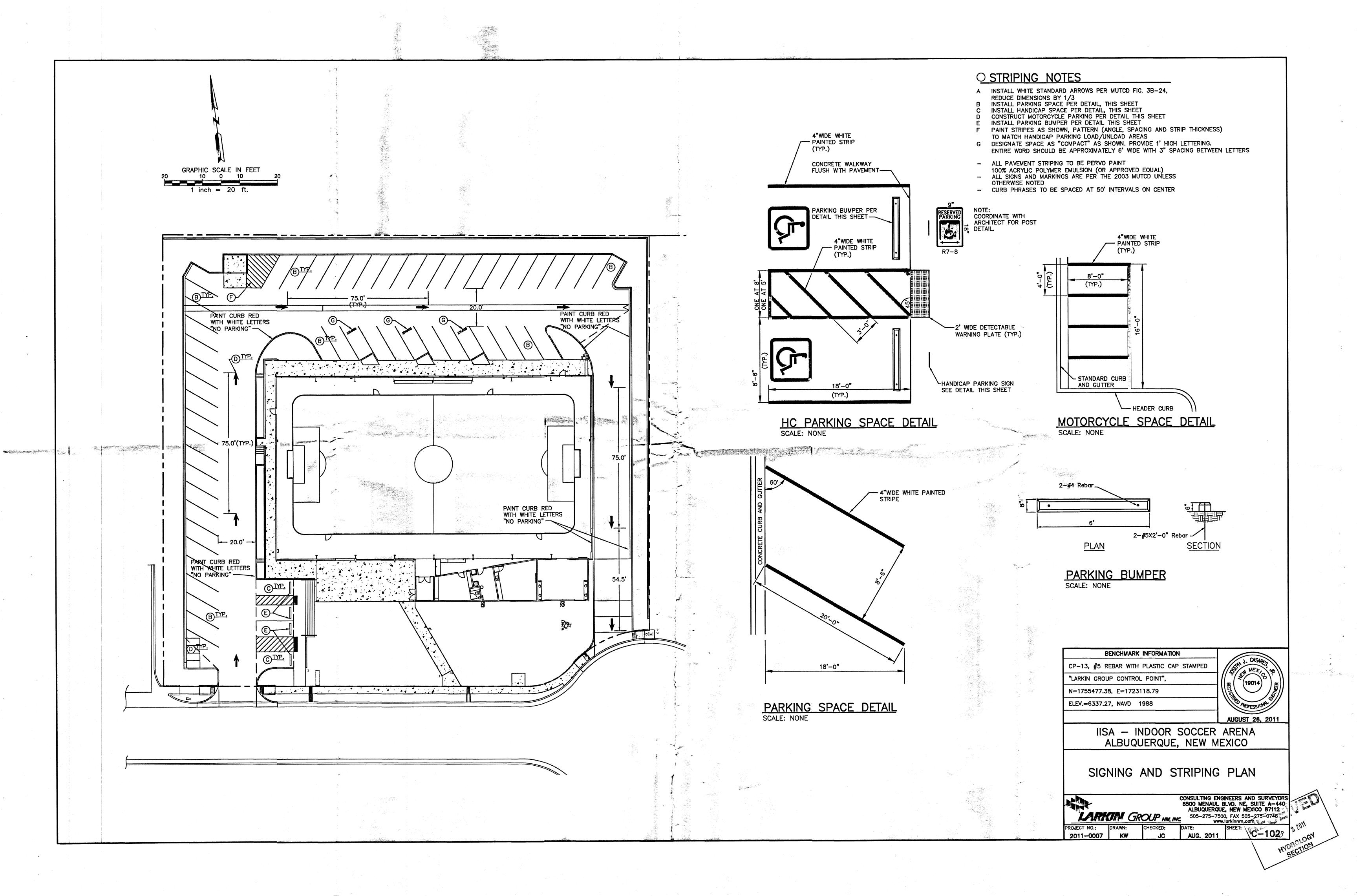
HYDROLOGY SECTION

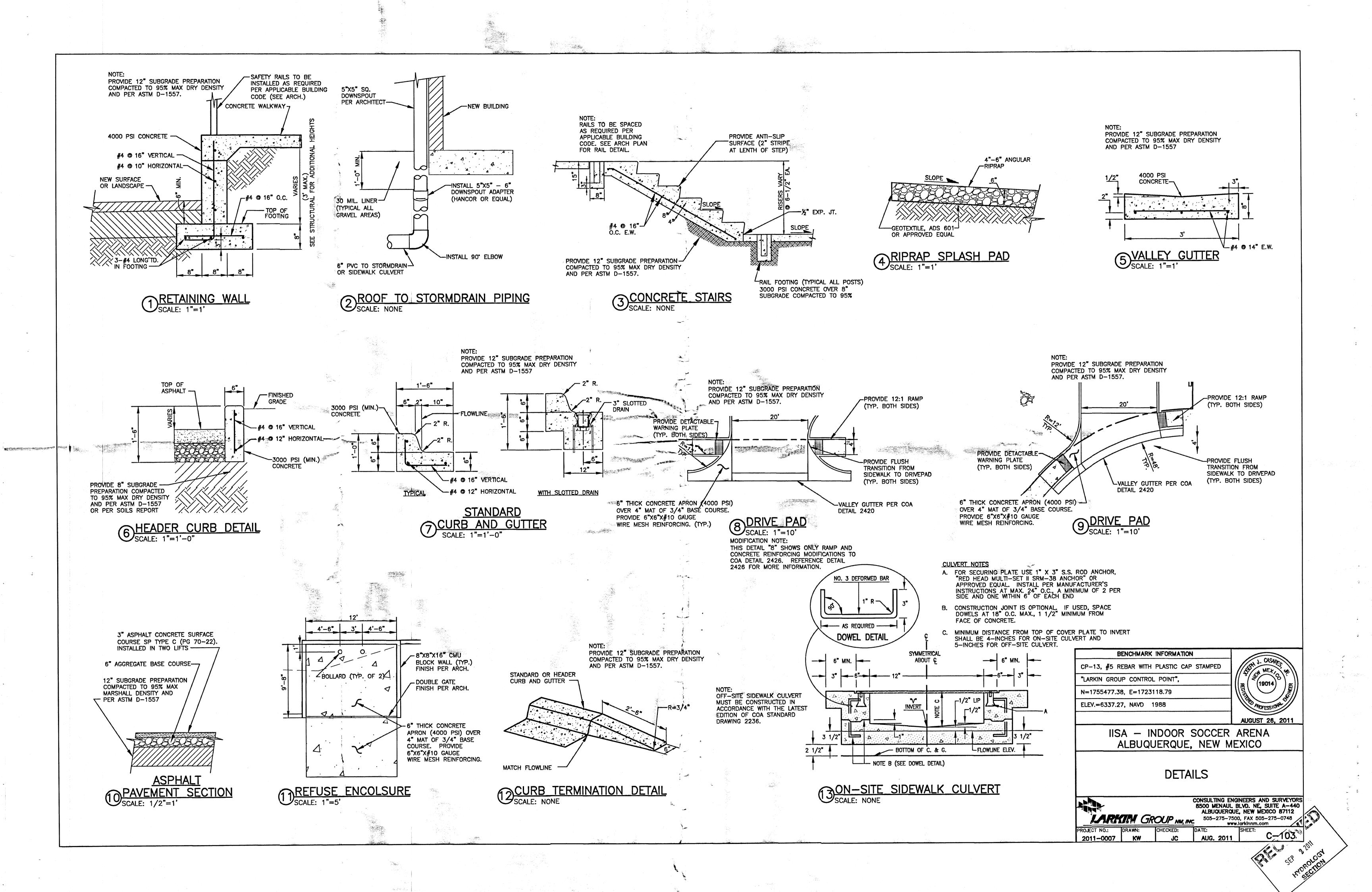


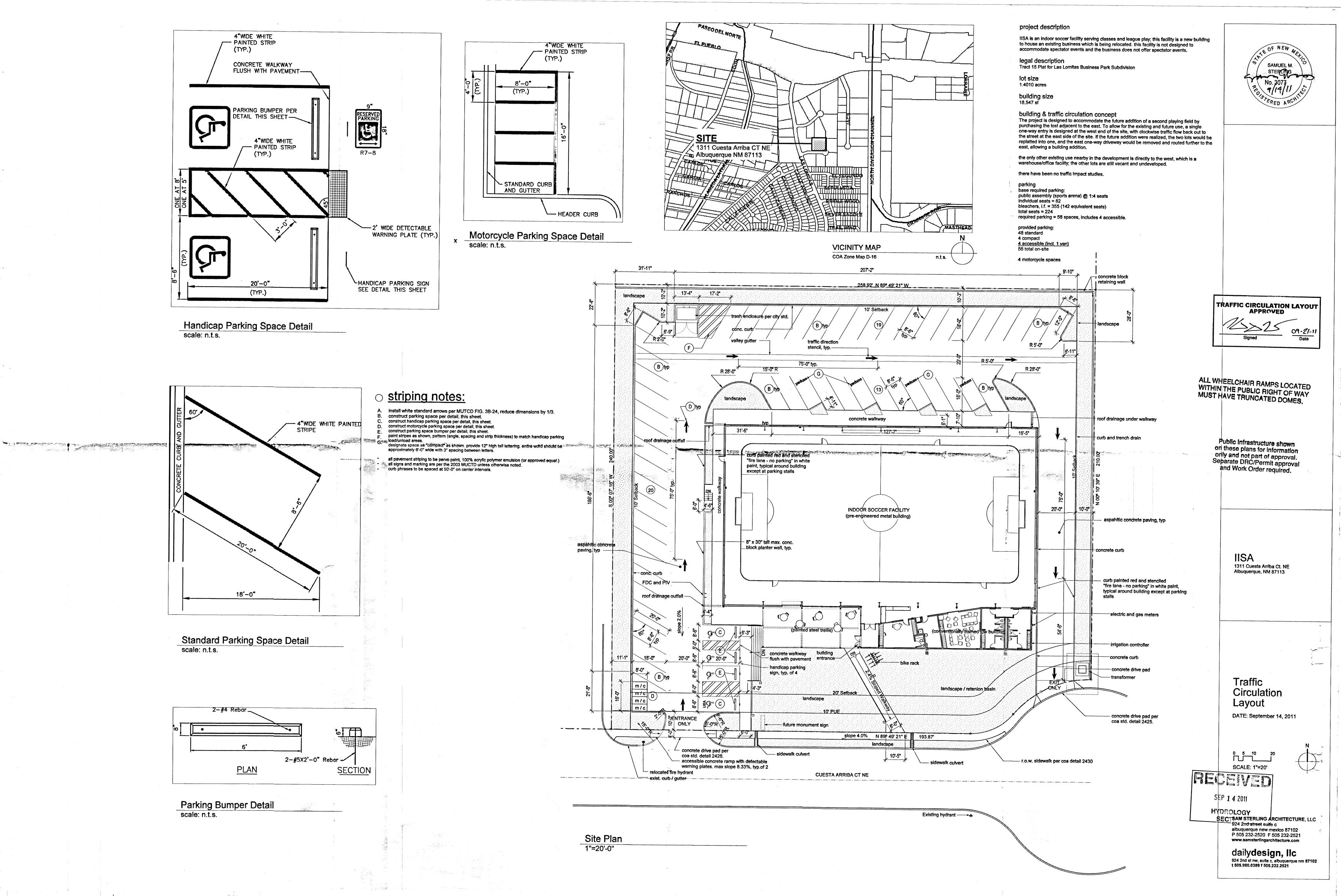


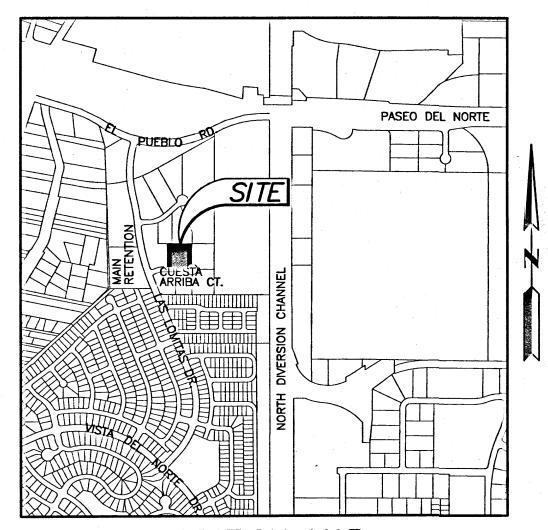
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(19014)









LOCATION MAP SCALE: 1"=1000'±

ZONE ATLAS MAP D-16-Z

EXECUTIVE SUMMARY

THIS PLAN SERVES TO SUPPORT THE DEVELOPMENT OF THE INTERNATIONAL INDOOR SOCCER ASSOCIATION'S (IISA) NEW ARENA. THE SITE IS LOCATED IN THE CITY OF ALBUQUERQUE AND IS KNOWN AS LOT 15 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 1311 CUESTA ARRIBA COURT. THE PROPOSED CONSTRUCTION CONSISTS OF NEW BUILDING, UTILITIES, DRAINAGE STRUCTURES PARKING LOT, WALKWAYS, LANDSCAPE AND OTHER AMENITIES AS REQUIRED FOR A FULLY FUNCTIONAL INDOOR SOCCER ARENA. OFF-SITE CONSTRUCTION WILL INCLUDE SIDEWALK, SIDEWALK CULVERT, DRIVE PADS AND FIRE LINE CONNECTION. THE SITE WILL BE DEVELOPED CONCURRENTLY AND NO PHASING IS PROPOSED. MOST LOTS WITHIN THIS SUBDIVISION ARE NOT DEVELOPED EXCEPT FOR BERMS AT ALL LOT LINES. HOWEVER, THE LOT DIRECTLY TO THE WEST 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 4.63 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 (4.63 CFS) DOES NOT EXCEED THE ALLOWABLE 4.79 CFS AS ACCORDING TO DRAINAGE REPORT D-16/D002C ON FILE WITH COA.

AS SHOWN ON THE LOCATION MAP THE SITE (60,984 SI APPROXIMATELY 1.4 ACRES) IS LOCATED IN THE CITY OF ALBUQUERQUE AT 1311 CUESTA ARRIBA 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, 2005, IN BOOK 2005C, PAGE 357. FURTHERMORE, THE SITE IS LOCATED IN FLOOD ZONE X AS INDICATED BY FIRM NUMBER 35001C0136G, RECORDED ON SEPTEMBER 26, 2008 BY THE

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 PROPÓSED 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 ALL 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 SOUTHWESTERLY.

V. DEVELOPED CONDITIONS

THE PROPOSED ON-SITE CONSTRUCTION CONSISTS OF NEW BUILDING, UTILITIES, DRAINAGE STRUCTURES PARKING LOT. WALKWAYS, LANDSCAPE AND OTHER AMENITIES. OFF-SITE CONSTRUCTION WILL INCLUDE SIDEWALK, SIDEWALK CULVERT, DRIVE PADS AND FIRE LINE CONNECTION. IT IS PROPOSED THAT STORMWATER GENERATED ON-SITE WILL BE STRATEGICALLY CONTROLLED AND CONVEYED TO THE SUBDIVISION'S MAIN RETENTION BASIN AS WELL AS THE ON-SITE DETENTION BASINS. SINCE ALL LANDSCAPED AREAS WILL BE DEPRESSED 6-INCHES, STORMWATER THAT FALLS IN THESE AREAS WILL SLOWLY PERCOLATE INTO THE GROUND AND SURROUNDING VEGETATION. STORMWATER GENERATED ON-SITE WILL BE SURFACE ROUTED TOWARDS APPROPRIATE DETENTION BASINS OR OUTFALL POINTS. ROOF RUN-OFF WILL BE CONVEYED UTILIZING ROOF SCUPPERS AND DOWNSPOUTS. DOWNSPOUTS WILL BE PIPED UNDER WALKWAYS AND WILL OUTLET ALONG THE ON-SITE CURBS. ALL 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 76% OF THE SITE WILL BE MADE-UP OF CONCRETE, ASPHALT AND ROOFTOP. THE PROPOSED CONSTRUCTION WILL INCREASE THE AMOUNT OF IMPERVIOUS AREA. PERMANENT EROSION CONTROL AT PIPE OUTLETS AND SURFACE FLOW CONCENTRATION POINTS WILL CONSIST OF RIP-RAP.

VII. WATER QUALITY ENHANCEMENTS

NO WATER QUALITY ENHANCEMENTS ARE PROPOSED.

VIII. GRADING PLAN

THE GRADING PLAN ON SHEET C-101 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. BOTH THE 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 = DPERVIOUS = C

PRECIPITATION ZONE = 2 (DPM CH. 22, TABLE A-1) FOR ADDITIONAL DATA USED, SEE TABLE 1 ON THIS SHEET.

DRAINAGE AREA - PRE-DEVELOPMENT 60,984 sf = 100% PERVIOUSANALYSIS RESULTS Q = 4.4 cfs

V = 5,743 cf DRAINAGE AREA "A" - POST DEVELOPMENT 30,853 sf = 82% IMPERVIOUS6.932 sf = 18% PERVIOUSANALYSIS RESULTS

V = 7,132 cfDRAINAGE AREA "B" - POST-DEVELOPMENT 13.061 sf = 74% IMPERVIOUS

6,433 sf = 26% PERVIOUSANALYSIS RESULTS Q = 0.50 cfs (SEE AHYMO RESULTS) V = 3,006 cf (SEE AHYMO RESULTS)

DRAINAGE AREA "C" - POST-DEVELOPMENT 974 sf = 26% IMPERVIOUS2.731 sf = 74% PERVIOUS

ANALYSIS RESULTS Q = 0.30 cfsV = 560 cf

Q = 3.83 cfs

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

 $Q = (0.67A)[(2gh)^0.5] = (1.08 cfs)$

SIX-INCH ROOF DRAIN CAPACITY (Q): PIPE ROUGHNESS (n) = 0.012PIPE FLOW AREA (A) = 0.196 sfHYDRAULIC RADIUS (R) = 0.125

 $Q = (1.49/n)(A)(R^0.667)(S^0.5) = 0.88 cfs$

ON-SITE CULVERT CAPACITY (Q): INLET OPEN AREA (A) = 0.5 sfSUBMERGED HEAD (h) = 0.04 ft

PIPE SLOPE (S)

DETENTION BASIN DESCRIPTION AND VOLUME (V) CALCULATIONS:

 $Q = (0.67A)[(2gh)^0.5] = 0.53 cfs$

NOTE: STORMWATER WILL BE DETAINED IN DRAINAGE ARE "B" ONLY.

DETENTION BASIN CONSIST OF TWO BASINS CONNECTED BY A 10" PIPE WITH A CONSTANT INVERT OF ELEVATION 5036.1. ONE PORTION OF THE BASIN IS RECTANGULAR AND DESIGNED WITH RETAINING WALLS ALONG ALL FOUR SIDES. THE OTHER PORTION IS A POLYGON DESIGNED WITH SIDES SLOPES OF 3' HORIZONTAL TO EVERY 1' VERTICAL. THE TOTAL VOLUME IS CALCULATED AS FOLLOWS;

= .0208 ft/ft

RECTANGULAR CHARACTERISTICS: LENGTH = 128.0 FTWIDTH = 7.3 FT DEPTH = 1.17 FT**POLYGONAL CHARACTERISTICS:** BOTTOM PERIMETER AREA = 1.786 SF TOP PERIMETER AREA = 2,481 SF DEPTH = 1.17 FT

V = (128.0 FT)*(7.3 FT)*(1.17 FT) +(1/2)*[(2,481 SF + 1,786 SF)*(1.17 FT)] = 3.589 CF

X. CONCLUSION

THIS PLAN SUPPORTS THE PROPOSED IMPROVEMENTS TO THE IISA'S NEW ARENA. 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 4.63 CFS OF STORMWATER TO RUN OFF INTO THE RIGHT-OF-WAY, AND WILL PROVIDE 3,006 CF OF STORMWATER DETENTION ON-SITE. MORE SPECIFICALLY, RUN-OFF FROM; DRAINAGE AREA "A" WILL SHEET FLOW TO THE RIGHT-OF-WAY. DRAINAGE AREA "B" WILL BE DETAINED ON-SITE, DRAINAGE AREA "C" WILL FLOW TO THE RIGHT-OF-WAY VIA THE OFF-SITE CULVERT. FURTHERMORE, THE RUN-OFF DIRECTED TO THE RIGHT-OF-WAY (4.63 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.

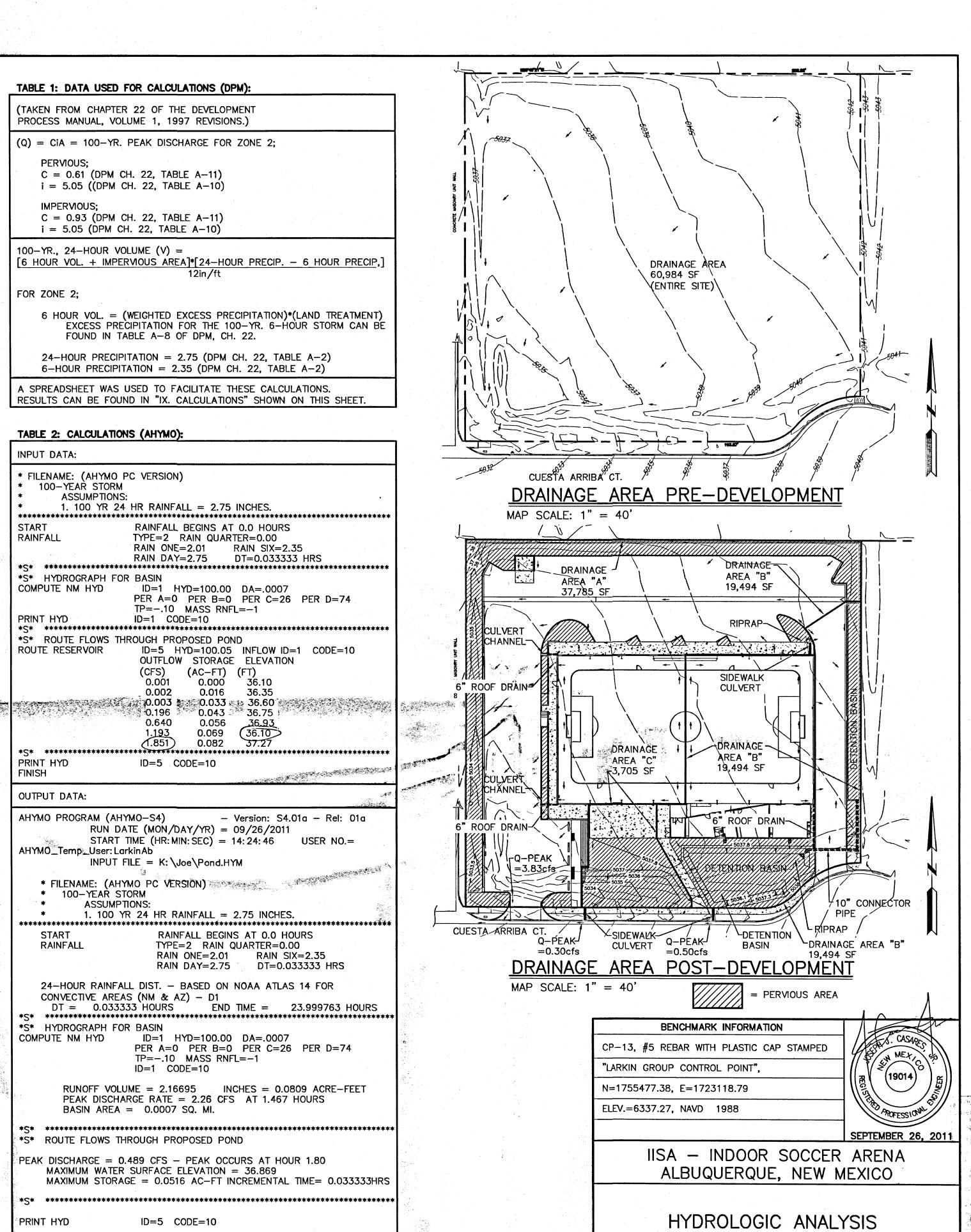
PARTIAL HYDROGRAPH 100.05

FINISH

RUNOFF VOLUME = 1.84487 INCHES = 0.0689 ACRE-FEET

BASIN AREA = 0.0007 SQ. MI.

PEAK DISCHARGE RATE = 0.49 CFS AT 1.800 HOURS



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CONSULTING ENGINEERS AND SURVEYORS

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LARKIN GROUP NM, INC.

KW

2011-0007

ALBUQUERQUE, NEW MEXICO 87112

505-275-7500, FAX 505-275-0748

SEPT. 2011

C-100



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.

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

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 THE SPECIFICATIONS.

10. EXERCISE CARE TO AVOID DISTURBING EXISTING UTILITIES, AND COORDINATE WITH THE UTILITY COMPANIES 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 TWO WEEKS, AT ALL TIMES AND SHALL BE SUBJECT TO REVIEW BY THE PROJECT MANAGER 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. COORDINATE WITH GEOTECHNICAL INVESTIGATION CONDUCTED BY FLORENTINO ENGINEERING, IF ANY CRITERIA WITHIN THIS REPORT CANNOT BE MET, CONTACT THE GEOTECHNICAL ENGINEER FOR SUPPLEMENTAL RECOMMENDATIONS.

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 30" 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-INCHES ABOVE ADJACENT LANDSCAPE FINISH.

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

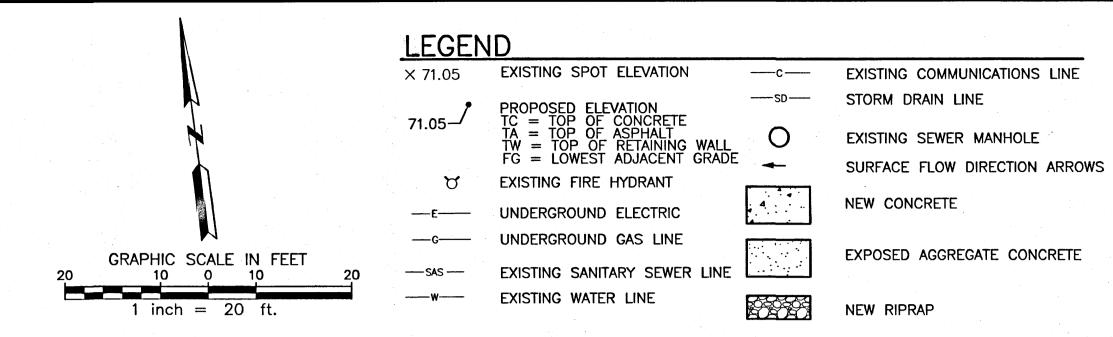
LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHA NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH MINIMUM AMOUNT OF DELAY.

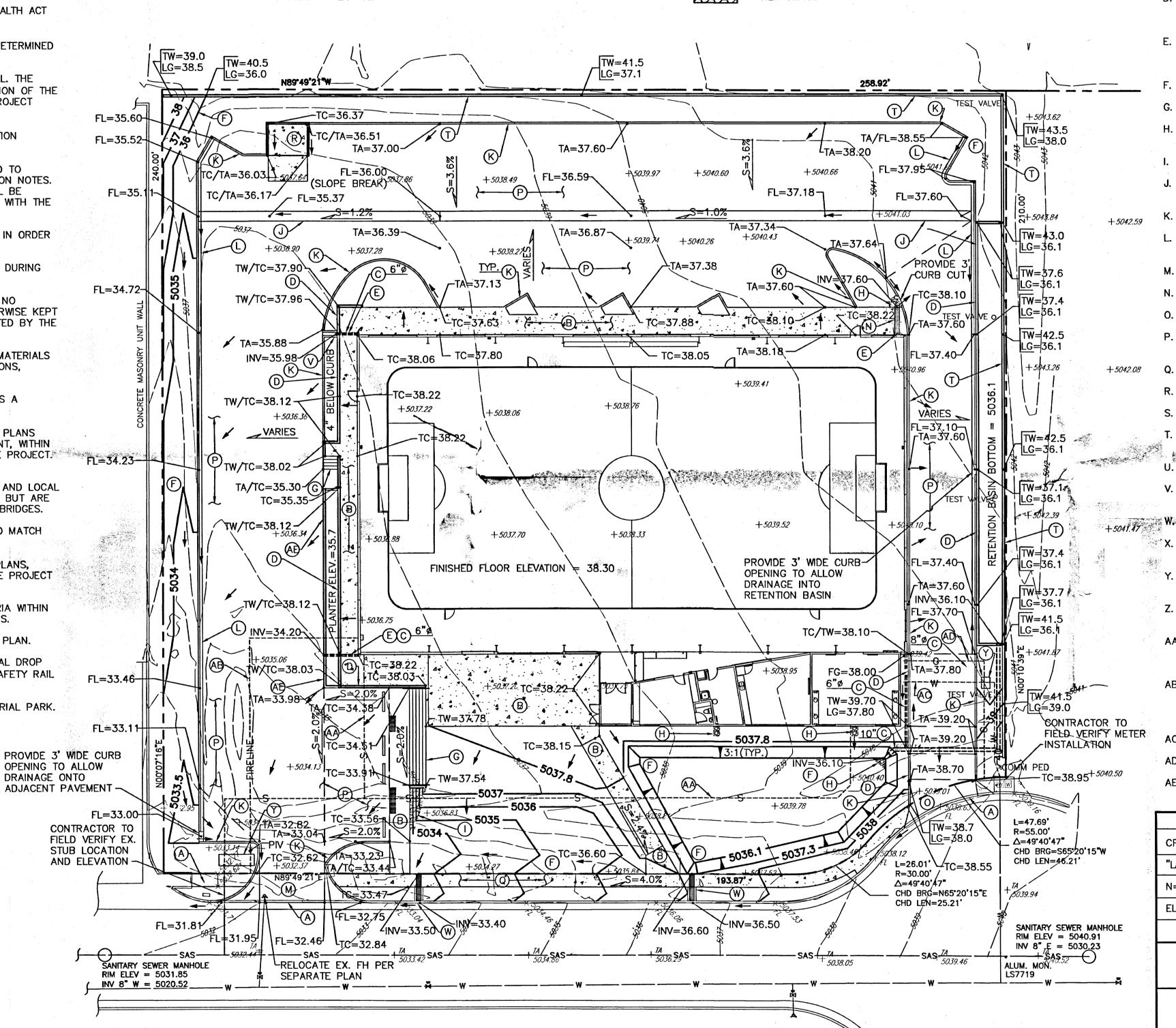
BACKFILL COMPACTION SHALL BE ACCORDING TO STREET USE.

6. MAINTENANCE OF THE FACILITY SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY BEING SERVED.

7. WORK ON ARTERIAL STREETS SHALL BE PREFORMED ON A 24-HOUR BASIS.

APPROVALS NAME DATE
INSPECTOR





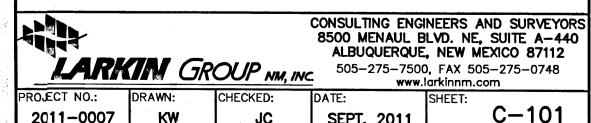
OCONSTRUCTION NOTES

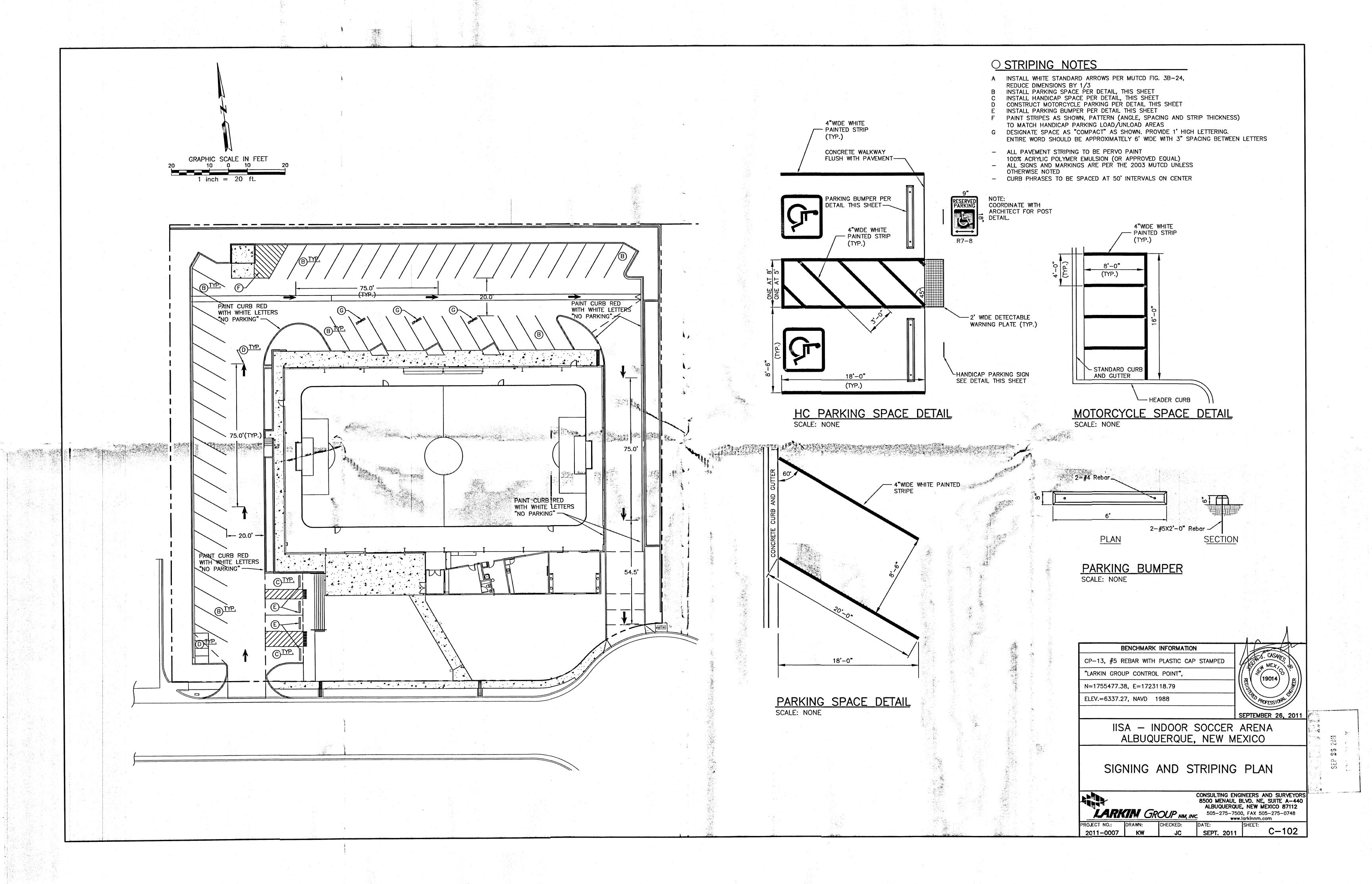
- A. REMOVE EXISTING CONCRETE TO THE NEAREST JOINT, SCORE, OR EDGE. PROVIDE NEAT, STRAIGHT SAWCUT EDGES AT ALL NEW TO EX. INTERFACES.
- B. CONSTRUCT 4" THICK CONCRETE (2500 PSI) WALKWAY WITH 6"X6"X#10. WRE MESH. PROVIDE 6' (MAX. SPACING) SCORE JOINTS. ALSO PROVIDE 20' (MAX SPACING) EXPANSION JOINTS. SURFACE FINISH AS DIRECTED BY THE ARCHITECT.
- C. INSTALL NEW HDPE STORM DRAIN PIPE SIZES SHOWN (ADS N12-ST OR APPROVED EQUAL). SLOPE 6" PIPE AT 1/4" PER FOOT, AND 10" AT 0" PER FOOT (FLAT). PROVIDE BEDDING PER PIPE MANUFACTURER'S SPECIFICATIONS. PROVIDE 10" END SECTION AT DETENTION BASIN/PIPE INVERT.
- D. CONSTRUCT RETAINING WALL PER ELEVATIONS SHOWN AND PER DETAIL—1, SHEET C—103. SEE STRUCTURAL PLANS FOR ADDITIONAL HEIGHTS.
- E. INSTALL ROOF DRAIN NOZZLE PER DETAIL—2, SHEET C—103.
 PROVIDE ALL BENDS AND APPURTENANCE TO CONNECT TO DOWN
 SPOUT NOZZLE COORDINATE WITH BUILDING PLANS AS NECESSARY.
- F. GRADE AREA PER CONTOUR ELEVATIONS SHOWN.
- G. CONSTRUCT CONCRETE STAIRS PER DETAIL-3, SHEET C-103.
- H. INSTALL ANGULAR RIPRAP (4" TO 6") WITHIN AREA AS SHOWN ON PLAN AND PER DETAIL—4, SHEET C—103.
- I. STABILIZE SLOPE WITH 12" TO 24" BOULDERS, EMBEDDED.
- J. CONSTRUCT 3' WIDE CONCRETE VALLEY GUTTER PER DETAIL-5, SHEET C-103.
- K. CONSTRUCT HEADER CURB PER DETAIL-6, SHEET C-103.
- L. CONSTRUCT STANDARD CURB AND GUTTER PER DETAIL-7, SHEET C-103.
- M. CONSTRUCT CONCRETE DRIVE PAD PER COA DETAIL 2426.
- N. CONSTRUCT CULVERT PER DETAIL-13, SHEET C-103.
- O. CONSTRUCT CONCRETE DRIVE PAD PER COA DETAIL 2425.
- P. CONSTRUCT NEW ASPHALT SECTION PER DETAIL-10, SHEET C-103, AND PER SOILS REPORT RECOMMENDATION.
- +5042.08 Q. CONSTRUCT RIGHT-OF-WAY SIDEWALK PER COA DETAIL 2430.
 - R. CONSTRUCT REFUSE ENCLOSURE PER DETAIL-11, SHEET C-103.
 - S. NOTE NOT USED.
 - T. CONSTRUCT KEYSTONE RETAINING WALL PER MANUFACTURER RECOMMENDATIONS.
 - U. NOTE NOT USED.
 - V. CONSTRUCT CULVERT CHANNEL (NO TOP PLATE) PER DETAIL-13, SHEET C-103.
 - W. CONSTRUCT 18 WIDE SIDEWALK CULVERT PER COA DETAIL 2236.
 - X. CONSTRUCT 12" WIDE SIDEWALK CULVERT WITH SCUPPER PER COADETAIL 2236.
 - PROVIDE UTILITY VENT PER DETAIL IN "LANDFILL GAS SURVEY" EXECUTED BY VINEYARD AND ASSOC. #011-1-078.
 - Z. CONSTRUCT CONCRETE ADA COMPLIANT RAMP AT MAX. SLOPE OF 6"H:12'V (8.33%). PROVIDE DETECTABLE WARNING PLATES (TYP.).
 - AA. INSTALL 4" PVC SEWER SERVICE AND CONNECT TO EXISTING STUB. PROVIDE PIPE BEDDING AND ADEQUATE DEPTH TO ACCOMMODATE TRAFFIC LOADING. COORDINATE WITH PIPE MANUFACTURER.
 - AB. INSTALL 6" PVC FIRELINE. PROVIDE POST INDICATOR VALVE (PIV) AT LOCATION SHOWN AND PROVIDE PIPE BEDDING AND ADEQUATE DEPTH TO ACCOMMODATE TRAFFIC LOADING. COORDINATE WITH PIPE MANUFACTURER
 - AC. INSTALL 2" WATER SERVICE IN LOCATION AS SHOWN ON PLAN.
 - AD. INSTALL GAS SERVICE. COORDINATE WITH UTILITY COMPANY.
 - AE. CONSTRUCT RETAINING WALL PER DETAIL-12, SHEET C-103.

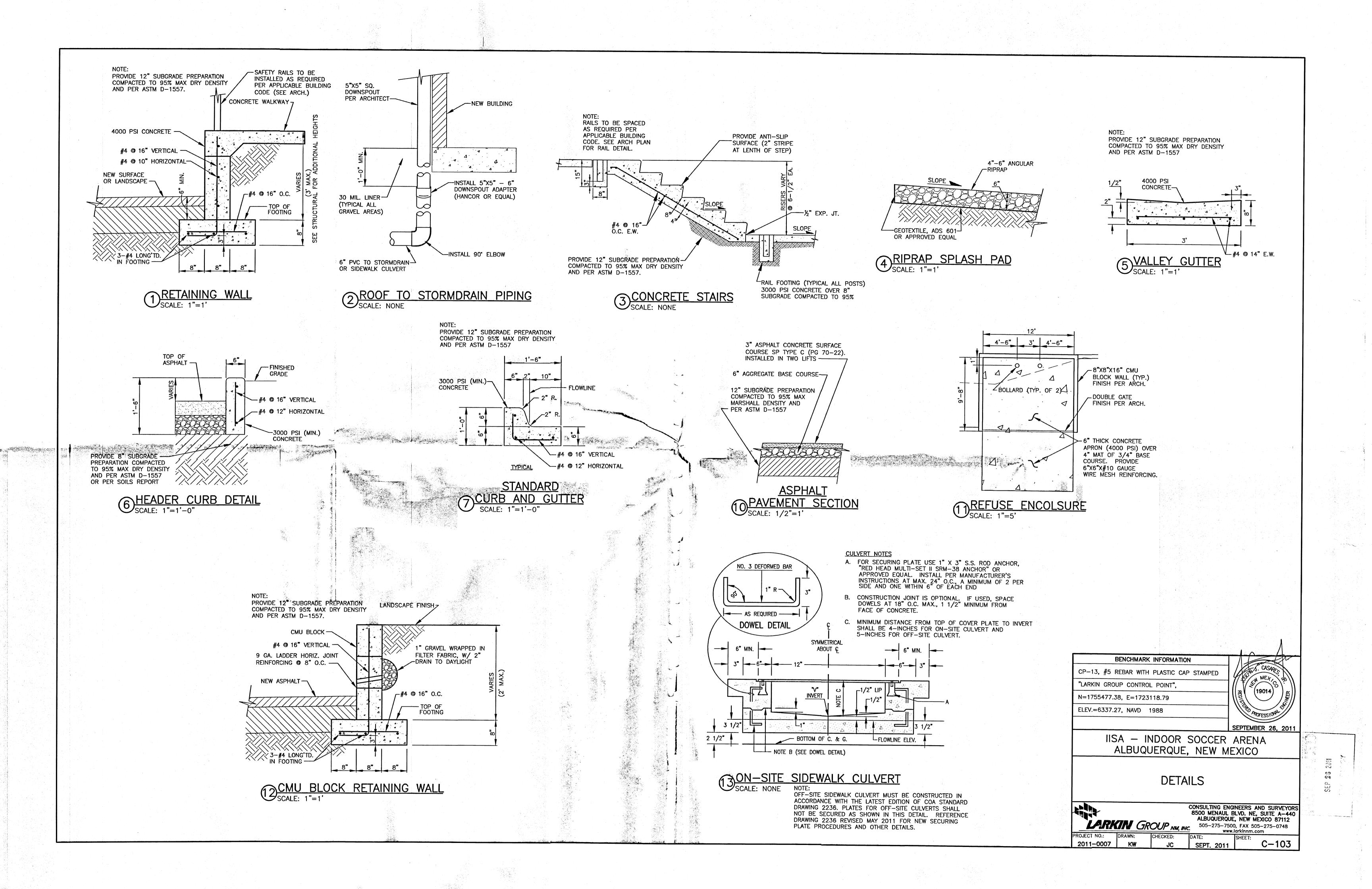
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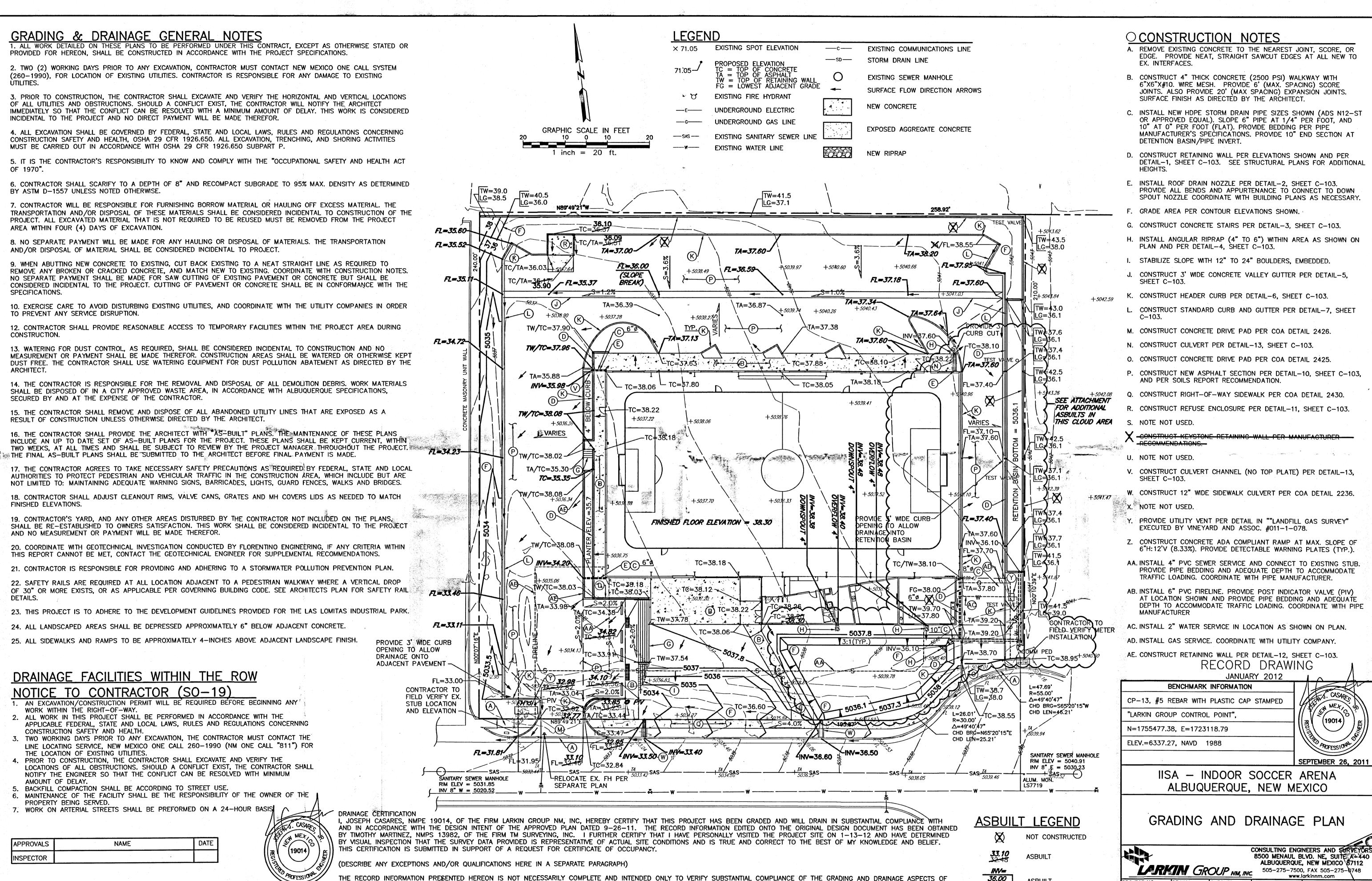
IISA - INDOOR SOCCER ARENA ALBUQUERQUE, NEW MEXICO

GRADING AND DRAINAGE PLAN









36.00

ASBUILT

2011-0007

JOSEPH CASARES, NMPE 19014

(SEAL) - SEE LEFT

1/26/12 THIS PROJECT THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

SEPT. 2011

