

CITY OF ALBUQUERQUE



April 24, 2015

Ronald Bohannon, PE
Tierra West, LLC
5571 Midway Park Place NE
Albuquerque, NM 87109

**RE: Main Event, Pan American Freeway and Vassar Drive
Grading Plan and Drainage Plan
Engineer's Stamp Date 3-27-2015 (File: G16-D149)**

Dear Mr. Bohannon:

Based upon the information provided in your submittal received 4-01-15, the above referenced Grading Plan cannot be approved for Building Permit until the following comments are addressed:

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

- 1) Show computations for the first flush on this site, and explain how it will be managed. The volume required to be retained is 0.34 inches times the impervious area.
- 2) In the "Carpenters Training Center Drainage Report" where 159.55 cfs was approved for discharge from the site that included 18.68 cfs from the Carpenter's Training Center, this amount was said to include "127.4 cfs from the existing retention pond, 13.04 cfs from I-25 and only 18.68 cfs from the Carpenter's Center". In your drainage narrative for this plan, include discussion of all on-site and off-site flows contributing to the downstream storm drain system that was constructed as part of SAD 216. Include excerpts from previous drainage reports within the next submittal including the stormcad profiles from the "Carpenters Training Center Report" (but with flows labeled on the profiles) and the original SAD 216 Map #4 and Table 1 showing the analysis points and corresponding acceptable flows for the downstream system. Also explain difference between the 159.55 cfs versus the 101 cfs originally shown for SAD 216 at Analysis Point 3 for that report. Please put discussion into a report format for this large of a site.
- 3) On the "Drainage Plan", include map of all off-site basins. Label flow on the plan view for each of the new pipes that corresponds with the "Pipe Capacity Table". Label the existing storm drains sizes discharging to the site from off-site as well as the flows that are being conveyed from off-site. Show existing 48" pipe downstream of site along with capacity and total proposed discharge from on-site.

4) Include inlet capacity calculations within next submittal and inlet details. Show grate elevations for these inlets on the "Grading Plan" which correspond to the "Drainage Plan". There are a couple of discrepancies including a difference of about one foot between grate elevations and grade elevations at the same spot including two grates along the northwest side of the site that show grate elevations of 5063.75 and 5065.50.

5) Check the middle entrance to the private drive south of the building with regard to grade elevations. A couple of new spot elevations are shown to be 3 feet off from existing spot elevations, creating a very steep drop. Include more existing spot elevations within the public and private roads surrounding the site.

6) Include detail of the 8-foot modified manhole.

7) It looks like an approximate 3:1 slope is being created between the Pan American Freeway and the retaining wall along the parking lot. Provide Section A-A symbol on the plan view. There is an elevation discrepancy where the top of wall elevation is 5079.67, and there is an existing 5084.0 spot elevation as well as a 5086.90 for the new manhole rim elevation within very short distance from the wall.

8) Call for existing 24" stub to be removed on Drainage Plan on the southwest corner of the site.

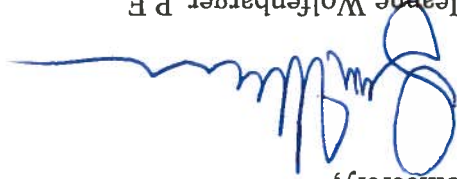
9) Specify elevations in parking lot to be at bottom of curb if this is the case.

10) Show roof downspouts on smaller building similar to what you have shown for the larger building.

11) Highlight site on overall vicinity map.

If you have any questions, you can contact me at 924-3924.

Sincerely,



Jeanne Wolfenbarger, P.E.
Senior Engineer, Planning Dept.
Development Review Services

Orig: Drainage file
c.pdf Addresssee via Email



City of Albuquerque

Planning Department

Development & Building Services Division

RAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: Main Event City Drainage #: _____

DRB#: 1006865 EPC#: _____ Work Order#: _____

Legal Description: Lots 2-A and 2-B SRCC Albuquerque Carpenters Training Center

City Address: _____

Engineering Firm: Tierra West, LLC Contact: Jonathan Niski

Address: 5571 Midway Park Place NE Albuquerque, NM 87109

Phone#: 505-858-3100 Fax#: 505-858-1118 E-mail: jniski@tierrawestllc.com

Owner: Southwest Regional Council of Carpenters Contact: _____

Address: 533 S. Fremont Avenue, 9th Floor Los Angeles, CA 90071

Phone#: 213-488-2957 Fax#: _____ E-mail: rsowell@swcarpenters.org

Architect: Hodges USA Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Surveyor: TBD Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Contractor: TBD Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
- ☒ DRAINAGE PLAN 1st SUBMITTAL
- ☐ DRAINAGE PLAN RESUBMITTAL
- ☐ CONCEPTUAL G & D PLAN
- ☒ GRADING PLAN
- ☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
- ☐ ENGINEER'S CERT (HYDROLOGY)
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ ENGINEER'S CERT (TCL)
- ☐ ENGINEER'S CERT (DRB SITE PLAN)
- ☐ ENGINEER'S CERT (ESC)
- ☐ SO-19
- ☐ OTHER (SPECIFY) _____

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

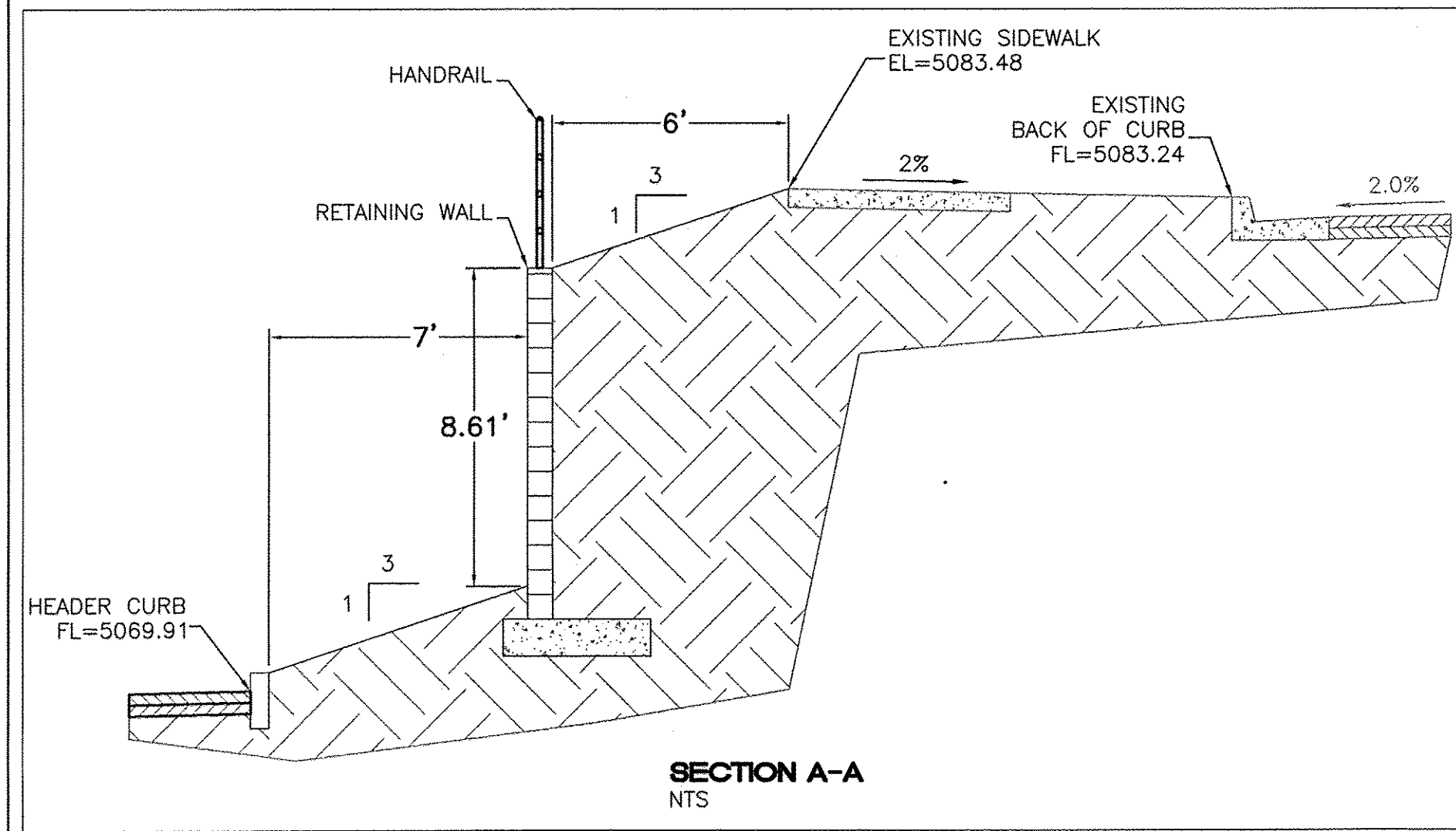
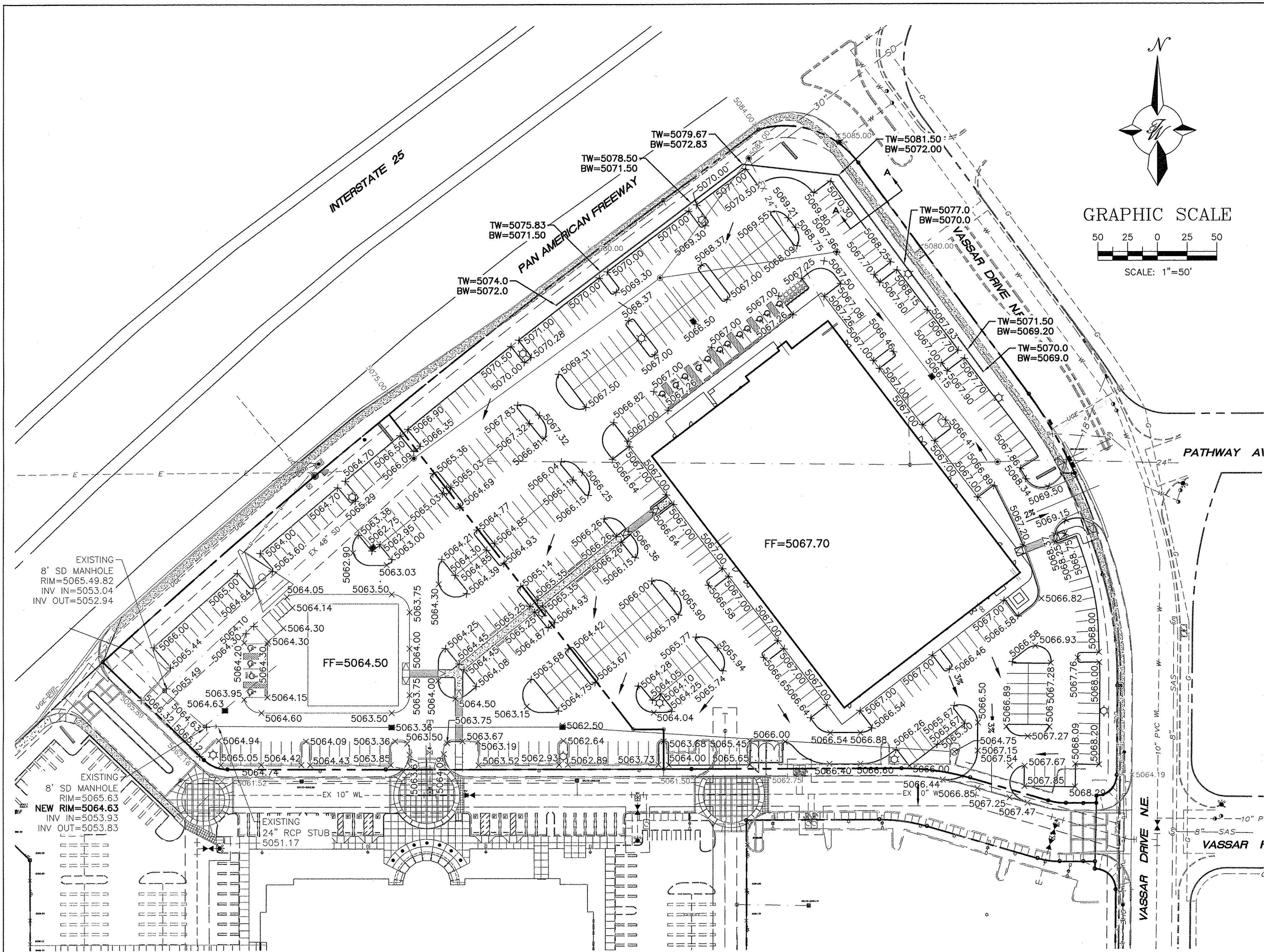
- ☐ SIA/FINANCIAL GUARANTEE RELEASE
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ S. DEV. PLAN FOR SUB'D APPROVAL
- ☐ S. DEV. FOR BLDG. PERMIT APPROVAL
- ☐ SECTOR PLAN APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ CERTIFICATE OF OCCUPANCY (PERM)
- ☐ CERTIFICATE OF OCCUPANCY (TCL TEMP)
- ☐ FOUNDATION PERMIT APPROVAL
- ☒ BUILDING PERMIT APPROVAL
- ☐ GRADING PERMIT APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ WORK ORDER APPROVAL
- ☐ GRADING CERTIFICATION
- ☐ SO-19 APPROVAL
- ☐ ESC PERMIT APPROVAL
- ☐ ESC CERT. ACCEPTANCE
- ☐ OTHER (SPECIFY) _____

WAS A PRE-DESIGN CONFERENCE ATTENDED: _____ Yes _____ No _____ Copy Provided

DATE SUBMITTED: 04/01/2015 By: Jonathan Niski

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

1. **Conceptual Grading and Drainage Plan:** 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 subdivision containing more than ten (10) lots or constituting five (5) acres or more
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development



EROSION CONTROL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL (CITY) ACCEPTANCE OF ANY PROJECT.

EXISTING SITE DRAINAGE:

THE 6.82 ACRE SITE IS LOCATED AT THE SOUTHEAST CORNER OF PAN AMERICAN FREEWAY AND VASSAR DRIVE NE. THE SITE IS BOUNDED ON THE NORTH AND WEST BY PAN AMERICAN FREEWAY, ON THE EAST BY VASSAR DRIVE NE AND ON THE SOUTH BY AN INDUSTRIAL/MANUFACTURING DEVELOPMENT.

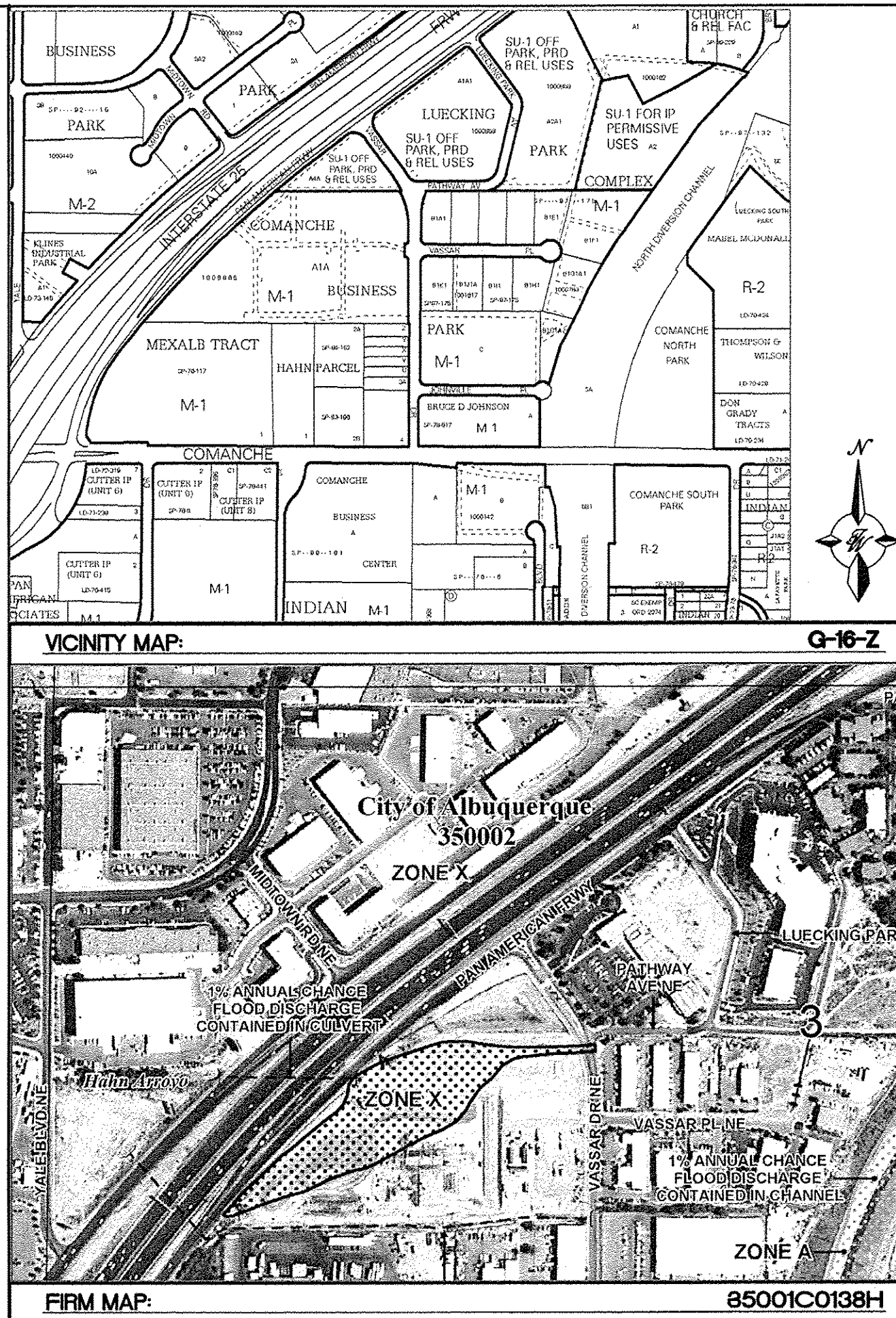
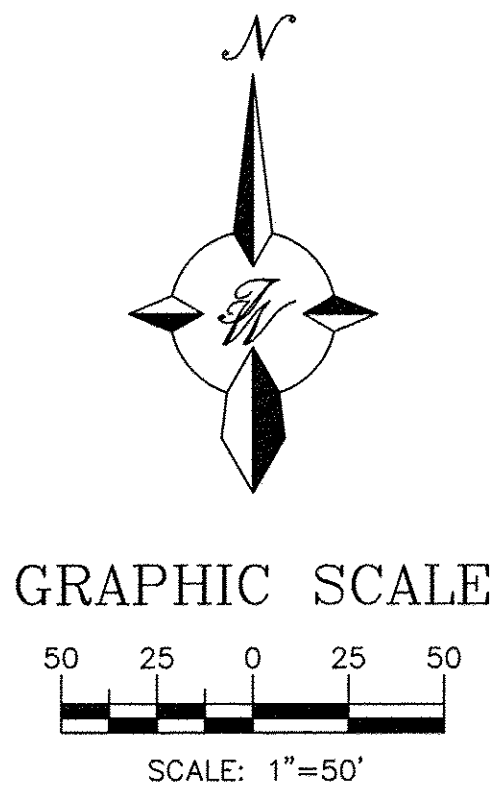
THE SITE IS CURRENTLY VACANT WITH ONE THIRD OF THE PROPERTY BEING A TEMPORARY RETENTION POND FOR THE PATHWAY OFFICE PARK (G16/D114) AND THE REMAINING TWO THIRDS DRAINING FROM EAST TO WEST TO A TEMPORARY DESILTING POND AND STORM SEWER INLET WHERE THE WATER IS THEN CONVEYED BY STORM SEWER AND OPEN CHANNEL TO THE GRIEGOS POND THAT WAS CONSTRUCTED WITH SAD 216.

THERE ARE OFF-SITE FLOWS ENTERING THE POND AS PART OF THE PATHWAY OFFICE PARK DEVELOPMENT AS WELL AS MINIMAL FLOWS FROM THE PAN AMERICAN FREEWAY. THIS SITE IS LOCATED IN A SHADED "X" ZONE AS SHOWN ON FIRM MAP #35001C0138H.

BASED ON THE APPROVED DRAINAGE REPORT FOR THE CARPENTERS TRAINING CENTER (G16/D145) THIS PROJECT MAY DISCHARGE A TOTAL OF 161 CFS WHICH TAKES INTO ACCOUNT ALL OF THE STORM WATER ENTERING THE TEMPORARY RETENTION POND.

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



PROPOSED SITE DRAINAGE:

THIS SITE WILL BE DEVELOPED WITH AN ENTERTAINMENT/RESTAURANT BUILDING ON THE PAD ALONG VASSAR DRIVE AND A FUTURE RESTAURANT PAD SITE ALONG THE PAN AMERICAN FREEWAY. THE TEMPORARY RETENTION POND WILL BE ELIMINATED AND THE EXISTING 42-INCH PUBLIC STORM SEWER WILL BE REROUTED AND CONNECTED TO AN EXISTING 48-INCH PUBLIC STORM SEWER CONSTRUCTED WITH THE CARPENTERS TRAINING CENTER DEVELOPMENT (G16/D145). THE SITE WILL UTILIZE LOW IMPACT DEVELOPMENT (LID) WHERE POSSIBLE ALLOWING SURFACE STORM WATER TO FLOW THROUGH LANDSCAPED AREAS PRIOR TO DISCHARGING TO THE STORM SEWER. THERE ARE SEVEN PROPOSED BASINS AS SHOWN ON THE PROPOSED BASIN MAP ON SHEET C8.

BASIN A CONSISTS OF THE BUILDING WITH ALL OF THE ROOF DRAINAGE FLOWING TO THE BACK OF THE BUILDING AND CONVEYED TO THE PARKING LOT VIA EXTERNAL ROOF DRAINS. THESE FLOWS ALONG WITH THE PARKING LOT FLOWS WILL DRAIN TO A LANDSCAPED PONDING AREA WITH A STAND PIPE SO THAT TRASH AND SEDIMENT CAN BE CAPTURED PRIOR TO THE STORM WATER ENTERING A STORM SEWER SYSTEM. THIS BASIN WILL GENERATE A 100-YEAR PEAK FLOW OF 8.62 CFS.

BASIN B CONSISTS OF THE SOUTHWEST PARKING LOT WHERE SURFACE STORM WATER WILL BE ROUTED THROUGH LANDSCAPING PRIOR TO DISCHARGING TO A DROP INLET AT A 100-YEAR PEAK FLOW OF 5.11 CFS.

BASIN C CONSISTS OF THE MAIN DRIVE AISLE INTO THE SITE AND PART OF THE FUTURE RESTAURANT PAD. THIS BASIN WILL GENERATE A DEVELOPED 100-YEAR PEAK FLOW OF 1.54 CFS THAT WILL DISCHARGE INTO A DROP INLET.

BASIN D CONSISTS OF A PORTION OF THE FUTURE RESTAURANT PAD AND WILL GENERATE A DEVELOPED 100-YEAR PEAK FLOW OF 1.46 CFS WHICH DISCHARGES INTO A DROP INLET.

BASIN E CONSISTS OF A PARKING LOT WHERE THE TEMPORARY RETENTION POND IS BEING RECLAIMED. AN EXISTING 42-INCH PUBLIC STORM SEWER (93.4 CFS) ENTERS THIS BASIN FROM THE WEST AND WILL BE REALIGNED TO THE NORTH TO INTERCEPT AN EXISTING 24-INCH STORM SEWER (24.5 CFS) THAT ENTERS THE SITE FROM THE NORTH. THIS BASIN WILL GENERATE A 100-YEAR PEAK FLOW OF 3.45 CFS AND DISCHARGE TO A DROP INLET CONNECTED TO THE 42-INCH STORM SEWER.

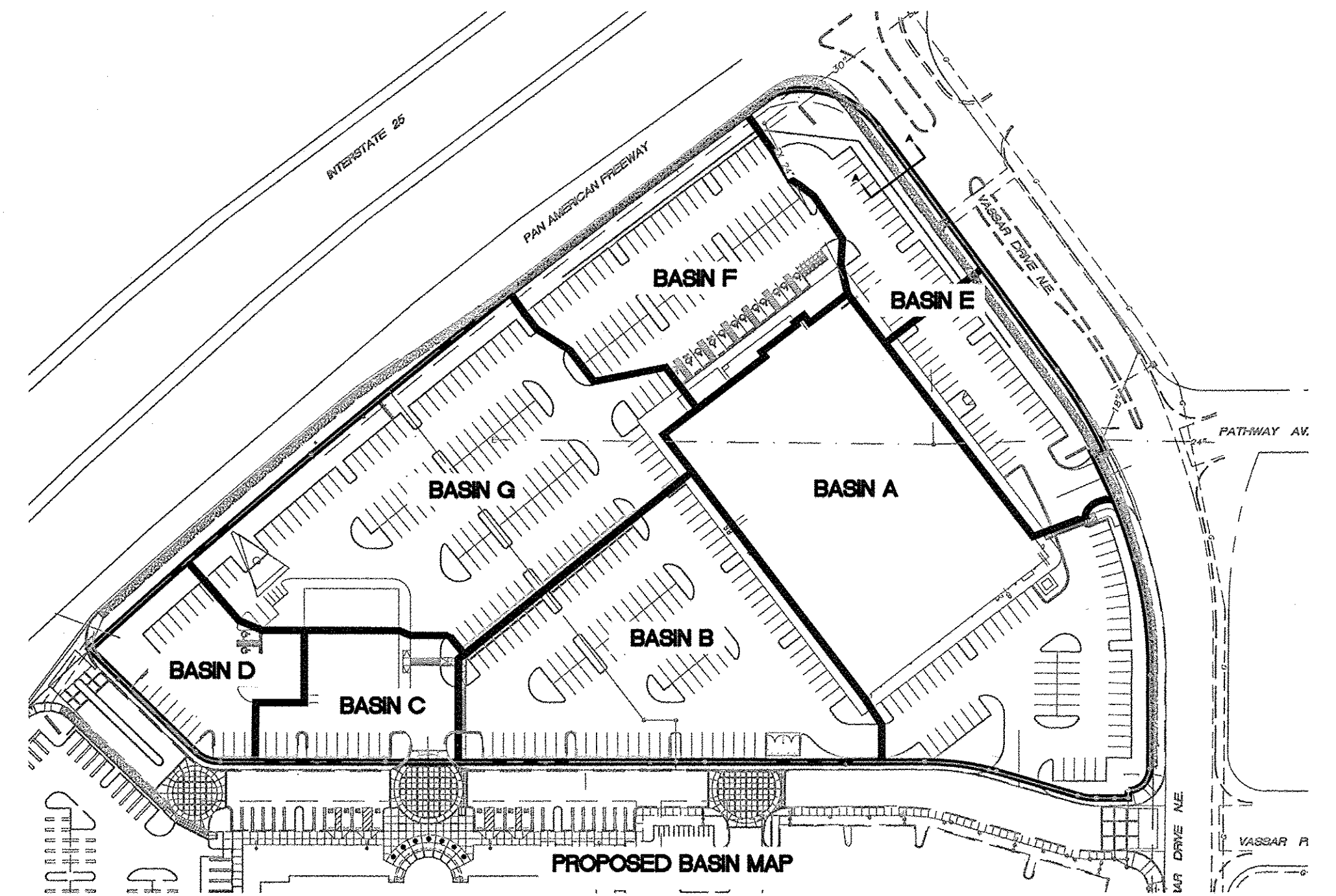
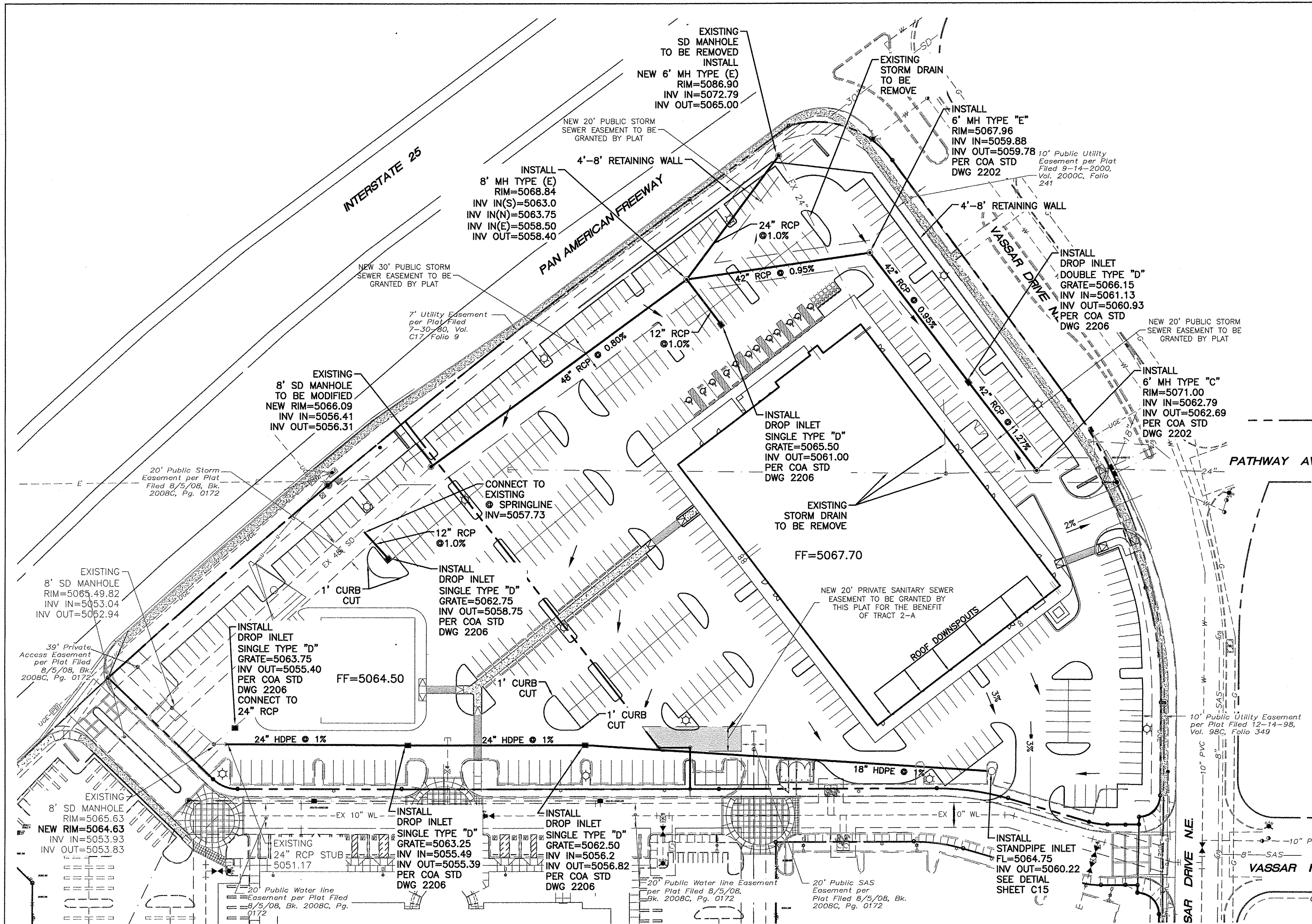
BASIN F CONSISTS OF A PARKING LOT GENERATING A 100-YEAR PEAK FLOW OF 3.44 CFS WHICH DISCHARGES TO A DROP INLET.

BASIN G CONSISTS OF A PARKING LOT AND THE REMAINING PORTION OF THE FUTURE RESTAURANT PAD. THE REALIGNED 42-INCH PUBLIC STORM SEWER WILL BE CONNECTED TO AN EXISTING 48-INCH PUBLIC STORM SEWER THAT WAS DESIGNED TO CONTAIN ALL OF THE DEVELOPED FLOW FROM THIS PROPERTY AS WELL AS FROM THE PATHWAY OFFICE PARK. THIS BASIN GENERATES A 100-YEAR PEAK FLOW OF 6.25 CFS.

ALL OF THE STORM SEWER CONSTRUCTED WITH THIS PROJECT WILL BE CONNECTED TO AN EXISTING 48-INCH STORM SEWER CONSTRUCTED WITH THE CARPENTERS TRAINING CENTER PROJECT. THE PREVIOUSLY APPROVED DRAINAGE REPORT FOR CARPENTERS CENTER ESTIMATED A TOTAL DEVELOPED DISCHARGE THROUGH THAT PIPE OF 159.55 CFS. THIS PROJECT WILL GENERATE A TOTAL DEVELOPED 100-YEAR FLOW OF 29.88 CFS AND COMBINED WITH THE 117.9 CFS FROM THE PATHWAY OFFICE PARK DEVELOPMENT WILL DISCHARGE A 100-YEAR FLOW OF 147.79 CFS WHICH IS LESS THAN THE 159.55 CFS PREVIOUSLY APPROVED.

SINCE STORM WATER IS BEING CAPTURED IN THE LANDSCAPE ISLANDS AND THE DEVELOPED FLOW FROM THIS PROJECT WAS INCLUDED IN THE DESIGN OF THE REGIONAL GRIEGOS POND CONSTRUCTED WITH SAD 216 THIS SITE MEETS THE CURRENT CITY DRAINAGE ORDINANCE.

| | | | |
|----------------------------------|-------------------------------|--|-------------|
| | MAIN EVENT | | DRAWN BY |
| | PAN AM FREEWAY AND VASSAR AV. | | BJF |
| | GRADING PLAN | | DATE |
| | | | 02/26/15 |
| | | | 2015015_GRB |
| | | | SHEET # |
| | | | C5 |
| | | | JOB # |
| RONALD R. BOHANNAN P.E. #7868 | | | 2015015 |
| | | | |
| | | | |
| | | | |



Pipe Capacity

| Pipe | D (in) | Slope (%) | Area (ft ²) | R | Q Provided (cfs) | Q Required (cfs) | Velocity (ft/s) |
|------|--------|-----------|-------------------------|-------|------------------|------------------|-----------------|
| 1 | 42 | 1.27 | 9.62 | 0.875 | 113.69 | 93.40 | 9.71 |
| 2 | 42 | 0.95 | 9.62 | 0.875 | 98.33 | 96.87 | 10.07 |
| 3 | 42 | 0.95 | 9.62 | 0.875 | 98.33 | 96.87 | 10.07 |
| 4 | 24 | 1.25 | 3.14 | 0.500 | 25.36 | 24.50 | 7.80 |
| 5 | 12 | 1.00 | 0.79 | 0.250 | 3.57 | 3.44 | 4.38 |
| 6 | 48 | 0.80 | 12.57 | 1.000 | 128.82 | 124.81 | 9.93 |
| 7 | 48 | 1.17 | 12.57 | 1.000 | 155.79 | 124.81 | 9.93 |
| 8 | 12 | 3.40 | 0.79 | 0.250 | 6.59 | 6.25 | 7.96 |
| 9 | 48 | 1.17 | 12.57 | 1.000 | 155.79 | 131.06 | 10.43 |
| 10 | 18 | 1.00 | 1.77 | 0.375 | 10.53 | 8.62 | 4.88 |
| 11 | 24 | 1.00 | 3.14 | 0.500 | 22.68 | 13.73 | 4.37 |
| 12 | 24 | 1.00 | 3.14 | 0.500 | 22.68 | 15.27 | 4.86 |
| 13 | 24 | 6.97 | 3.14 | 0.500 | 59.89 | 1.46 | 0.46 |
| 14 | 24 | 1.98 | 3.14 | 0.500 | 31.92 | 16.73 | 5.33 |
| 15 | 48 | 2.65 | 12.57 | 1.000 | 234.46 | 147.79 | 11.76 |

Manning's Equation:
 $Q = 1.49/n \cdot A \cdot R^{2/3} \cdot S^{1/2}$

A = Area
R = D/4
S = Slope
n = 0.013

- LEGEND**
- CURB & GUTTER
 - BOUNDARY LINE
 - EASEMENT
 - CENTERLINE
 - RIGHT-OF-WAY
 - BUILDING
 - SIDEWALK
 - RETAINING WALL
 - FLOW ARROW
 - EXISTING CURB & GUTTER
 - EXISTING BOUNDARY LINE

Weighted E Method

On-Site Basins

| Basin | Area (sf) | Area (acres) | Treatment A % | Treatment B % | Treatment C % | Treatment D % | Weighted E (ac-ft) | Volume (ac-ft) | Flow cfs | Weighted E (ac-ft) | Volume (ac-ft) | Flow cfs |
|-------|-----------|--------------|---------------|---------------|---------------|---------------|--------------------|----------------|----------|--------------------|----------------|----------|
| A | 83,352 | 1.91 | 0% | 8% | 0.15 | 0% | 92% | 1.76 | 2.013 | 0.321 | 8.62 | 1.255 |
| B | 49,888 | 1.15 | 0% | 10% | 0.11 | 0% | 90% | 1.03 | 1.986 | 0.190 | 5.11 | 1.234 |
| C | 14,756 | 0.34 | 0% | 6% | 0.02 | 0% | 94% | 0.32 | 2.040 | 0.058 | 1.54 | 1.276 |
| D | 15,034 | 0.35 | 0% | 19% | 0.07 | 0% | 81% | 0.28 | 1.865 | 0.054 | 1.46 | 1.139 |
| E | 36,072 | 0.83 | 0% | 22% | 0.18 | 0% | 78% | 0.65 | 1.825 | 0.126 | 3.45 | 1.107 |
| F | 34,539 | 0.79 | 0% | 15% | 0.12 | 0% | 85% | 0.67 | 1.919 | 0.127 | 3.44 | 1.181 |
| G | 63,131 | 1.45 | 0% | 16% | 0.23 | 0% | 84% | 1.22 | 1.906 | 0.230 | 6.25 | 1.170 |
| | | | | | | | | | | 29.88 | 0.141 | 4.04 |

Equations:

Weighted E = $E_a \cdot A_a + E_b \cdot A_b + E_c \cdot A_c + E_d \cdot A_d$ / (Total Area)

Volume = Weighted D * Total Area

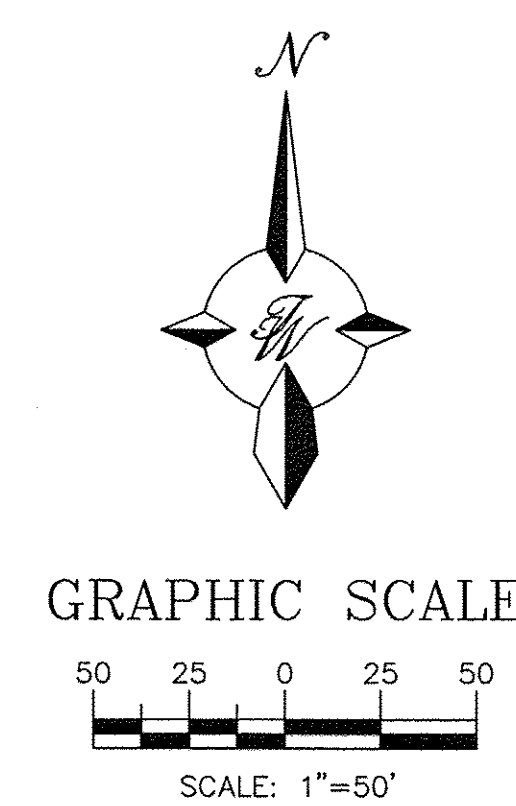
Flow = $Q_a \cdot A_a + Q_b \cdot A_b + Q_c \cdot A_c + Q_d \cdot A_d$

| Excess Precipitation, E (inches) | Zone 2 | 100-Year | 10-Year |
|----------------------------------|--------|----------|---------|
| E _a | 0.53 | 0.13 | |
| E _b | 0.78 | 0.28 | |
| E _c | 1.13 | 0.52 | |
| E _d | 2.12 | 1.34 | |

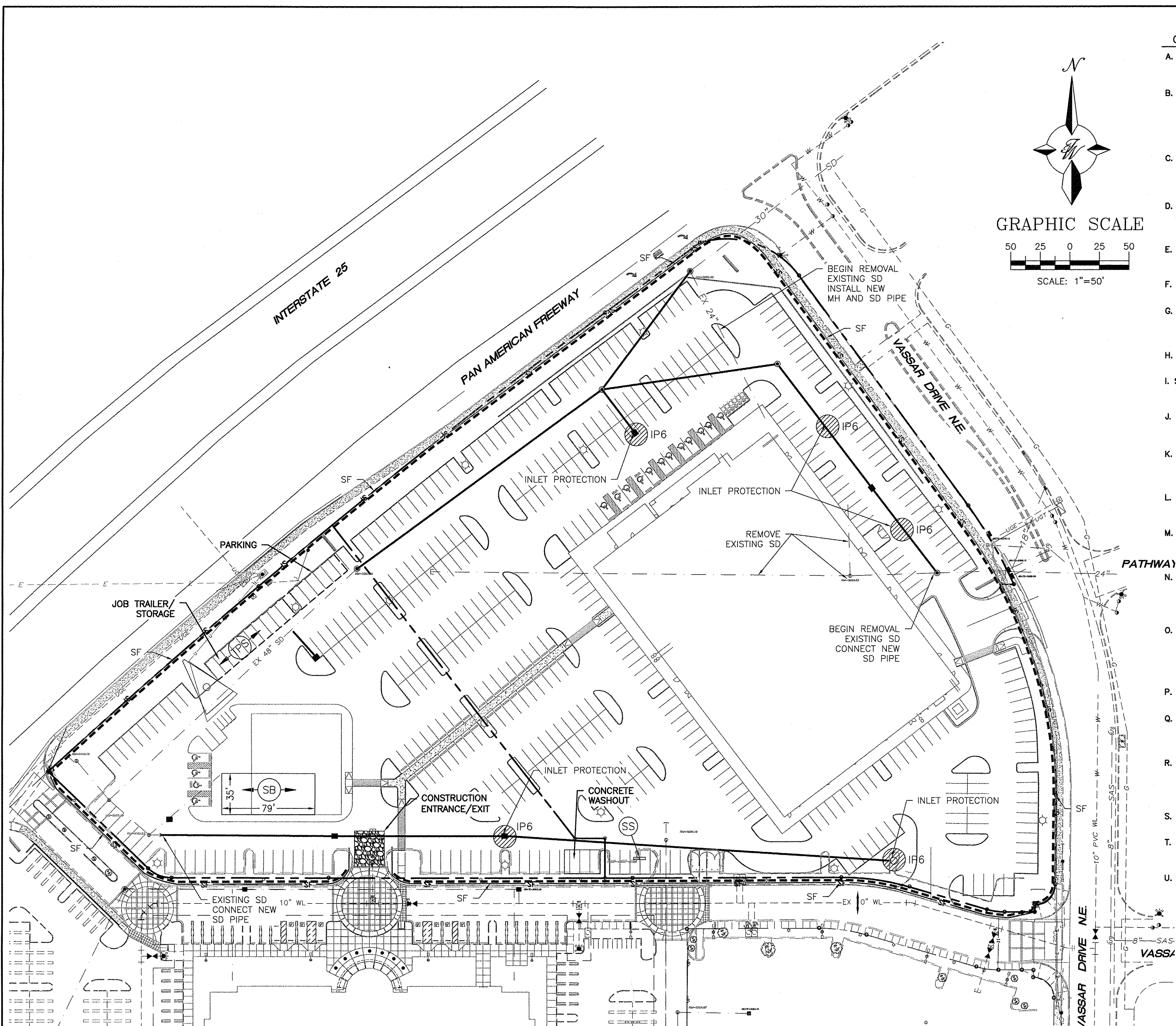
| Peak Discharge (cfs/acre) | Zone 2 | 100-Year | 10-Year |
|---------------------------|--------|----------|---------|
| Q _a | 1.56 | 0.38 | |
| Q _b | 2.28 | 0.95 | |
| Q _c | 3.14 | 1.71 | |
| Q _d | 4.70 | 3.14 | |

CAUTION:
ALL EXISTING UTILITIES SHOWN WERE OBTAINED FROM RESEARCH, AS-BUILTS, SURVEYS OR INFORMATION PROVIDED BY OTHERS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO AND INCLUDING ANY EXCAVATION, TO DETERMINE THE ACTUAL LOCATION OF UTILITIES AND OTHER IMPROVEMENTS, PRIOR TO STARTING THE WORK. ANY CHANGES FROM THIS PLAN SHALL BE COORDINATED WITH AND APPROVED BY THE ENGINEER.

- EROSION CONTROL NOTES:**
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
 - CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
 - CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
 - REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
 - ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL (CITY) ACCEPTANCE OF ANY PROJECT.



| | | |
|--|--|------------------|
| ENGINEER'S SEAL RONALD R. BOHANNON P.E. #7868 | MAIN EVENT PAN AM FREEWAY AND VASSAR AV. | DRAWN BY BJF |
| | DRAINAGE PLAN | DATE 02/26/15 |
| TIERRA WEST, LLC 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NM 87109 (505) 858-3100 www.tierrawestllc.com | SHEET # C6 | JOB # 2015015 |



GENERAL EROSION NOTES

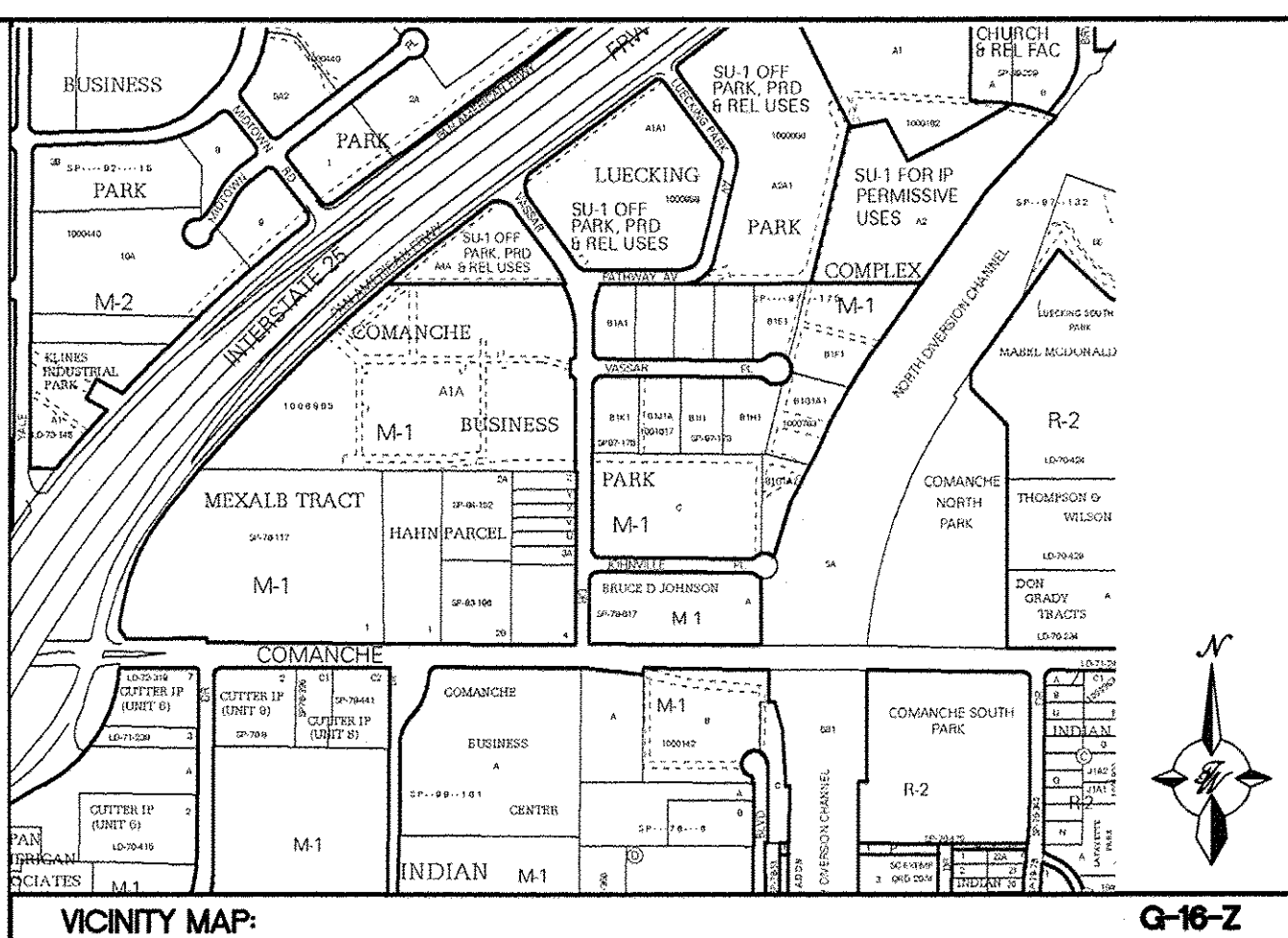
- THE STORMWATER POLLUTION PREVENTION PLAN IS COMPRISED OF THIS DRAWING ("SITE MAP"), THE STANDARD DETAILS, THE PLAN NARRATIVE, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
- ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF NEW MEXICO NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.
- CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
- BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
- SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS, PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.
- CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
- GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
- ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
- SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLotation BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
- DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
- RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
- ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.
- DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 21 DAYS, SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. PROVIDE ADEQUATE TEMPORARY IRRIGATION FOR GERMINATION.
- DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.
- IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEY MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.
- ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
- CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
- ON-SITE & OFFSITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
- SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
- DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO PREVENT EROSION.
- ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

SEQUENCE OF CONSTRUCTION

- INSTALL STABILIZED CONSTRUCTION ENTRANCES.
- CONSTRUCT THE SILT FENCES ON THE SITE.
- PREPARE TEMPORARY PARKING AND STORAGE AREA.
- CONSTRUCT THE SEDIMENTATION AND SEDIMENT TRAP BASINS.
- CLEAR AND GRUB THE SITE.
- UNDERCUT GRADE AS REQUIRED.
- START CONSTRUCTION OF BUILDING PAD AND STRUCTURES.
- FINISH GRADING THE SITE. RAISE GRADES TO INDUCE DRAINAGE TOWARD TEMPORARY SEDIMENT BASINS.
- PROTECT LANDSCAPE DRAINS FROM SEDIMENT AFTER INSTALLATION.
- STABILIZE GRADED AREAS UPON COMPLETION.

CAUTION:

ALL EXISTING UTILITIES SHOWN WERE OBTAINED FROM RESEARCH, AS-BUILTS, SURVEYS OR INFORMATION PROVIDED BY OTHERS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO AND INCLUDING ANY EXCAVATION, TO DETERMINE THE ACTUAL LOCATION OF UTILITIES AND OTHER IMPROVEMENTS, PRIOR TO STARTING THE WORK. ANY CHANGES FROM THIS PLAN SHALL BE COORDINATED WITH AND APPROVED BY THE ENGINEER.



LEGEND

- BOUNDARY LINE
- RIGHT OF WAY LINE
- LIMITS OF DISTURBANCE
- STORM DRAIN
- SILT DIKE DIVERSION

EROSION DETAILS

- CE TEMPORARY STONE CONSTRUCTION EXIT
- SF TEMPORARY SILT FENCE
- IP1 BLOCK AND AGGREGATE INLET SEDIMENT FILTER
- SB TEMPORARY SEDIMENT BASIN

EROSION NOTES

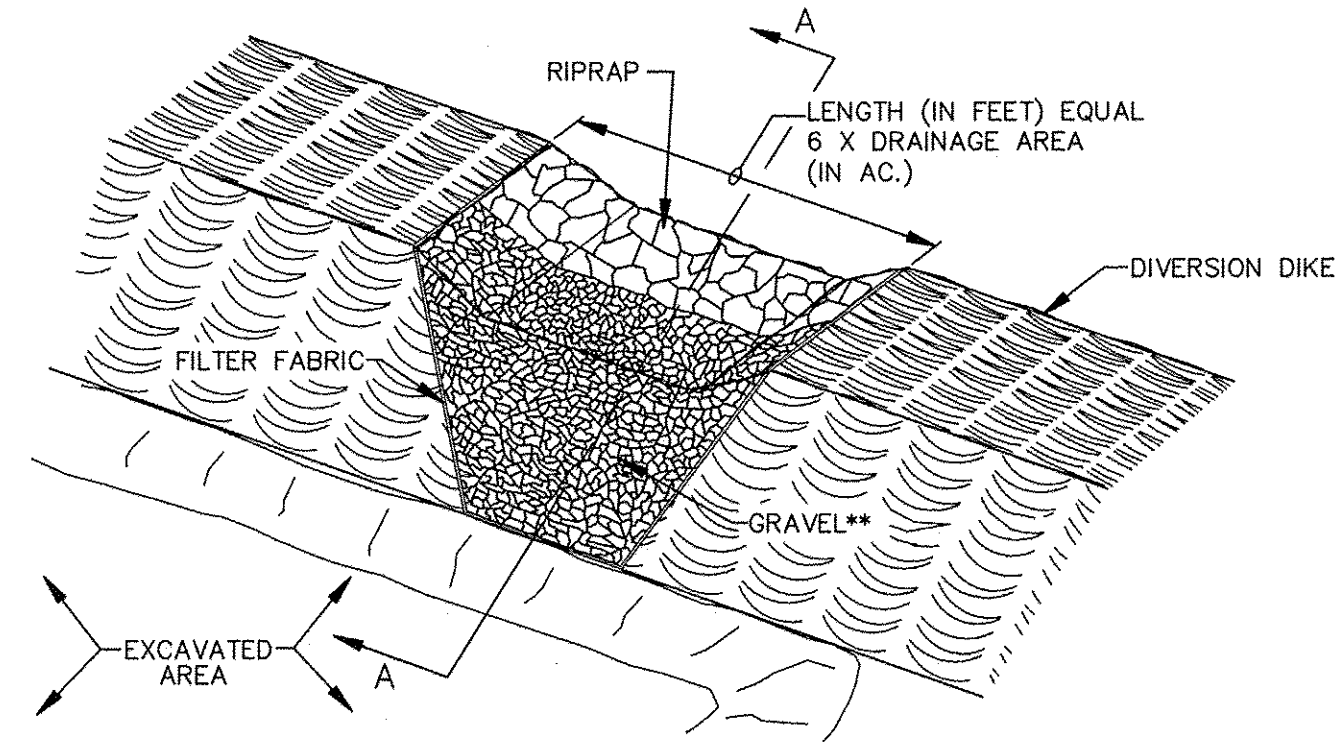
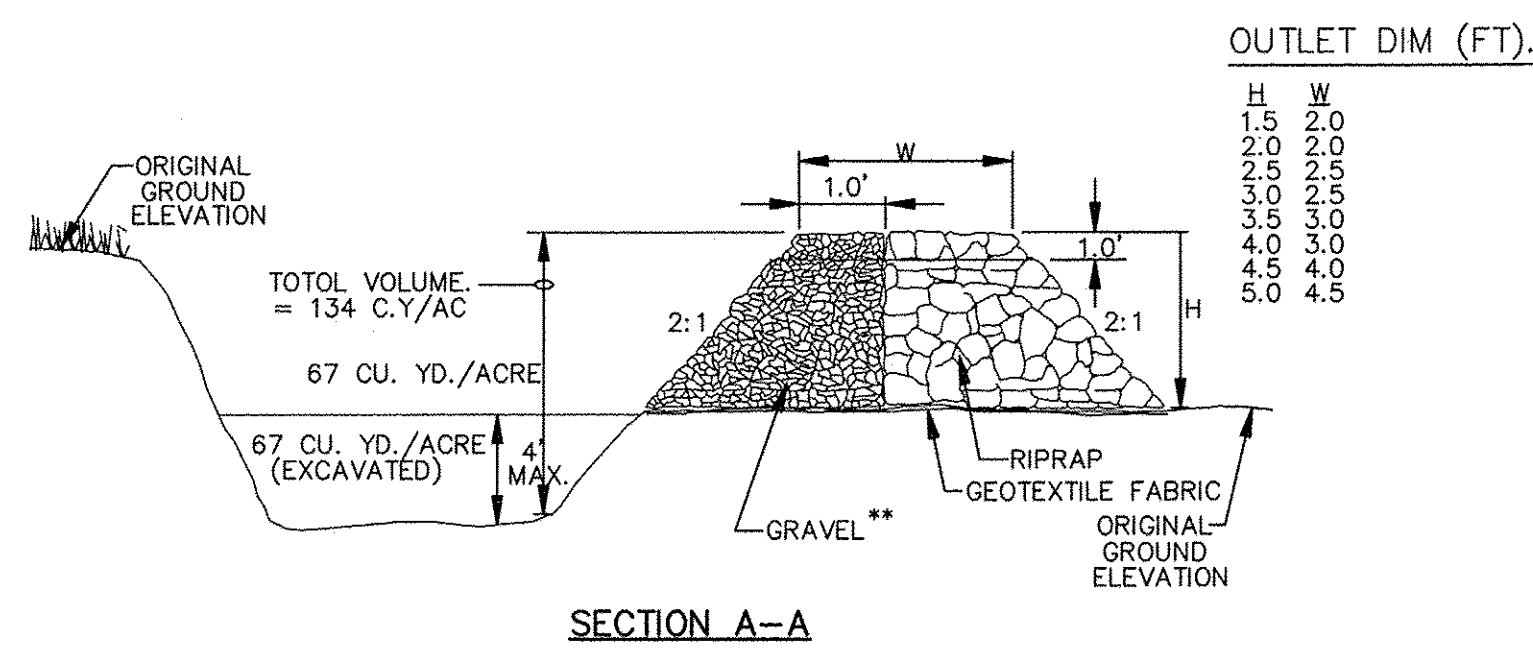
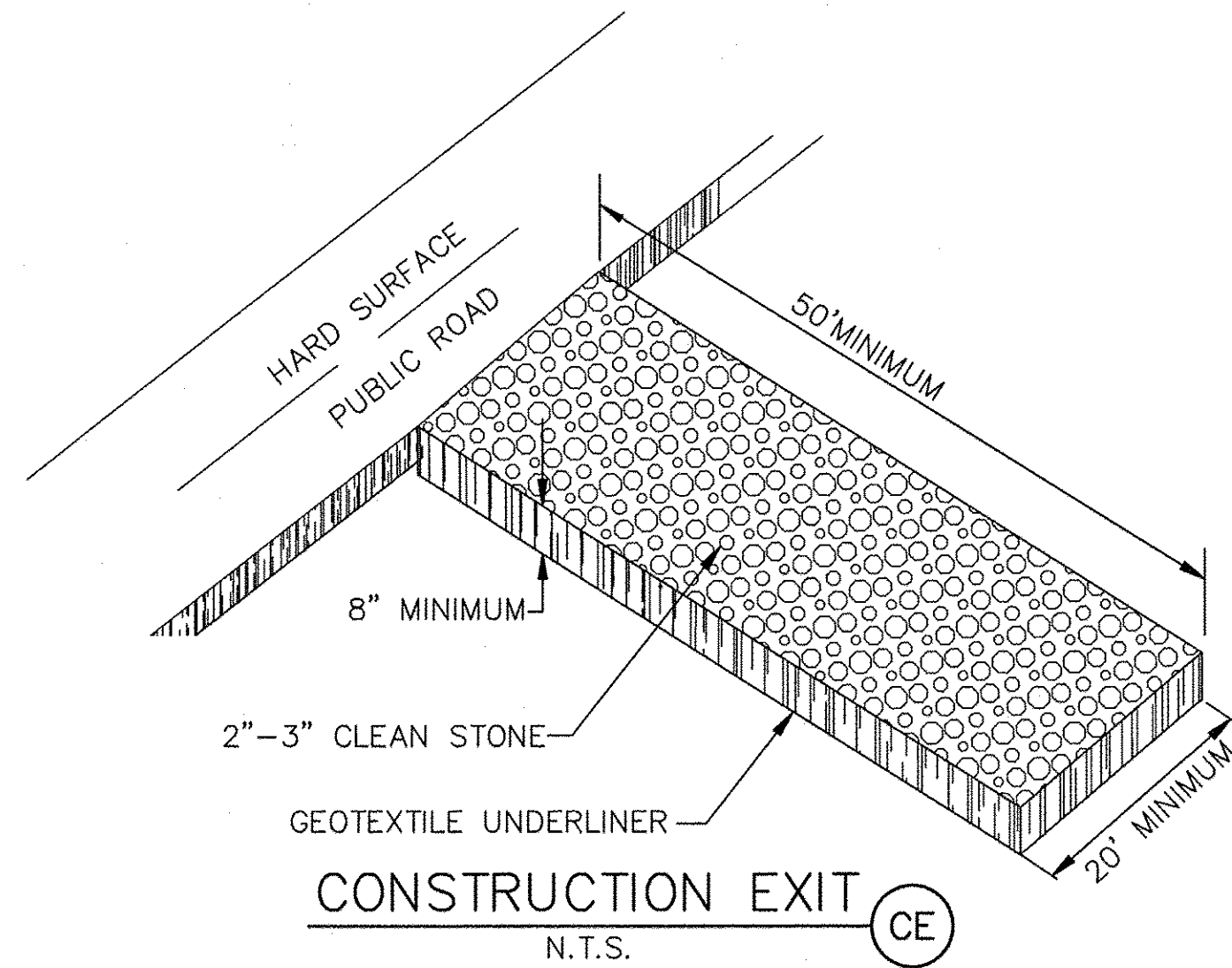
- TPS TEMPORARY PARKING AND STORAGE
- SS SWPPP INFORMATION SIGN
- SD SILT DIKE DIVERSION

MAINTENANCE

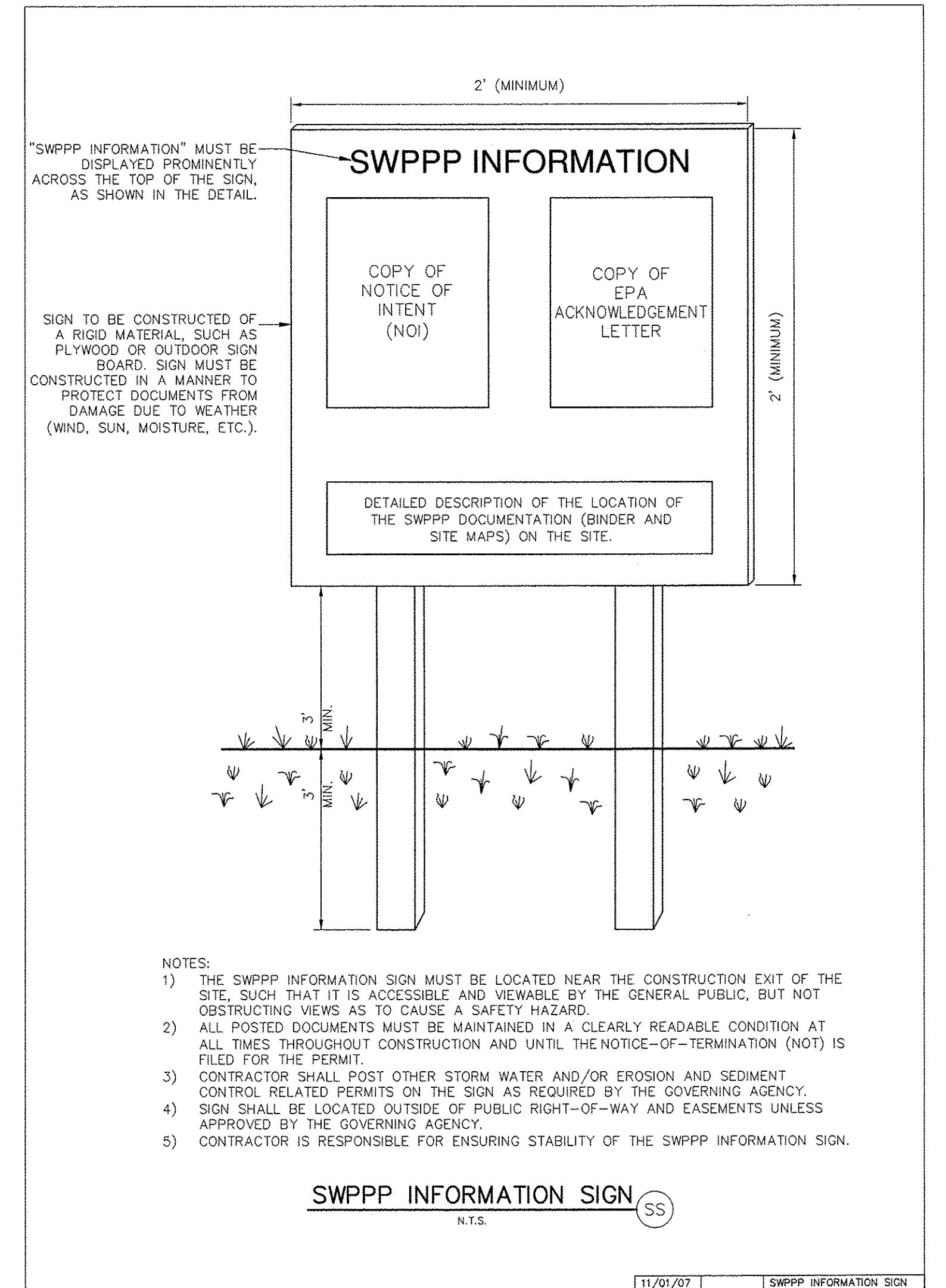
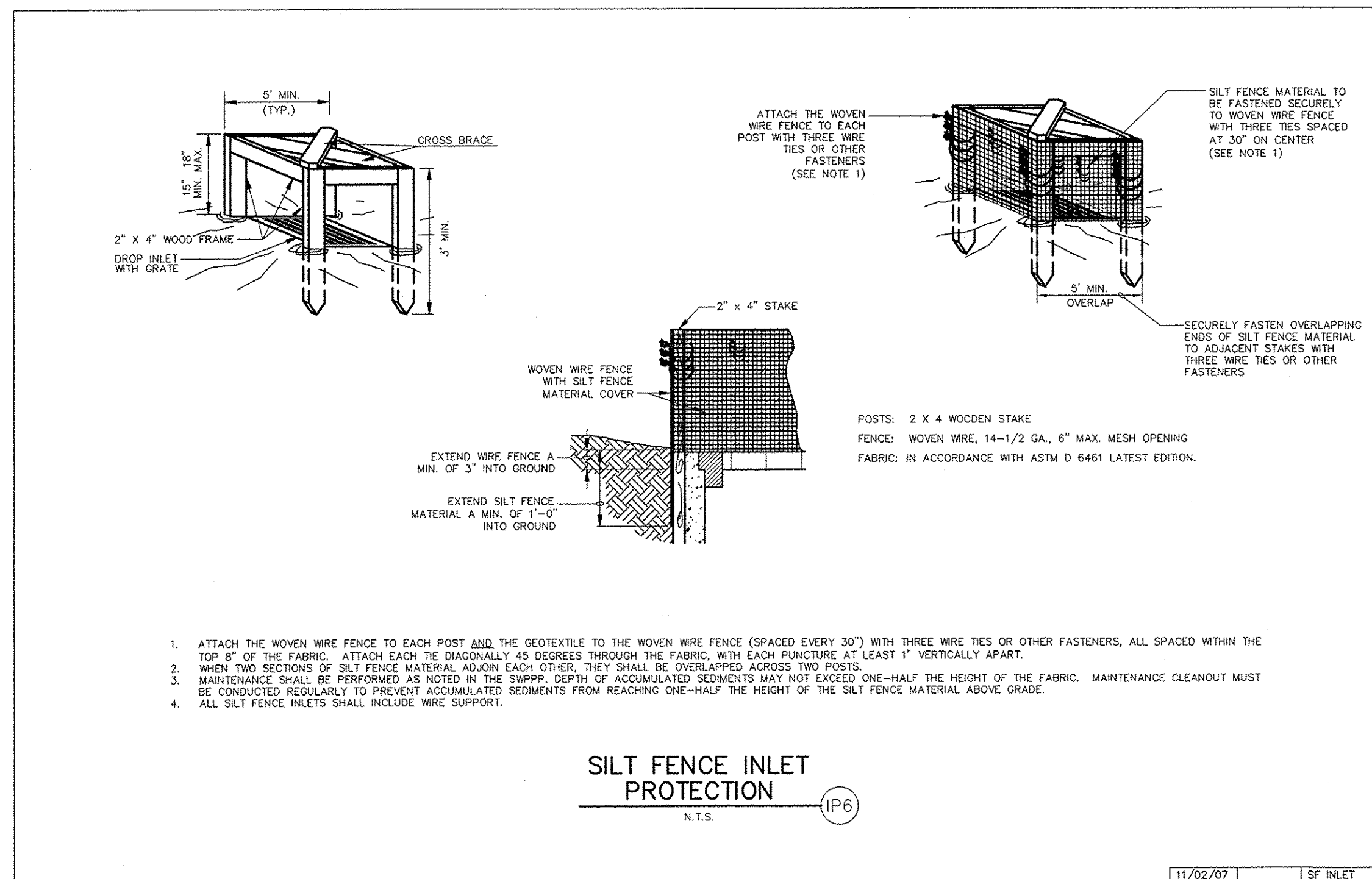
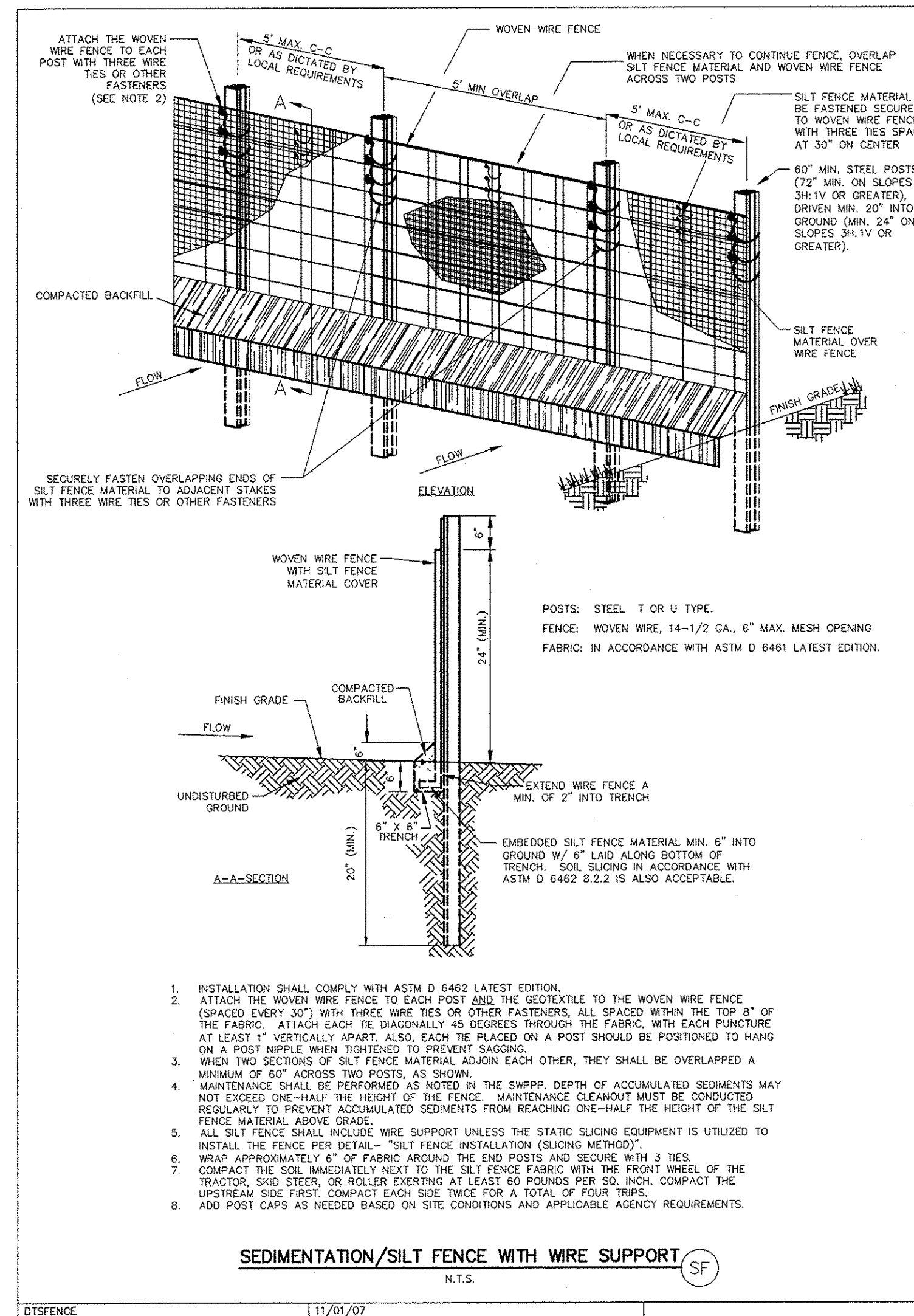
ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A 0.5" RAINFALL EVENT, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

- INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
- ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
- SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
- THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
- THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.
- OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50%.

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|---|-------------------------------|------------------|
|  JOEL D. HERNANDEZ P.E. #17893 | MAIN EVENT | DRAWN BY BJF |
| | PAN AM FREEWAY AND VASSAR AV. | DATE 03/23/15 |
| SEDIMENTATION AND EROSION CONTROL PLAN | 2015015-SWPPP | SHEET # EC-1 |
| TERRA WEST, LLC 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NM 87109 (505) 858-3100 www.tierawestllc.com | JOB # 2015015 | |



OUTLET (PERSPECTIVE)
TEMPORARY SEDIMENT TRAP
N.T.S. ST



| | | |
|--|--|------------------------|
| ENGINEER'S SEAL RONALD R. BOHANNAN P.E. #7868 | MAIN EVENT PAN AM FREEWAY AND VASSAR AV. | DRAWN BY BJF |
| | SEDIMENTATION AND EROSION CONTROL PLAN | DATE 03/23/15 |
| TIERRA WEST, LLC 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NM 87109 (505) 858-3100 www.tierrowestllc.com | 2015015-SWPPP | SHEET # EC-2 |
| | 2015015 | JOB # 2015015 |