12G

Fort Bend County
Engineering Department
301 Jackson Suite 401
Richmond, Texas 77469
281.633.7500
Permits@fortbendcountytx.gov

REVIEW BY FORT BEND COUNTY COMMISSIONERS COURT

☐ **Right of Way Permit**

☒ **Commercial Driveway Permit**

Permit No: 2017-12467

Applicant: **DL Meacham, LP**

Job Location Site: **8522 Vista Hills Drive, Richmond, TX 77407**

Bond No. [redacted] **Date of Bond:** **3/24/2017** **Amount:** **$50,000.00**

The above applicant came to make use of certain Fort Bend County property subject to, "The Order Regulating the Laying, Construction, Maintenance, and Repair of Buried Cables, Conduits, and Pole Lines, In, Under, Across or Along Roads, Streets, Highways, and Drainage Ditches in Fort Bend County, Texas, Under the Jurisdiction of the Commissioners Court of Fort Bend County, Texas," as passed by the Commissioners Court of Fort Bend County, Texas, of the Minutes of the Commissioners Court of Fort Bend County, Texas, to the extent that such order is not inconsistant with Chapter 181, Vernon's Texas Statutes and Codes Annoted.

Notes:

1. Evidence of review by the Commissioners Court must be kept on the job site and failure to do so constitutes grounds for job shutdown.
2. Written notices are required:
   a. 48 hours in advance of construction start up, and
   b. When construction is completed and ready for final inspection, submit notification to Permit Administrator thru MyGovernmentOnline.org portal.
3. This permit expires one (1) year from date of permit if construction has not commenced.

On this 4th day of April, 2017, Upon Motion of Commissioner Meyers, seconded by Commissioner Morales, duly put and carried, it is ORDERED, ADJUDGED AND DECREED that said notice of said above purpose is hereby acknowledged by the Commissioners Court of Fort Bend County, Texas, and that said notice be placed on record according to the regulation order thereof.

Signature

By: Charly O. Al
for County Engineer

By: N/A
Drainage District Engineer/Manager

Presented to Commissioners Court and approved.

Date Recorded 4-18-17 Comm. Court No. 12G

Clerk of Commissioners Court

By: Rhonda Wilkes
Deputy

Fort Bend County
Engineering Department
301 Jackson Suite 401
Richmond, Texas 77469
281.633.7500
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PERMIT APPLICATION REVIEW FORM FOR CABLE, CONDUIT, AND POLE LINE ACTIVITY IN FORT BEND COUNTY

☐ **Right of Way Permit**

☒ **Commercial Driveway Permit**

Permit No: 2017-12467

The following "Notice of Proposed Cable, Conduit, and/or Pole Line activity in Fort Bend County" and accompanying attachments have been reviewed and the notice conforms to appropriate regulations set by Commissioner's Court of Fort Bend County, Texas.

(1) COMPLETE APPLICATION FORM:

- [X] a. Name of road, street, and/or drainage ditch affected.
- [X] b. Vicinity map showing course of directions
- [X] c. Plans and specifications

(2) BOND:

- [ ] County Attorney, approval when applicable.
- [X] Perpetual bond currently posted. Bond No: [redacted] Amount: $50,000.00
- [ ] Performance bond submitted. Bond No: Amount:
- [ ] Cashier's Check Check No: Amount:

(3) DRAINAGE DISTRICT APPROVAL (WHEN APPLICABLE):

Drainage District Approval

Date

We have reviewed this project and agree it meets minimum requirements.

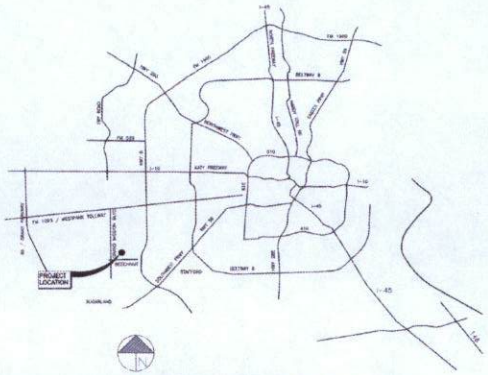
Charles O. Al

Permit Administrator

3/28/17

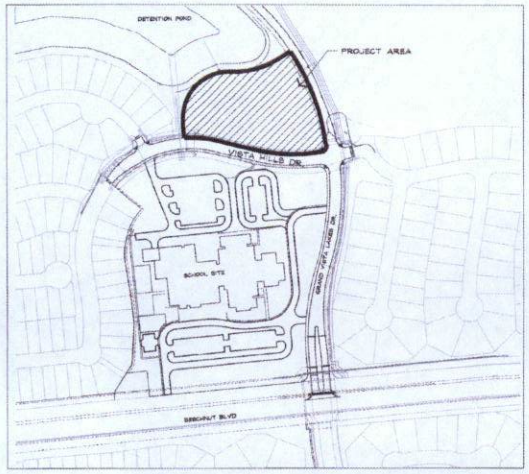
Date

GRAND VISTA
North Recreation Center
FORT BEND COUNTY, TEXAS



Key Map 526 Q,R - Zip Code 77407

LOCATION MAP



SITE REFERENCE MAP

a project developed for

Taylor Morrison

by

KGA DEFOREST.DESIGN, LLC
LANDSCAPE ARCHITECTURE
23801 Cinco Ranch Blvd. Suite A-250 Katy Texas 77494
Phone 281.646.1602 281.646.1641 Fax

ALJ Lindsey

STATE OF TEXAS
A. LESTER JONES
102152
LICENSED
PROFESSIONAL ENGINEER
1/11/17

FORT BEND COUNTY ENGINEER

ENGINEER: Paul J. Stigl, PE PTOE for Richard W. Stolzer, P.E.

DATE: 2/17/17

THESE SIGNATURES ARE VOID IF CONSTRUCTION HAS NOT COMMENCED IN (1) YEAR FROM DATE OF APPROVAL.

APPROVED: Casandra Lee for Development Coordination

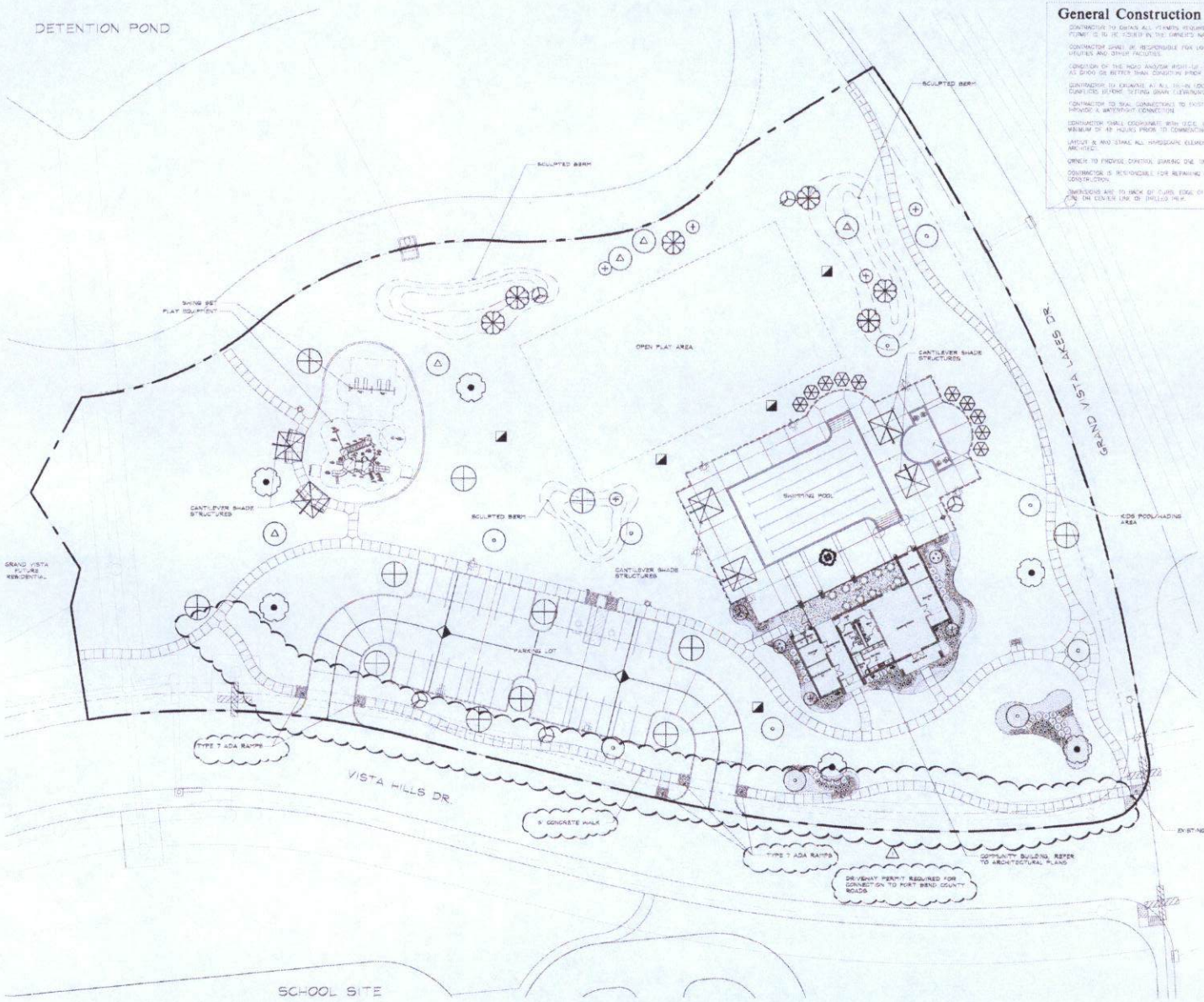
DATE: 3.10.17

Issued for Construction: October 21, 2016

Sheet No.	Description	Sheet No.	Description	Sheet No.	Description
R-1	Overall Reference Plan	LG-1	Grading Plan	LF-1	Pool Area Fencing Plan
LC-1	Overall Layout Plan	C0.1	General Notes (Civil)	LIR-1	Irrigation Plan
LC-2	Pool and Parking Lot Layout Plan	C1.0	Utility Plan	LIR-2	Irrigation Details and Notes
LC-3	Sidewalk Layout Plan	C2.0	Drainage Boundaries	LP-1	Planting Plan
LC-4	Playground Layout Plan	C3.0	Erosion Control Plan	LP-2	Building Planting Plan, Notes & Details
LC-5	Construction Notes & Detail	C4.0	Construction Details (1 of 2)		
LC-6	Construction Notes & Detail	C4.1	Construction Details (2 of 2)		
LC-7	Construction Notes & Detail				

TRAFFIC CONTROL SHALL BE IMPLEMENTED BY THE CONTRACTOR PRIOR TO INSTALLING DRIVEWAYS. TXDOT STANDARDS SHALL BE ADHERED TO.

245-16-58 Grand Vista North Recreation Center



General Construction Notes:

CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED PRIOR TO STARTING CONSTRUCTION. THE PERMIT IS TO BE ISSUED IN THE OWNER'S NAME.

CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES AND SITIUP FACILITIES.

CONDITION OF THE ROAD AND/OR RIGHT-OF-WAY, UPON COMPLETION OF JOB, SHALL BE AS GOOD OR BETTER THAN CONDITION PRIOR TO STARTING WORK.

CONTRACTOR TO EXCAVATE AT ALL TIE-IN LOCATIONS TO CONFIRM ANY POTENTIAL CONFLICTS BEFORE SITING SWAN LEWIS/NOV.

CONTRACTOR TO SEAL CONNECTIONS TO EXISTING INLETS WITH NON-SHRINK GROUT TO PROVIDE A WATERTIGHT CONNECTION.

CONTRACTOR SHALL COORDINATE WITH TXCS (713/223-4567) FOR UTILITY LOCATIONS A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK.

LAYOUT & AND STAKE ALL HARDSCAPE ELEMENTS FOR APPROVAL BY LANDSCAPE ARCHITECT.

OWNER TO PROVIDE CONTROL STAKING ONE TIME FOR CONTRACTOR.

CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL EXISTING GRADES DAMAGED DURING CONSTRUCTION.

DIMENSIONS ARE TO BACK OF CURB, EDGE OF PAVEMENT, CENTER LINE OF WALK, LOT LINE, ON CENTER LINE OF TRELLIS, ETC.

QA FOREST DESIGN, L.L.C.
LANDSCAPE ARCHITECTURE
[illegible] Street Hawes Bldg., Suite A-[illegible]
Katy, Texas 77494
281-646-1002 281-646-1041
Phone Fax

10/21/2016

"For regulatory approval, permitting or construction."

Grand Vista
North Recreation Center
Taylor Morrison
Fort Bend County, Texas

APPROVED: [illegible]
DATE: 2/10/17

PROJECT AREA

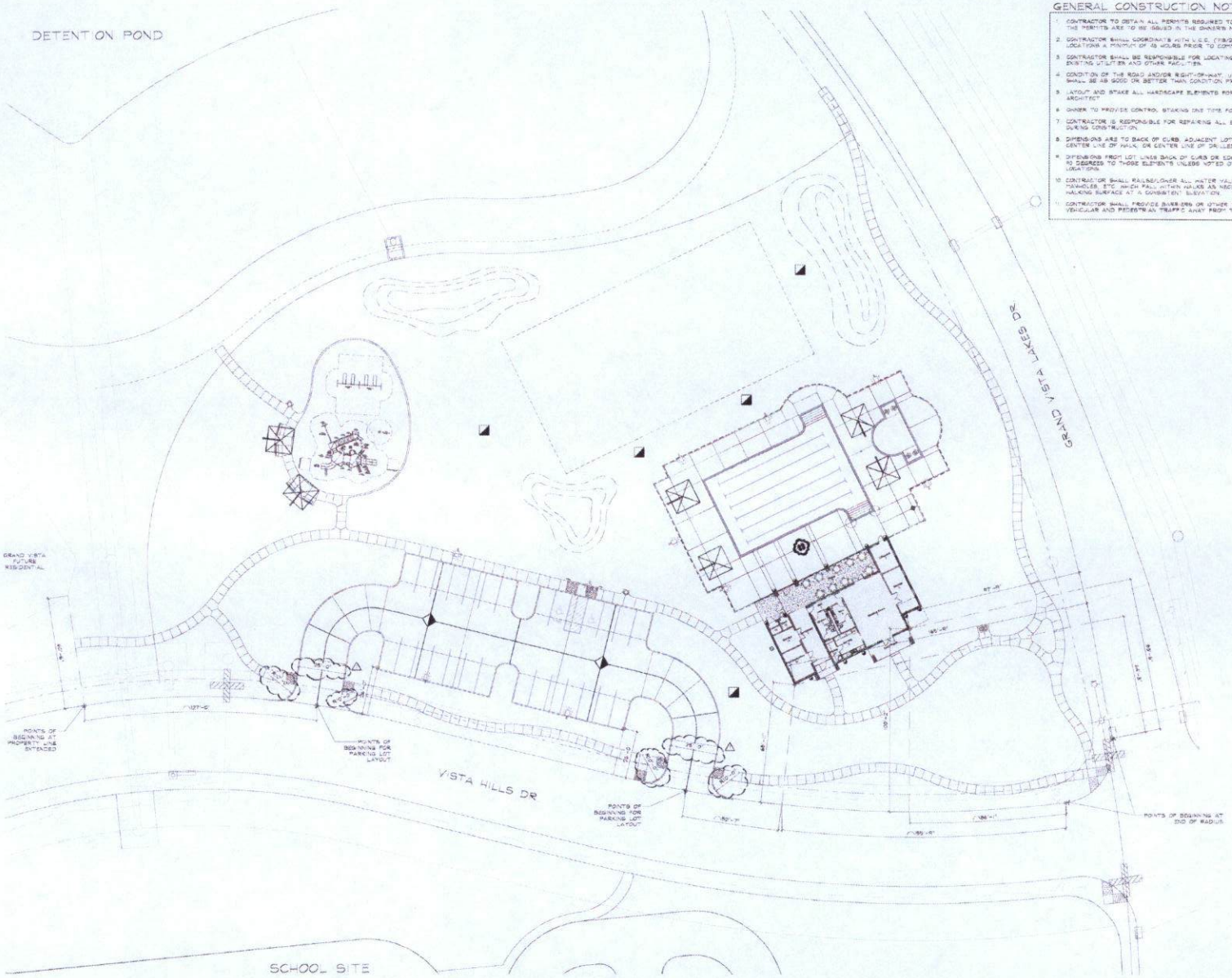
N

0 10 20 40 60

Overall Reference Plan

Date: 10/21/16
Scale: SEE PLANS
Job No.: 245-16-08
Revised: 11/3/16

R-1



GENERAL CONSTRUCTION NOTES

1. CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED TO STARTING CONSTRUCTION. THE PERMITS ARE TO BE ISSUED IN THE OWNERS NAME.
2. CONTRACTOR SHALL COORDINATE WITH U.C.C. (713/228-4967) FOR UTILITY LOCATIONS A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES AND OTHER FACILITIES.
4. CONDITION OF THE ROAD AND/OR RIGHT-OF-WAY, UPON COMPLETION OF JOB SHALL BE AS GOOD OR BETTER THAN CONDITION PRIOR TO STARTING WORK.
5. LAYOUT AND STAKE ALL HARDSCAPE ELEMENTS FOR APPROVAL BY LANDSCAPE ARCHITECT.
6. OWNER TO PROVIDE CONTROL STAKING ONE TIME FOR CONTRACTOR.
7. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL EXISTING GRADES DAMAGED DURING CONSTRUCTION.
8. DIMENSIONS ARE TO BACK OF CURB, ADJACENT LOT LINE, EDGE OF PAVEMENT, CENTER LINE OF WALL, OR CENTER LINE OF DRILLED PIER.
9. DIMENSIONS FROM LOT LINES BACK OF CURB OR EDGE OF PAVEMENT ARE AT 90 DEGREES TO THOSE ELEMENTS UNLESS NOTED OTHERWISE AT SPECIFIC LOCATIONS.
10. CONTRACTOR SHALL RAISE/LOWER ALL WATER VALVES, FIRE HYDRANTS, MANHOLES, ETC. WHICH FALL WITHIN AREAS AS NECESSARY TO PROVIDE WALKING SURFACE AT A CONSISTENT ELEVATION.
11. CONTRACTOR SHALL PROVIDE BARRIERS OR OTHER PROTECTION TO KEEP VEHICULAR AND PEDESTRIAN TRAFFIC AWAY FROM THE CONSTRUCTION AREA.

SYNGA WESTBERT DESIGN, L.L.C.
LANDSCAPE ARCHITECTURE
2800 Post Oak Blvd., Suite A-200
Houston, Texas 77056
713.840.1002 713.840.1041
Phone Fax

10/21/2016

"For regulatory approval, permitting or construction."

Grand Vista
North Recreation Center
Taylor Morrison
Fort Bend County, Texas

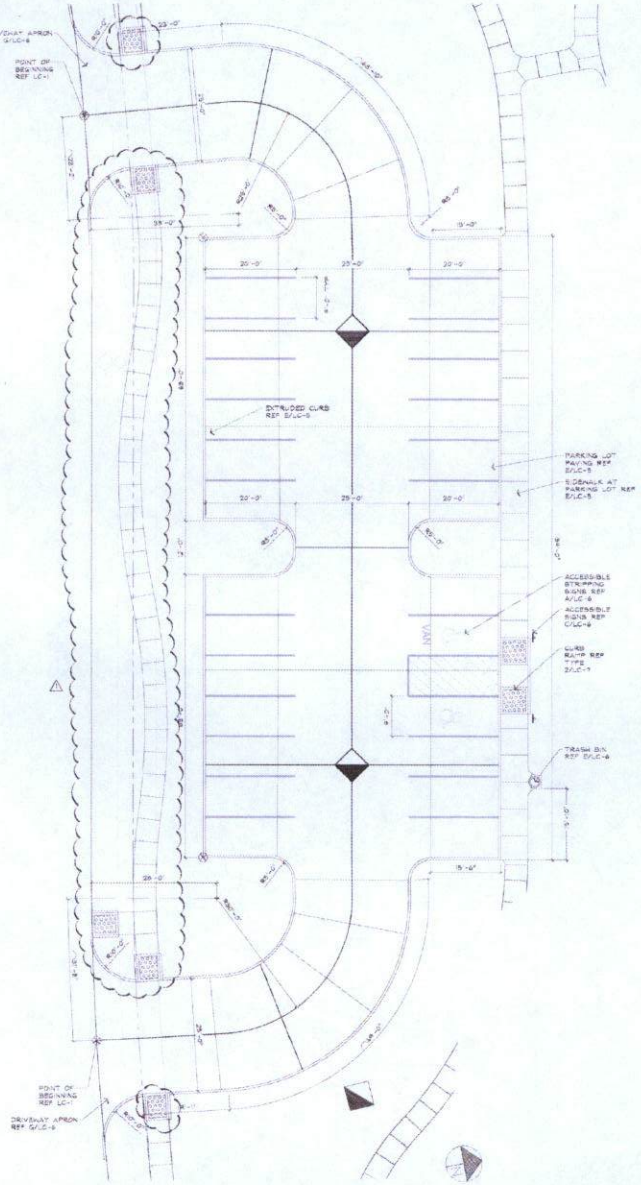
APPROVED: [signature]
DATE: 3-10-17

Overall Layout Plan

Date: 10/21/16
Scale: SEE PLANS
Job No: 245-16-58
Revised: 11/3/16 △

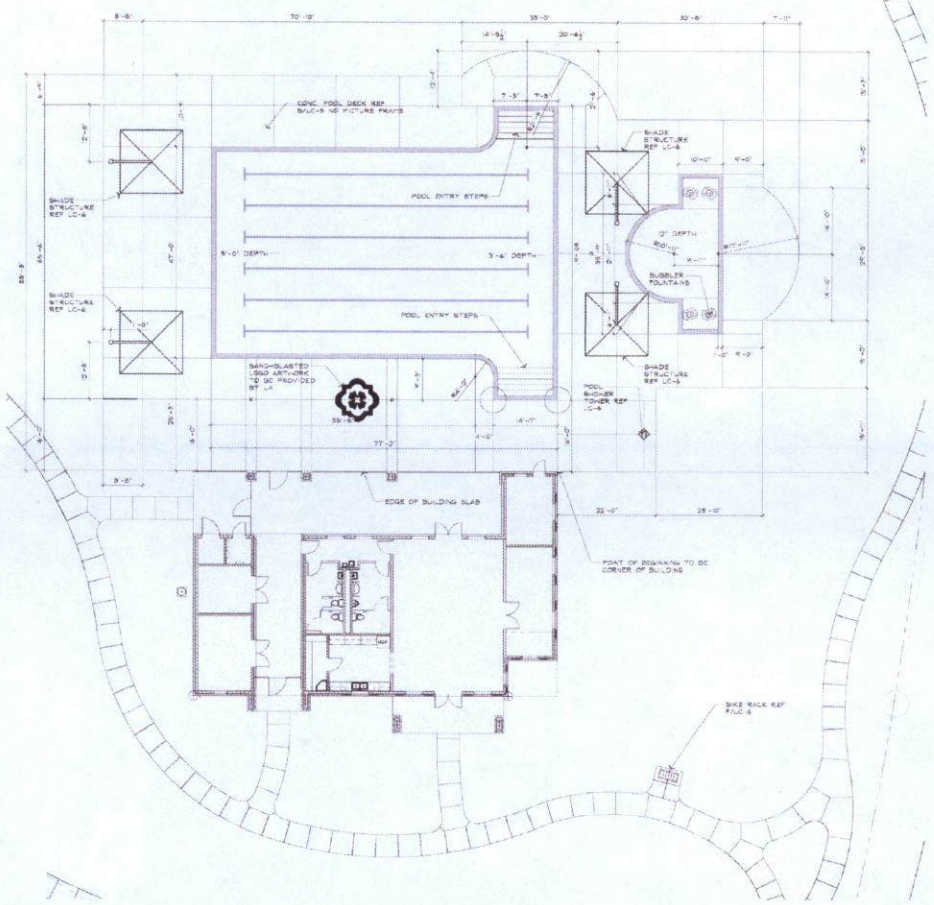
0 30 40 60
Scale 1" = 20'

LC-1



B PARKING LOT LAYOUT

0 10 20 30
Scale 1" = 10'



A POOL LAYOUT

0 10 20 30
Scale 1" = 10'

GCA Forest Design, LLC
LANDSCAPE ARCHITECTURE
10/21/2016
"For regulatory approval, permitting or construction."

Grand Vista
North Recreation Center
Taylor Morrison
Fort Bend County, Texas

APPROVED: BY: DATE: 2-10-17

Pool and Parking Lot Layout Plan

Date: 10/21/16
Scale: SEE PLANS
Job No.: 245-16-58
Revised: 11/3/16

LC-2

GENERAL CONSTRUCTION NOTES

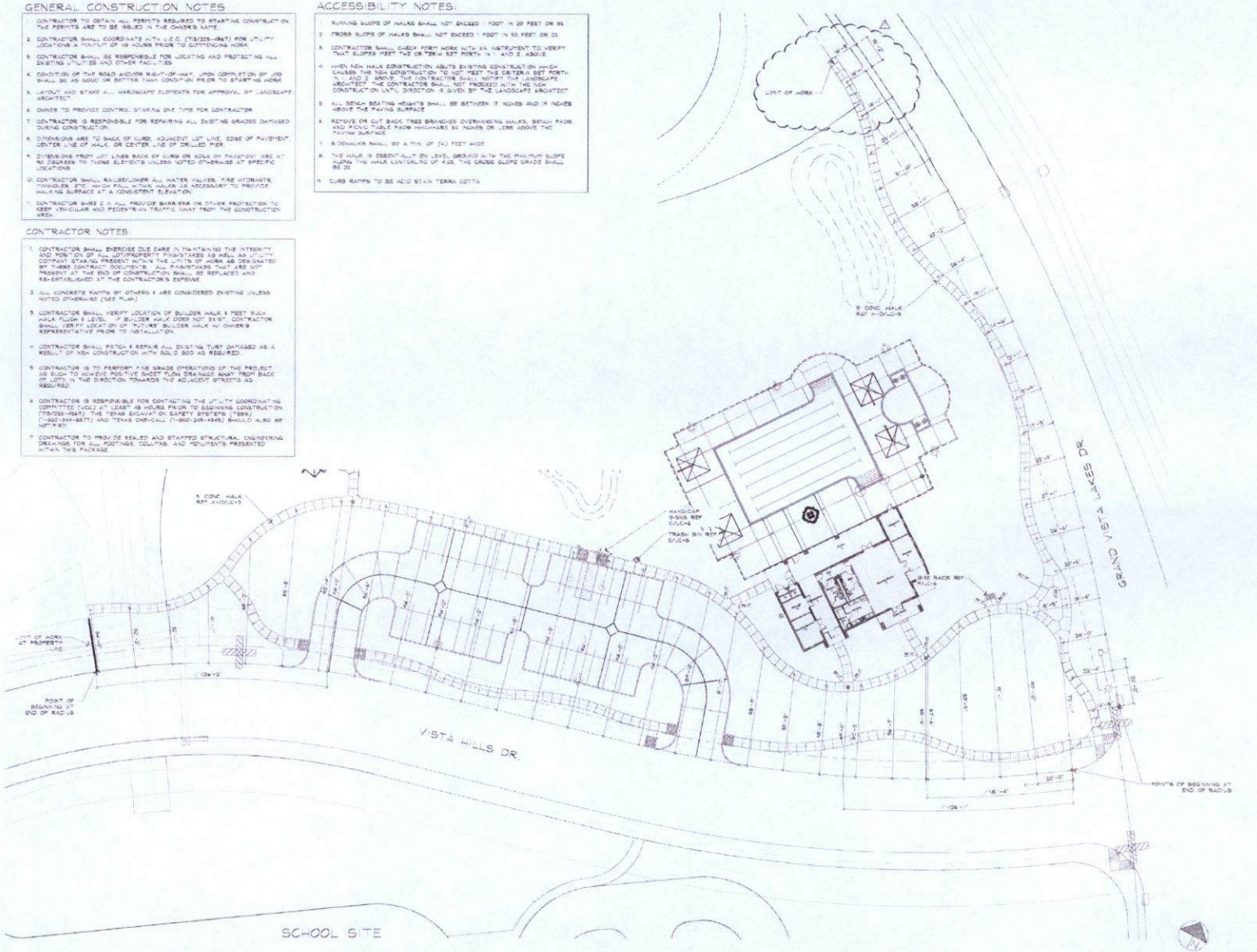
1. CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED TO STARTING CONSTRUCTION. THE PERMITS ARE TO BE ISSUED IN THE OWNER'S NAME.
2. CONTRACTOR SHALL COORDINATE WITH U.C.C. (713/225-4947) FOR UTILITY LOCATIONS A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES AND OTHER FACILITIES.
4. CONDITION OF THE ROAD AND/OR RIGHT-OF-WAY, UPON COMPLETION OF JOB SHALL BE AS GOOD OR BETTER THAN CONDITION PRIOR TO STARTING WORK.
5. LAYOUT AND STAKE ALL HARDSCAPE ELEMENTS FOR APPROVAL BY LANDSCAPE ARCHITECT.
6. OWNER TO PROVIDE CONTROL STAKING ONE TIME FOR CONTRACTOR.
7. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL EXISTING GRADES DAMAGED DURING CONSTRUCTION.
8. DIMENSIONS ARE TO BACK OF CURB, ADJACENT LOT LINE, EDGE OF PAVEMENT, CENTER LINE OF WALK, OR CENTER LINE OF DRILLED PIER.
9. DIMENSIONS FROM LOT LINES BACK OF CURB OR EDGE OF PAVEMENT ARE AT 90 DEGREES TO THOSE ELEMENTS UNLESS NOTED OTHERWISE AT SPECIFIC LOCATIONS.
10. CONTRACTOR SHALL RAISE/LOWER ALL WATER VALVES, FIRE HYDRANTS, MANHOLES, ETC. WHICH FALL WITHIN WALKS AS NECESSARY TO PROVIDE WALKING SURFACE AT A CONSISTENT ELEVATION.
11. CONTRACTOR SHALL PROVIDE BARRIERS OR OTHER PROTECTION TO KEEP VEHICULAR AND PEDESTRIAN TRAFFIC AWAY FROM THE CONSTRUCTION AREA.

CONTRACTOR NOTES

1. CONTRACTOR SHALL EXERCISE DUE CARE IN MAINTAINING THE INTEGRITY AND POSITION OF ALL LOT/PROPERTY POINT/STAKES AS WELL AS UTILITY COMPANY STAKING PRESENT WITHIN THE LIMITS OF WORK AS DESIGNATED BY THESE CONTRACT DOCUMENTS. ALL POINT/STAKES THAT ARE NOT PRESENT AT THE END OF CONSTRUCTION SHALL BE REPLACED AND RE-ESTABLISHED AT THE CONTRACTOR'S EXPENSE.
2. ALL CONCRETE WALKS (BY OTHERS) ARE CONSIDERED EXISTING UNLESS NOTED OTHERWISE (SEE PLAN).
3. CONTRACTOR SHALL VERIFY LOCATION OF BUILDER WALK & MEET SUCH WALK FLUSH & LEVEL. IF BUILDER WALK DOES NOT EXIST, CONTRACTOR SHALL VERIFY LOCATION OF FUTURE BUILDER WALK W/ OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
4. CONTRACTOR SHALL PATCH & REPAIR ALL EXISTING TURF DAMAGED AS A RESULT OF NEW CONSTRUCTION WITH SOLID SOD AS REQUIRED.
5. CONTRACTOR IS TO PERFORM FINE GRADE OPERATIONS OF THE PROJECT AS SUCH TO ACHIEVE POSITIVE SHEET FLOW DRAINAGE AWAY FROM BACK OF LOTS, IN THE DIRECTION TOWARDS THE ADJACENT STREETS AS REQUIRED.
6. CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE UTILITY COORDINATING COMMITTEE (UCC) AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION (713/225-4947). THE TEXAS EXCAVATION SAFETY SYSTEMS (TESS) (1-800-344-8377) AND TEXAS ONE-CALL (1-800-245-4545) SHOULD ALSO BE NOTIFIED.
7. CONTRACTOR TO PROVIDE SEALED AND STAMPED STRUCTURAL ENGINEERING DRAWINGS FOR ALL FOOTINGS, COLUMNS, AND MONUMENTS PRESENTED WITHIN THIS PACKAGE.

ACCESSIBILITY NOTES:

1. RUNNING SLOPE OF WALKS SHALL NOT EXCEED 1 FOOT IN 20 FEET OR 5%.
2. CROSS SLOPE OF WALKS SHALL NOT EXCEED 1 FOOT IN 50 FEET OR 2%.
3. CONTRACTOR SHALL CHECK FORM WORK WITH AN INSTRUMENT TO VERIFY THAT SLOPES MEET THE CRITERIA SET FORTH IN 1 AND 2 ABOVE.
4. WHEN NEW WALK CONSTRUCTION ABUTS EXISTING CONSTRUCTION WHICH CAUSES THE NEW CONSTRUCTION TO NOT MEET THE CRITERIA SET FORTH IN 1 AND 2 ABOVE, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL NOT PROCEED WITH THE NEW CONSTRUCTION UNTIL DIRECTION IS GIVEN BY THE LANDSCAPE ARCHITECT.
5. ALL BENCH SEATING HEIGHTS SHALL BE BETWEEN 17 INCHES AND 19 INCHES ABOVE THE PAVING SURFACE.
6. REMOVE OR CUT BACK TREE BRANCHES OVERHANGING WALKS, BENCH PADS AND PICNIC TABLE PADS HIGHER SO NOTED OR LESS ABOVE THE PAVING SURFACE.
7. SIDEWALKS SHALL BE A MIN. OF (4) FEET WIDE.
8. THE WALK IS ESSENTIALLY ON LEVEL GROUND WITH THE MAXIMUM SLOPE ALONG THE WALK CENTERLINE OF 4.0%. THE CROSS SLOPE GRADE SHALL BE 2%.
9. CURB RAMPS TO BE ACID STAIN TERRA COTTA.



A SIDEWALK LAYOUT

Scale 1" = 20'

LANDSCAPE ARCHITECTURE

10/21/2016

"For regulatory approval, permitting or construction."

Grand Vista
North Recreation Center
Taylor Morrison
Fort Bend County, Texas

APPROVED: [signature]
DATE: 2-9-17

Sidewalk Layout Plan

Date: 10/21/16
Scale: SEE PLANS
Job No: 245-16-58
Revised: 11/3/16

LC-3

GENERAL CONSTRUCTION NOTES

1. CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED TO STARTING CONSTRUCTION. THE PERMITS ARE TO BE ISSUED IN THE OWNER'S NAME
2. CONTRACTOR SHALL COORDINATE WITH U.C.C. (713/223-4567) FOR UTILITY LOCATIONS A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES AND OTHER FACILITIES
4. CONDITION OF THE ROAD AND/OR RIGHT-OF-WAY, UPON COMPLETION OF JOB SHALL BE AS GOOD OR BETTER THAN CONDITION PRIOR TO STARTING WORK.
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7. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL EXISTING GRADES DAMAGED DURING CONSTRUCTION.
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CONTRACTOR NOTES.

1. CONTRACTOR SHALL EXERCISE DUE CARE IN MAINTAINING THE INTEGRITY AND POSITION OF ALL LOT/PROPERTY PINS/STAKES AS WELL AS UTILITY COMPANY STAKING PRESENT WITHIN THE LIMITS OF WORK AS DESIGNATED BY THESE CONTRACT DOCUMENTS. ALL PINS/STAKES THAT ARE NOT PRESENT AT THE END OF CONSTRUCTION SHALL BE REPLACED AND RE-ESTABLISHED AT THE CONTRACTOR'S EXPENSE
2. ALL CONCRETE RAMPS BY OTHERS & ARE CONSIDERED EXISTING UNLESS NOTED OTHERWISE (SEE PLAN)
3. CONTRACTOR SHALL VERIFY LOCATION OF BUILDER WALK & MEET SUCH WALK FLUSH & LEVEL. IF BUILDER WALK DOES NOT EXIST, CONTRACTOR SHALL VERIFY LOCATION OF 'FUTURE' BUILDER WALK W/ OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
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5. CONTRACTOR IS TO PERFORM FINE GRADE OPERATIONS OF THE PROJECT AS SUCH TO ACHIEVE POSITIVE SHEET FLOW DRAINAGE AWAY FROM BACK OF LOTS IN THE DIRECTION TOWARDS THE ADJACENT STREETS AS REQUIRED
6. CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE UTILITY COORDINATING COMMITTEE (UCC) AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION (713/223-4567). THE TEXAS EXCAVATION SAFETY SYSTEMS (TESS) (1-800-344-8377) AND TEXAS ONE-CALL (1-800-245-4545) SHOULD ALSO BE NOTIFIED
7. CONTRACTOR TO PROVIDE SEALED AND STAMPED STRUCTURAL ENGINEERING DRAWINGS FOR ALL FOOTINGS, COLUMNS, AND MONUMENTS PRESENTED WITHIN THIS PACKAGE

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6. REMOVE OR CUT BACK TREE BRANCHES OVERHANGING WALKS, BENCH PADS AND PICNIC TABLE PADS WHICH ARE 80 INCHES OR LESS ABOVE THE PAVING SURFACE
7. SIDEWALKS SHALL BE A MIN. OF (4) FEET WIDE.
8. THE WALK IS ESSENTIALLY ON LEVEL GROUND WITH THE MAXIMUM SLOPE ALONG THE WALK CENTERLINE OF 4.0% THE CROSS SLOPE GRADE SHALL BE 2%
9. CURB RAMPS TO BE ACID STAIN TERRA COTTA

PLAYGROUND NOTES:

1) CONTRACTOR SHALL PROVIDE ON SITE INSTALLATION INSPECTION FROM CERTIFIED INSTALLER AS PART OF THEIR BASE BID

2) INSPECTION IS TO ASSURE COMPLIANCE PER STATE, LOCAL AND MANUFACTURER SPECIFICATIONS RELATIVE TO THE INSTALLATION PROCESS, EQUIPMENT AND OVERALL FINAL PRODUCT ACCEPTABILITY

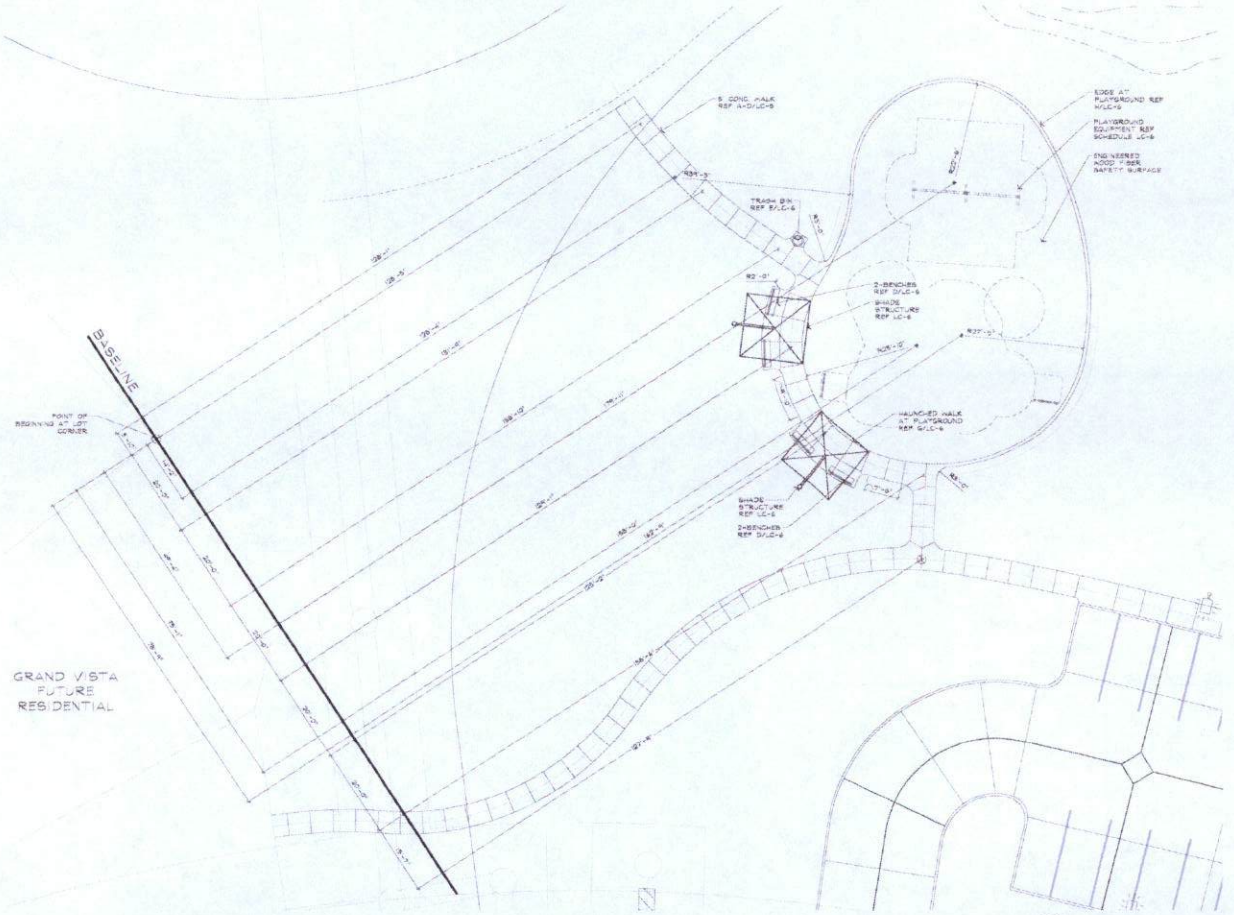
3) APPROVAL LETTER FROM MANUFACTURER SHALL BE PROVIDED TO THE LANDSCAPE ARCHITECT PRIOR TO THE PLAY EQUIPMENT BEING OPENED TO THE PUBLIC

4) CONTRACTOR IS RESPONSIBLE FOR SECURING THE PLAY EQUIPMENT FROM PUBLIC USE UNTIL SUCH TIME AS THE COMPLIANCE LETTER HAS BEEN PROVIDED AND APPROVED BY THE LANDSCAPE ARCHITECT

5) CONTRACTOR SHALL LAYOUT PLAYGROUND EQUIPMENT TO ENSURE PLAYGROUND SAFETY ZONES AROUND EQUIPMENT FROM MANUFACTOR FIT WITHIN THE CONCRETE BAND / HAUNCHED CONCRETE AREA BEFORE CONCRETE POUR OF BAND OR HAUNCHED CONCRETE EDGE

PLAYGROUND EQUIPMENT AND SURFACING NOTES:

1. THE PLAYGROUND EQUIPMENT SHALL BE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS
2. THE PLAYGROUND EQUIPMENT INSTALLER SHALL BE LICENSED WITH THE STATE OF TEXAS, AND CARRY PLAYGROUND CONSTRUCTION INSURANCE.
3. THE PLAYGROUND EQUIPMENT INSTALLER SHALL BE CERTIFIED BY THE MANUFACTURER AS AN INSTALLER OF ITS EQUIPMENT, IF THE MANUFACTURER OFFERS THIS
4. THE PLAYGROUND EQUIPMENT INSTALLER SHALL BE CERTIFIED WITH THE NPSI AS A CERTIFIED PLAYGROUND SAFETY INSPECTOR. IF NOT, THE INSTALLATION SHALL BE INSPECTED BY A CERTIFIED PLAYGROUND SAFETY INSPECTOR. THIS SHALL BE ARRANGED FOR AND PAID FOR BY THE CONTRACTOR. DOCUMENTATION OF THE INSPECTION AND THE CORRECTIVE ACTIONS TAKEN SHALL BE PROVIDED TO THE LANDSCAPE ARCHITECT
5. THE ENGINEERED WOOD FIBER SAFETY SURFACING SHALL MEET THE REQUIREMENTS OF ASTM F-1292 STANDARD SPECIFICATION FOR IMPACT ATTENUATION OF SURFACE SYSTEMS UNDER AND AROUND PLAYGROUND EQUIPMENT AND ASTM F1951 SPECIFICATION FOR DETERMINATION OF ACCESSIBILITY OF SURFACE SYSTEMS UNDER AND AROUND PLAYGROUND EQUIPMENT
6. SUBMIT ENGINEERED WOOD FIBER PRODUCT LITERATURE AND PROOF OF TESTING THE ABOVE REQUIREMENTS
7. ALL CONCRETE FOOTINGS SHALL BE A MINIMUM OF 6 INCHES BELOW THE CONSTRUCTION GRADE AND 12 TO 18 INCHES BELOW THE TOP OF THE SAFETY SURFACING



A PLAYGROUND LAYOUT

LGA LANDSCAPE ARCHITECTURE, LLC
LANDSCAPE ARCHITECTURE
10001 Stone Forest Blvd. Suite A-100
Katy, Texas 77494
281.394.1002 281.646.1841
Phone Fax

9/27/2016

"For regulatory approval, permitting or construction."

Grand Vista
North Recreation Center
Taylor Morrison
Fort Bend County, Texas

APPROVED: [signature] P.E. Development Coordinator
DATE: 2-10-17

Playground Layout Plan

Date: 9/27/16
Scale: SEE PLANS
Job No.: 245-16-58
Revised:

LC-4

GENERAL CONSTRUCTION NOTES

1. CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED TO STARTING CONSTRUCTION. THE PERMITS ARE TO BE ISSUED IN THE OWNER'S NAME.
2. CONTRACTOR SHALL COORDINATE WITH L.C.C. (713/223-4567) FOR UTILITY LOCATIONS A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK.
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8. DIMENSIONS ARE TO BACK OF CURB, ADJACENT LOT LINE, EDGE OF PAVEMENT, CENTER LINE OF WALK, OR CENTER LINE OF DRILLED PIER.
9. DIMENSIONS FROM LOT LINES BACK OF CURB OR EDGE OF PAVEMENT ARE AT NO DEGREE TO THOSE ELEMENTS UNLESS NOTED OTHERWISE AT SPECIFIC LOCATIONS.
10. CONTRACTOR SHALL RAISE/LOWER ALL WATER VALVES, FIRE HYDRANTS, MANHOLES, ETC. WHICH FALL WITHIN WALKS AS NECESSARY TO PROVIDE WALKING SURFACE AT A CONSISTENT ELEVATION.
11. CONTRACTOR SHALL PROVIDE BARRIERS OR OTHER PROTECTION TO KEEP VEHICULAR AND PEDESTRIAN TRAFFIC AWAY FROM THE CONSTRUCTION AREA.

CONTRACTOR NOTES:

1. CONTRACTOR SHALL EXERCISE DUE CARE IN MAINTAINING THE INTEGRITY AND POSITION OF ALL LOT/PROPERTY POINTS/PINS AS WELL AS UTILITY COMPANY STAKING PRESENT WITHIN THE LIMITS OF WORK AS DESIGNATED BY THESE CONTRACT DOCUMENTS. ALL POINTS/STAKES THAT ARE NOT PRESENT AT THE END OF CONSTRUCTION SHALL BE REPLACED AND RE-ESTABLISHED AT THE CONTRACTOR'S EXPENSE.
2. ALL CONCRETE RAMPS BY OTHERS & ARE CONSIDERED EXISTING UNLESS NOTED OTHERWISE (SEE PLAN).
3. CONTRACTOR SHALL VERIFY LOCATION OF BUILDER WALK & MEET SUCH WALK FLUSH & LEVEL. IF BUILDER WALK DOES NOT EXIST, CONTRACTOR SHALL VERIFY LOCATION OF FUTURE BUILDER WALK W/ OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
4. CONTRACTOR SHALL PATCH & REPAIR ALL EXISTING TURF DAMAGED AS A RESULT OF NEW CONSTRUCTION WITH SOLID SOD AS REQUIRED.
5. CONTRACTOR IS TO PERFORM FINE GRADE OPERATIONS OF THE PROJECT AS SUCH TO ACHIEVE POSITIVE SHEET FLOW DRAINAGE AWAY FROM BACK OF LOTS IN THE DIRECTION TOWARDS THE ADJACENT STREETS AS REQUIRED.
6. CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE UTILITY COORDINATING COMMITTEE (UCC) AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION (713-223-4567), THE TEXAS EXCAVATION SAFETY SYSTEMS (TESS) (1-800-344-8377) AND TEXAS ONE-CALL (1-800-245-4545). SHOULD ALSO BE NOTIFIED.
7. CONTRACTOR TO PROVIDE SEALED AND STAMPED STRUCTURAL ENGINEERING DRAWINGS FOR ALL FOOTINGS, COLUMNS, AND MONUMENTS PRESENTED WITHIN THIS PACKAGE.

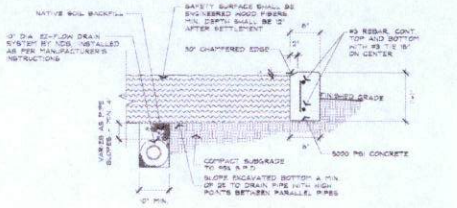
ACCESSIBILITY NOTES:

1. RUNNING SLOPE OF WALKS SHALL NOT EXCEED 1 FOOT IN 20 FEET OR 5%.
2. CROSS SLOPE OF WALKS SHALL NOT EXCEED 1 FOOT IN 50 FEET OR 2%.
3. CONTRACTOR SHALL CHECK FORM WORK WITH AN INSTRUMENT TO VERIFY THAT SLOPES MEET THE CRITERIA SET FORTH IN 1 AND 2 ABOVE.
4. WHEN NEW WALK CONSTRUCTION ABUTS EXISTING CONSTRUCTION WHICH CAUSES THE NEW CONSTRUCTION TO NOT MEET THE CRITERIA SET FORTH IN 1 AND 2 ABOVE, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL NOT PROCEED WITH THE NEW CONSTRUCTION UNTIL DIRECTION IS GIVEN BY THE LANDSCAPE ARCHITECT.
5. ALL BENCH SEATING HEIGHTS SHALL BE BETWEEN 17 INCHES AND 19 INCHES ABOVE THE PAVING SURFACE.
6. REMOVE OR CUT BACK TREE BRANCHES OVERHANGING WALKS, BENCH PADS AND PICNIC TABLE PADS WHICH ARE 80 INCHES OR LESS ABOVE THE PAVING SURFACE.
7. SIDEWALKS SHALL BE A MIN. OF (4) FEET WIDE.
8. THE WALK IS ESSENTIALLY ON LEVEL GROUND WITH THE MAXIMUM SLOPE ALONG THE WALK CENTERLINE OF 4.9%. THE CROSS SLOPE GRADE SHALL BE 2%.
9. CURB RAMPS TO BE ADD STAIN TERRA COTTA.

POOL NOTE:

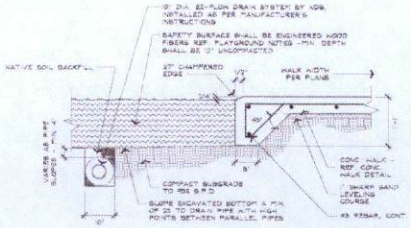
1. PER THE DEPARTMENT OF JUSTICE COMMUNITY POOLS THAT ARE ASSOCIATED WITH A PRIVATE RESIDENTIAL COMMUNITY AND ARE LIMITED TO THE EXCLUSIVE USE OF RESIDENTS AND THEIR GUESTS ARE NOT COVERED BY THE ADA ACCESSIBILITY REQUIREMENTS.

2. AS PER THE DEPARTMENT OF JUSTICE THIS IS A COMMUNITY POOL. IN A PRIVATE RESIDENTIAL COMMUNITY, LIMITED TO THE EXCLUSIVE USE OF RESIDENTS AND THEIR GUESTS. HOWEVER, PROVISIONS ARE BEING MADE FOR 2 ADA LIFTS AS SHOWN. THIS POOL IS NOT FOR USE BY THE GENERAL PUBLIC.



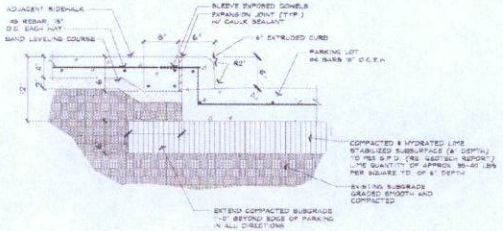
H EDGE AT PLAYGROUND, SAFETY SURFACE & DRAINAGE

1" = 1'-0"



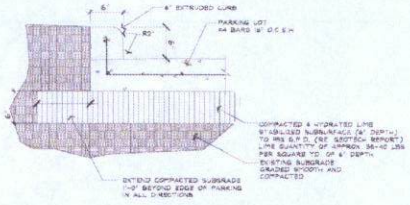
G HAUNCHED WALK AT PLAYGROUND, SAFETY SURFACE & DRAINAGE

1" = 1'-0"



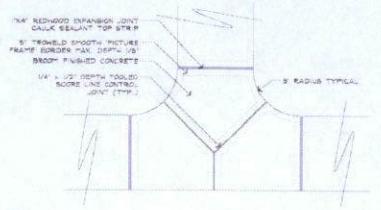
F PARKING LOT & SIDEWALK ADJACENT TO PARKING LOT

NTS



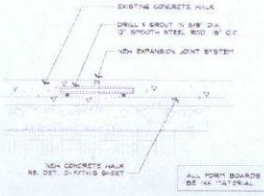
E EXTRUDED CURB AT PARKING LOT

NTS



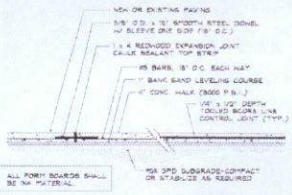
D TYPICAL CONCRETE WALK CONNECTION

NTS



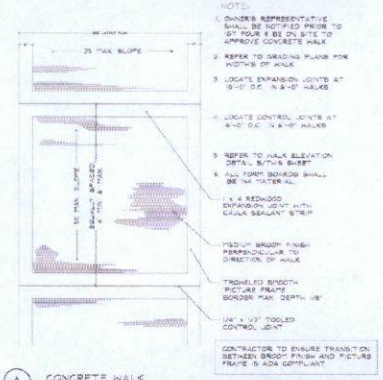
C NEW CONC. WALK / EXISTING WALK CONNECTION

NTS



B TYPICAL CONCRETE WALK ELEVATION

NTS



NOTES:

1. OWNER'S REPRESENTATIVE SHALL BE NOTIFIED PRIOR TO 1ST POUR & BE ON SITE TO APPROVE CONCRETE WALK.
2. REFER TO GRADING PLANS FOR WIDTHS OF WALK.
3. LOCATE EXPANSION JOINTS AT 18'-0" O.C. IN 5'-0" WALKS.
4. LOCATE CONTROL JOINTS AT 6'-0" O.C. IN 5'-0" WALKS.
5. REFER TO WALK ELEVATION DETAIL SHEET.
6. ALL FORM BOARDS SHALL BE NEW MATERIAL.

A CONCRETE WALK

NTS

LGA LANDSCAPE DESIGN, LLC
LANDSCAPE ARCHITECTURE
24001 Kingsland Blvd., Suite F-102
Katy, Texas 77494
281.840.1000 281.840.1041
Phone Fax

LICENSED LANDSCAPE ARCHITECT
STATE OF TEXAS
9/27/2016

"For regulatory approval, permitting or construction."

APPROVED: [signature]
DATE: 2-10-17

Grand Vista
North Recreation Center
Taylor Morrison
Fort Bend County, Texas

Construction Details

Date: 9/27/18
Scale: SEE PLANS
Job No: 245-16-58
Revised:

LC-5

SITE FURNISHINGS SCHEDULE

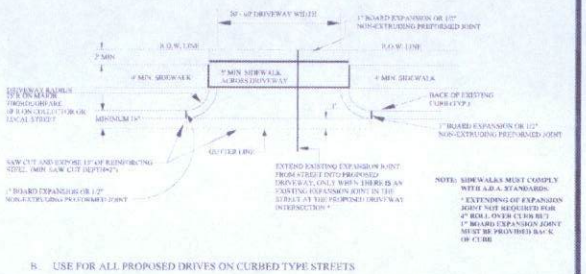
QTY	ITEM	MANUFACTURER / LOCAL REPRESENTATIVE	MODEL NO.	MATERIAL(S)	COLOR / COMMENTS	* INSTALLATION
6	SINGLE POST PYRAMID CANTILEVER SHADE STRUCTURE	USA SHADE MR. JARED ANGELICA 713-284-9666	14' X 14' SINGLE POST PYRAMID CANTILEVER W/ SHADEBRIDGE FABRIC	POWDER COATED STEEL TRUSS	FABRIC = "SUNMONTI" PALMS/MOSS + BROWN	ASSEMBLY AND INSTALLATION TO BE PERFORMED BY USA SHADE
4	6' PARK BENCH	DUNCAN	PAUL E. ALLEN COMPANY, INC MR. ERIC MILLER 1-888-877-4867	472-6025-C	STEEL FRAME, PE SLATS	SURFACE MOUNT PER MANUFACTURER'S INSTRUCTIONS. EPOXY BOLTS IN PLACE
2	TRASH RECEPTACLE 32 GAL.	DUNCAN	PAUL E. ALLEN COMPANY, INC MR. ERIC MILLER 1-888-877-4867	474-1620-01	STEEL FRAME, PE SLATS	SURFACE MOUNT PER MANUFACTURER'S INSTRUCTIONS. EPOXY BOLTS IN PLACE
1	BIKE RACK	DUNCAN	PAUL E. ALLEN COMPANY, INC MR. ERIC MILLER 1-888-877-4867	466	STEEL	STEEL FRAME TO BE FINISHED PER MANUFACTURER'S INSTRUCTIONS. CORE CONCRETE AND EPOXY MOUNT
1	POOL SHOWER	MOBIT DEPENDABLE FOUNTAINS	PAUL E. ALLEN COMPANY, INC MR. ERIC MILLER 1-888-877-4867	TH-500 SP-SS	STAINLESS STEEL	DRAIN TO BE BROWN. INCLUDE 8" SURFACE DRAIN

PLAYGROUND SCHEDULE

QTY	ITEM	MANUFACTURER / LOCAL REPRESENTATIVE	MODEL NO.	MATERIAL(S)	COLOR / COMMENTS	* INSTALLATION
	PLAYGROUND STRUCTURE	LANDSCAPE STRUCTURES	JONESTOWN RECREATION MR. BRYAN DE LA RUA (281)-202-9660	DRAWING #47226-1-3 FROM SIR ALFRED LAURIER ANNEX INCLUDE DYNAMIC SPINNER	STEEL FRAME	COLOR SELECTIONS: POSTS=GOLD BRACING=TAN PULLEY=FLINT-TAN TENSIONETT=BROWN STEEL REINF. GABLES=BLACK STEEL STUDS=BROWN	INSTALL PER MANUFACTURER'S INSTRUCTIONS
	ARCH SWING SET 8'-0" DOUBLE BAY	LANDSCAPE STRUCTURES	JONESTOWN RECREATION MR. BRYAN DE LA RUA (281)-202-9660	301342 -2301270	STEEL FRAME	COLOR TO BE METALLIC SILVER INCLUDE (2) REC. SEATS INCLUDE (2) FULL BUCKET SEATS	INSTALL PER MANUFACTURER'S INSTRUCTIONS

WHEN A COMMERCIAL SIDEWALK, DRIVEWAY, CURB OR GUTTER IS CONSTRUCTED, RECONSTRUCTED, REPAIRED OR REGRADED ON COUNTY RIGHT-OF-WAY. FOR USE WITH CONCRETE OR ASPHALT CURB TYPE STREETS, USE SECTIONS APPLICABLE.

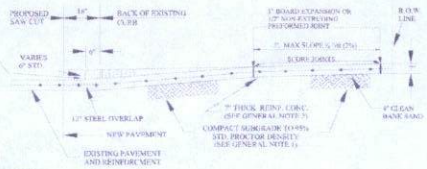
A. USE FOR ALL PROPOSED EXISTING CURB REMOVAL FOR DRIVEWAYS (PLAN VIEW NOT TO SCALE)



NOTE: SIDEWALKS MUST COMPLY WITH A.B.A. STANDARDS.

* EXTENDING OF EXPANSION JOINT NOT REQUIRED FOR 4" ROLL OVER CURB BUT 1" BOARD EXPANSION JOINT MUST BE PROVIDED BACK OF CURB

B. USE FOR ALL PROPOSED DRIVES ON CURBED TYPE STREETS



GENERAL NOTES:

1. COMPACT SUBGRADE FOR PROPOSED DRIVEWAY CONNECTION FROM PROPOSED SAW CUT AT EXISTING PAVEMENT TO R.O.W. LINE, COMPACT TO 95% OF STANDARD PROCTOR DENSITY (+/- 2% OPT. MOISTURE). THE COUNTY ENGINEER RESERVES THE RIGHT TO REQUIRE LABORATORY TESTS TO BE CONDUCTED.
2. PROPOSED DRIVEWAY REINFORCING STEEL IS TO BE #4 DEFORMED REINFORCING BARS (ASTM A615, GRADE 60, UNLESS NOTED SPACED AT 24" C.C., EACH WAY, WITH 12" MINIMUM LAP FROM PROPOSED SAW CUT TO R.O.W. LINE.
3. PROPOSED DRIVEWAY SHALL BE CONSTRUCTED WITH PORTLAND CEMENT (5 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE), CLASS "A" STRUCTURAL (REFER TO SPECIFICATION 02641), 7" THICK, FROM PROPOSED SAW CUT TO R.O.W. LINE.
4. PROPOSED SIDEWALK SHALL BE CONSTRUCTED WITH PORTLAND CEMENT (5 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE), CLASS "A" STRUCTURAL (REFER TO SPECIFICATION 02641), 4" THICK.

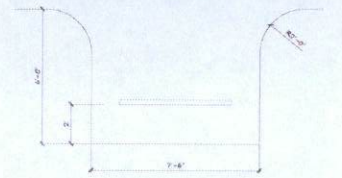
SIDEWALKS & DRIVEWAYS ON CURB TYPE STREETS COMMERCIAL AREA	DRAWN BY: L. BRDECKA DATE DRAWN: 2-1-94	REVISED BY: R. GOMEZ DATE REVISED: 11-1-05
	APPROVED BY: L. HOOD DATE: 2-1-94	DRAWING NO. FBC-025A
FORT BEND COUNTY ENGINEERING DEPARTMENT		

G FORT BEND COUNTY DRIVEWAY APRON DETAIL

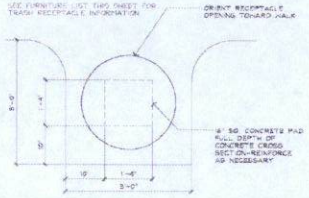
GENERAL NOTES FOR SIDEWALKS AND DRIVEWAYS

1. SAW CUT EXISTING CURB AT EACH END AND KNOCK OUT CURB FROM HIGHWAY TO END OF PROPOSED DRIVEWAY.
2. SAW CUT EXISTING PAVEMENT A MINIMUM OF 18" INCHES AWAY FROM FACE OF CURB (GUTTER LINE) AND BREAK OUT TO EXPOSE EXISTING REINFORCEMENT STEEL.
3. COMPACT SUBGRADE FOR PROPOSED DRIVEWAY CONNECTION FROM PROPOSED SAW CUT AT EXISTING PAVEMENT TO RIGHT-OF-WAY LINE, COMPACT TO 95% OF STANDARD PROCTOR DENSITY (+/- 2% OPT. MOISTURE). THE COUNTY ENGINEER RESERVES THE RIGHT TO REQUIRE LABORATORY TESTS TO BE CONDUCTED.
4. PLACE AND COMPACT 4" CLEAN BANK SAND.
5. MAINTAIN GUTTER LINE WITH FACE OF EXISTING CURB.
6. PROPOSED DRIVEWAY REINFORCING STEEL IS TO BE TIED TO EXISTING ROADWAY REINFORCING STEEL WITH A MINIMUM LAP OF 12 INCHES.
7. PROPOSED DRIVEWAY REINFORCING STEEL IS TO BE #4 DEFORMED REINFORCING BARS (ASTM A615, GRADE 60, UNLESS NOTED) SPACED AT 24 INCHES C.C. EACH WAY, WITH 12 INCHES MINIMUM LAP (6" X 6" W1.4 X W1.4 AS ALTERNATE) FROM PROPOSED SAW CUT TO RIGHT-OF-WAY LINE.
8. PROPOSED DRIVEWAY, CURB, GUTTER LINE, AND GRADE SHALL MATCH EXISTING STREET.
9. PROPOSED DRIVEWAY SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE, CLASS "A" STRUCTURAL (REFER TO SPECIFICATION 02641), 7 INCHES THICK AND A FEET MINIMUM WIDTH. SEE DRAWING 3C FBC 24A FOR ADDITIONAL INFORMATION AND DETAILS.
10. PROPOSED SIDEWALK SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE, CLASS "A" STRUCTURAL (REFER TO SPECIFICATION 02641), 4 INCHES THICK AND A FEET MINIMUM WIDTH. SEE DRAWING 3C FBC 24A FOR ADDITIONAL INFORMATION AND DETAILS.

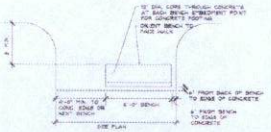
CONSTRUCTION NOTES FOR SIDEWALKS & DRIVEWAYS WITH CURB TYPE STREETS COMMERCIAL AREA	DRAWN BY: L. BRDECKA DATE DRAWN: 2-1-94	REVISED BY: L. BRDECKA DATE REVISED: 3-1-05
	APPROVED BY: L. HOOD DATE: 2-1-94	DRAWING NO. FBC-025B
FORT BEND COUNTY ENGINEERING DEPARTMENT		



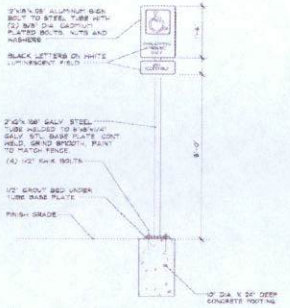
F BIKE RACK ENLARGEMENT



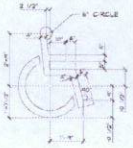
E TRASH RECEPTACLE PAD



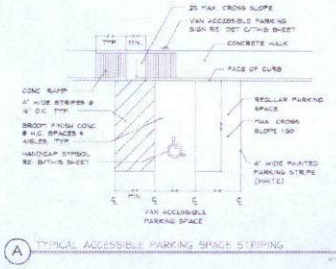
D BENCH & CONCRETE PAD



C TYPICAL ACCESSIBLE PARKING SPACE SIGNAGE



B TYPICAL ACCESSIBLE PARKING SPACE MARKER SYMBOL



A TYPICAL ACCESSIBLE PARKING SPACE STRIPING

RGA STREET DESIGN, LLC
LANDSCAPE ARCHITECTURE
10001 Stone Lake Blvd., Suite A-200
Austin, Texas 78759
281.848.1800 281.848.1841
Phone Fax

REGISTERED LANDSCAPE ARCHITECT
MICHAEL E. DEVINE
1397
STATE OF TEXAS

10/21/2016

"For regulatory approval, permitting or construction."

Grand Vista North Recreation Center

Taylor Morrison

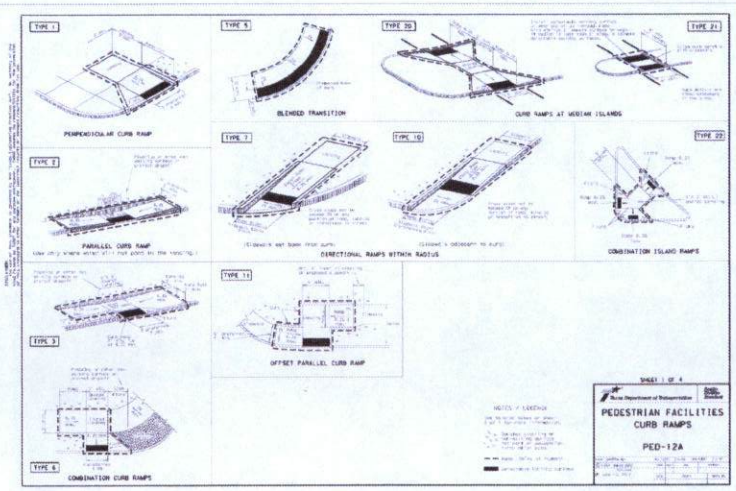
Fort Bend County, Texas

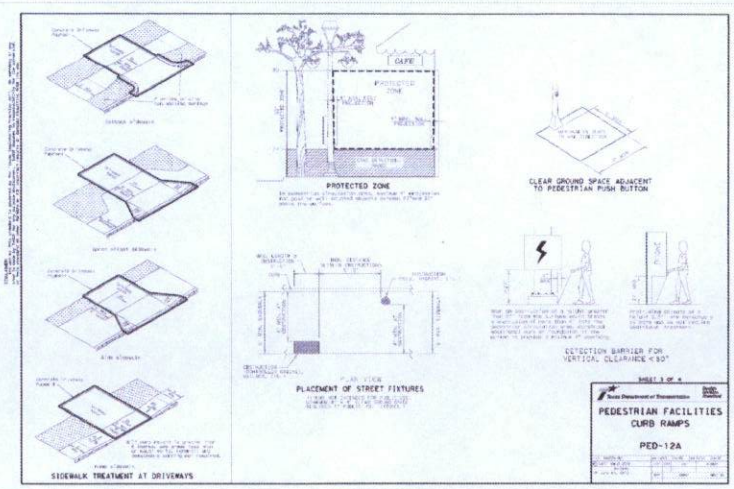
APPROVED: for Director of Construction
DATE: 2-10-17

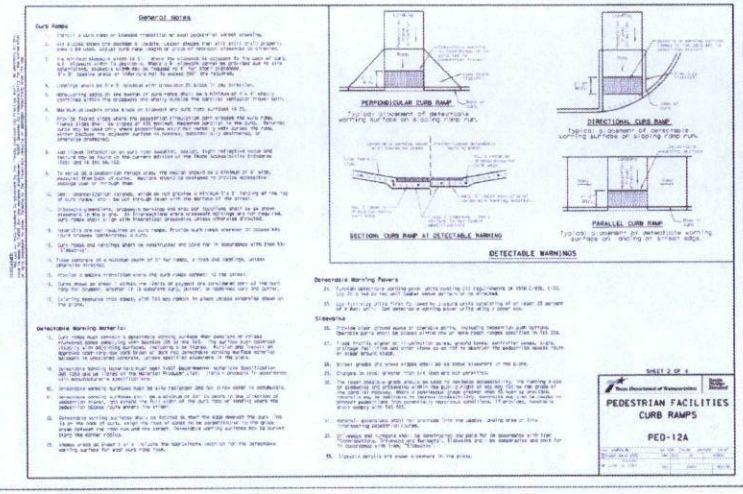
Construction Details

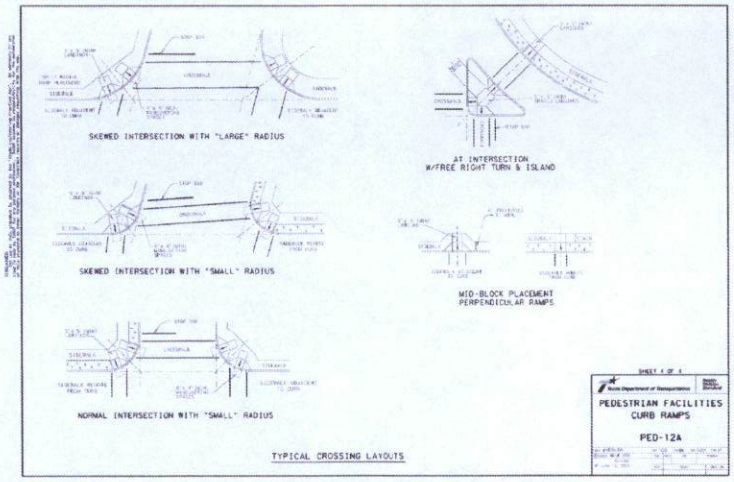
Date: 10/21/16
Scale: SEE PLANS
Job No.: 245-19-38
Revision: 11/3/16 △

LC-6









KGA GREEN DESIGN, LLC
LANDSCAPE ARCHITECTURE
2301 Gloria Kaye Blvd. Suite A-250
Katy, Texas 77494
281.549.1002 281.549.1041
Phone Fax

9/27/2018

"For regulatory approval, permitting or construction."

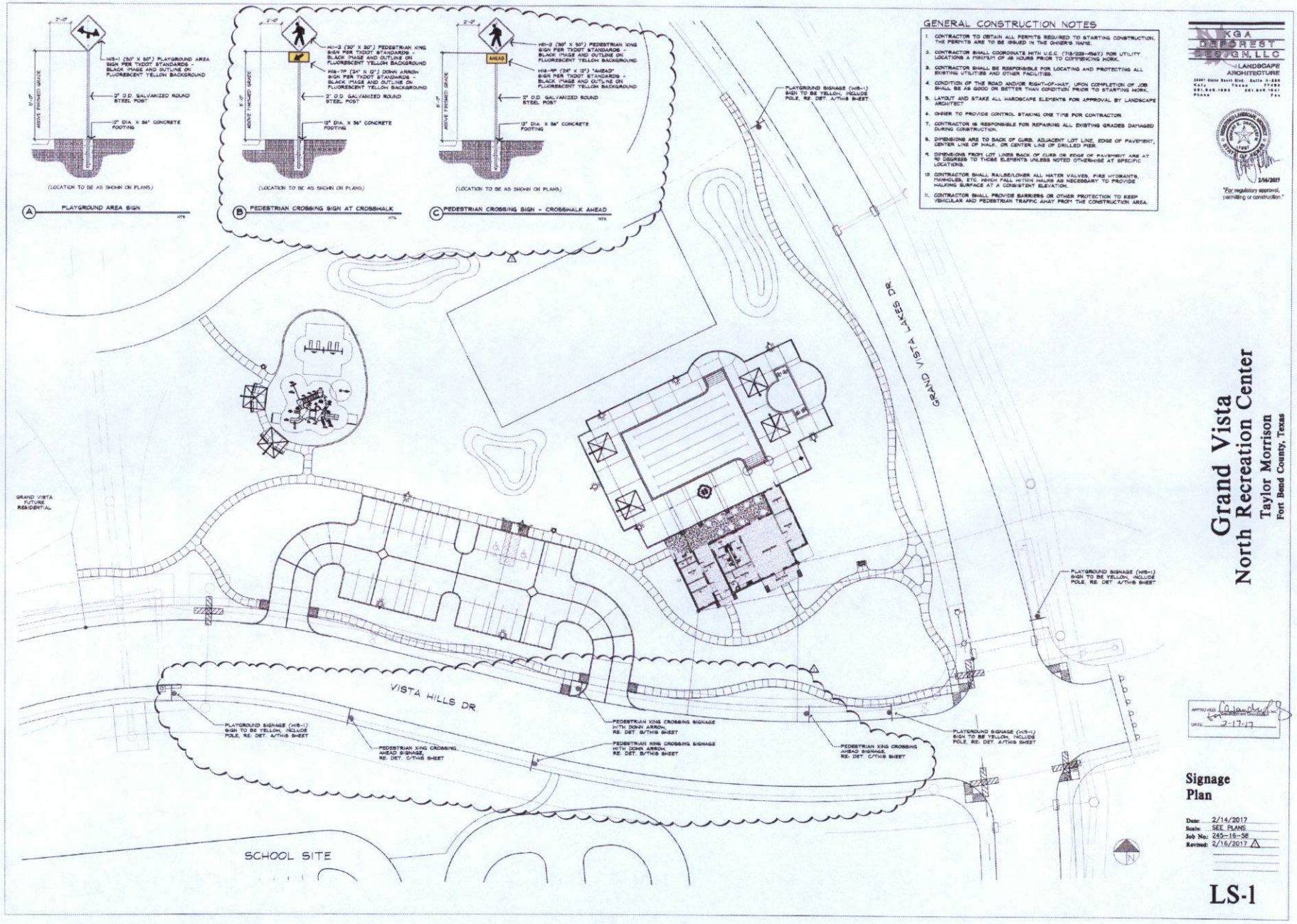
Grand Vista
North Recreation Center
Taylor Morrison
Fort Bend County, Texas

APPROVED: [signature]
DATE: 2-10-17

TXDOT Pedestrian Ramp Details

Date: 9/27/18
Scale: SEE PLANS
Job No.: 245-18-08
Revised:

LC-7



GENERAL CONSTRUCTION NOTES

1. CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED TO STARTING CONSTRUCTION. THE PERMITS ARE TO BE ISSUED IN THE OWNER'S NAME.
2. CONTRACTOR SHALL COORDINATE WITH U.C.C. (713/223-4567) FOR UTILITY LOCATIONS A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES AND OTHER FACILITIES.
4. CONDITION OF THE ROAD AND/OR RIGHT-OF-WAY, UPON COMPLETION OF JOB SHALL BE AS GOOD OR BETTER THAN CONDITION PRIOR TO STARTING WORK.
5. LAYOUT AND STAKE ALL HARDSCAPE ELEMENTS FOR APPROVAL BY LANDSCAPE ARCHITECT.
6. OWNER TO PROVIDE CONTROL STAKING ONE TIME FOR CONTRACTOR.
7. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL EXISTING GRADES DAMAGED DURING CONSTRUCTION.
8. DIMENSIONS ARE TO BACK OF CURB, ADJACENT LOT LINE, EDGE OF PAVEMENT, CENTER LINE OF WALK, OR CENTER LINE OF DRILLED PIER.
9. DIMENSIONS FROM LOT LINES BACK OF CURB OR EDGE OF PAVEMENT ARE AT 90 DEGREES TO THOSE ELEMENTS UNLESS NOTED OTHERWISE AT SPECIFIC LOCATIONS.
10. CONTRACTOR SHALL RAISE/LOWER ALL WATER VALVES, FIRE HYDRANTS, MANHOLES, ETC. WHICH FALL WITHIN WALKS AS NECESSARY TO PROVIDE WALKING SURFACE AT A CONSISTENT ELEVATION.
11. CONTRACTOR SHALL PROVIDE BARRIERS OR OTHER PROTECTION TO KEEP VEHICULAR AND PEDESTRIAN TRAFFIC AWAY FROM THE CONSTRUCTION AREA.

KGA DEERFOREST DESIGN, LLC
LANDSCAPE ARCHITECTURE
2/14/2017
"For regulatory approval, permitting or construction."

Grand Vista North Recreation Center

Taylor Morrison

Fort Bend County, Texas

APPROVED: [signature] DATE: 2-17-17

Signage Plan

Date: 2/14/2017
Scale: SEE PLANS
Job No: 245-16-58
Revised: 2/16/2017 △

LS-1

INLET NO.	INLET TYPE	STATION	FLOWLINE
E20	CONN. PROP 24" RCP TO EX MH	0+60.56, LINE A	CS 24" FL 84.03(N) PROP 24" FL 84.03(NE)
A1	PROP JUNCTION BOX	0+23.80, LINE A 0+60.00, LINE E	PROP 24" FL 84.32 PROP 18" FL 84.18 PROP 12" FL 87.70
A2	PROP 24" CATCH BASIN	1+75.45, LINE A 0+60.00, LINE B	PROP 18" FL 84.90 PROP 12" FL 84.80
A3	PROP 18" CATCH BASIN	2+83.62, LINE A 0+60.00, LINE C	PROP 12" FL 88.16(S) PROP 12" FL 88.18(E) PROP 8" FL 91.30
A4	PROP 18" CATCH BASIN	3+88.10, LINE A	PROP 12" FL 90.80
A5	PROP 18" CATCH BASIN	4+33.66, LINE A	PROP 12" FL 90.98
A6	PROP 18" CATCH BASIN	5+10.26, LINE A	PROP 12" FL 90.35
B1	PROP 24" CATCH BASIN	0+86.64, LINE B 0+00.00, LINE E	PROP 12" FL 85.40 PROP 8" FL 85.46
B2	PROP 18" CATCH BASIN	1+76.87, LINE B	PROP 8" FL 91.20(S) PROP 12" FL 95.10(W)
B3	PROP JUNCTION BOX	2+60.69, LINE B	PROP 8" FL 92.05
B4	PROP JUNCTION BOX	2+90.43, LINE B	PROP 8" FL 93.30
C1	PROP JUNCTION BOX	0+90.22, LINE C	PROP 8" FL 88.10(W) PROP 8" FL 91.85(E)
C2	PROP BRASS GRATE INLET	1+19.83, LINE C	PROP 8" FL 92.00
C3	PROP BRASS GRATE INLET	1+33.46, LINE C	PROP 8" FL 92.30
C4	PROP BRASS GRATE INLET	1+85.91, LINE C	PROP 8" FL 92.75
C5	PROP BRASS GRATE INLET	2+35.07, LINE C	PROP 8" FL 93.10
D1	PROP 36(X) DRAIN CONNECTION	0+40.00, LINE C	PROP 8" FL 91.50
E1	PROP 18" CATCH BASIN	0+96.54, LINE E	PROP 4" FL 90.00

PROJECT NO. 30 NOTES

1. STORM SEWER CONNECTIONS TO EXISTING MANHOLES AND/OR INLETS MUST BE MADE IN A MANNER THAT DOES NOT AFFECT THE INTEGRITY OF THE STRUCTURE AND MUST BE WATER-TIGHT. IF STRUCTURE CRACKS OCCUR, THE STRUCTURE WILL BE REPLACED.
2. CONTACT FBC DISTRICT'S ENGINEER AT (281) 936-3339 FOR INSPECTION OF STORM SEWER CONNECTIONS.

MAX PONDING

A2	0.29'
B2	0.27'

DRAINAGE PLAN KEY

- X.X — EXISTING ELEVATIONS
- 14.30 — PROPOSED ELEVATIONS
- PROPOSED JUNCTION BOX
- PROPOSED AREA INLET
  1. INLETS AT PARKING HAVE CAST IRON GRATES.
  2. INLETS AT POOL DECK HAVE "SAND" COLORED POLYLOFIN GRATES BY NDS W/ 3/8" OPENINGS
  3. INLETS AT TURF AREAS HAVE "GREEN" POLYLOFIN GRATES BY NDS
- INLET DATA KEY NUMBER
- PROPOSED PIPING – RCP OR HDPE PIPE AS NOTED
- 10" CZ FLOW DRAIN SYSTEM (4" INTERNAL PIPE) INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS
- SHEET FLOW DIRECTION
- POOL DECK DRAIN, PLASTIC BASIN WITH 6" CIRCULAR BRASS GRATE, TYP.
- 6" LANDSCAPE DRAIN WITH PLASTIC ATRIUM GRATE
- DOWNSPOUT

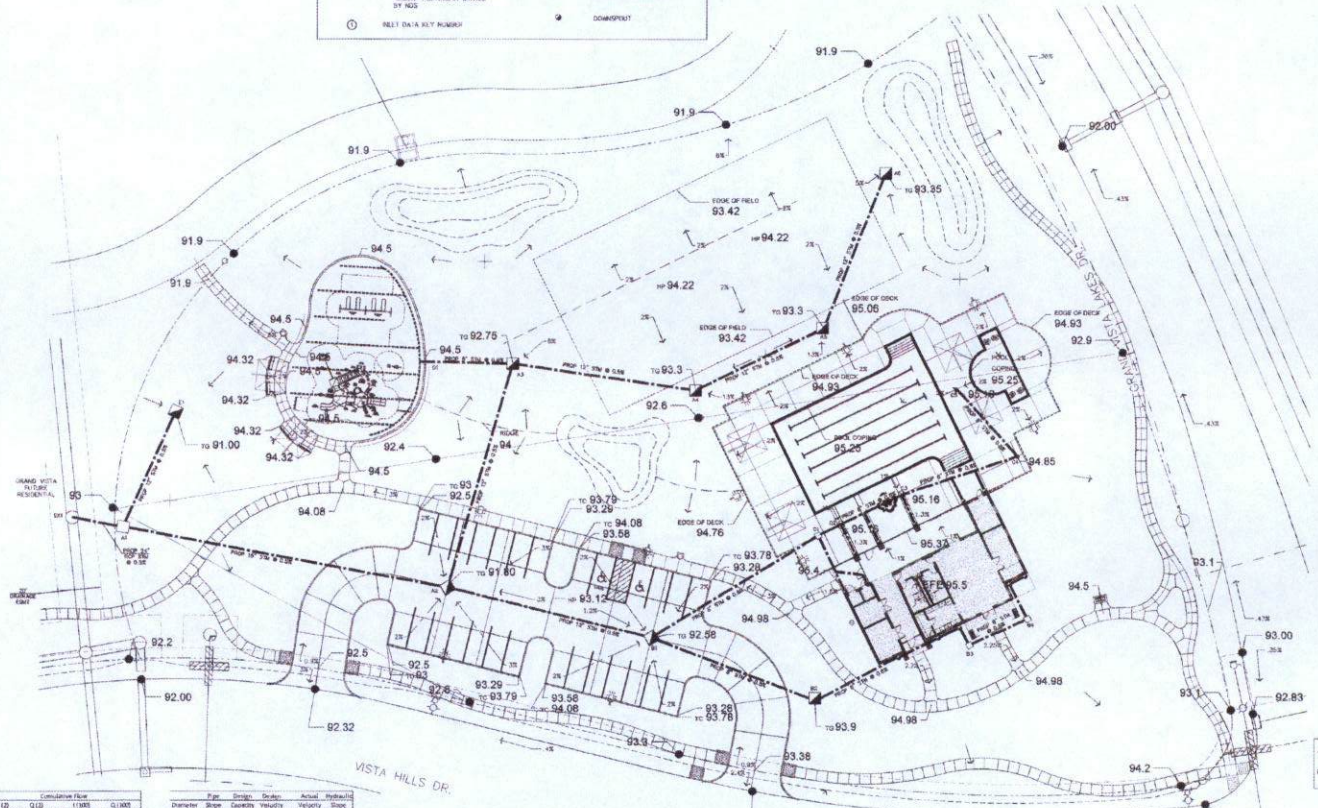
Accessibility Grading Notes:

1. RUNNING SLOPE OF WALKS SHALL NOT EXCEED 1 FOOT IN 20 FEET OR 5%
2. CROSS SLOPE OF WALKS SHALL NOT EXCEED 1 FOOT IN 50 FEET OR 2%
3. CONTRACTOR SHALL CHECK FORM WORK WITH AN INSTRUMENT TO VERIFY THAT SLOPES MEET THE CRITERIA SET FORTH IN 1. AND 2. ABOVE
4. WHEN NEW WALK CONSTRUCTION ABUTS EXISTING CONSTRUCTION WHICH CAUSES THE NEW CONSTRUCTION TO FAIL MEET THE CRITERIA SET FORTH IN 1. AND 2. ABOVE, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL NOT PROCEED WITH THE NEW CONSTRUCTION UNTIL DIRECTION IS GIVEN BY THE LANDSCAPE ARCHITECT.

CUT / FILL CALCULATIONS AND BALANCING
CONTRACTOR SHALL ESTIMATE NET CUT OR FILL REQUIRED TO BALANCE SITE BASED ON SITE CONDITIONS AND CONSTRUCTION DOCUMENTS. CONTRACTOR TO PROVIDE LINE ITEMS IN HIS/HER BID FOR OTHER SHALLOW CUT OF EXCESS MATERIAL OR IMPORTING OF ADDITIONAL MATERIAL AS ESTIMATED BY CONTRACTOR TO COMPLETE CONSTRUCTION.

NOTE:
ALL DECK DRAINS ARE CONNECTED WITH 4" HDPE DRAINPIPE UNLESS OTHERWISE NOTED.

GARY GREENWOOD DESIGN, LLC
LANDSCAPE ARCHITECTURE
2508 Dove Beach Way
Katy, Texas 77494
281.646.9410 Phone
281.646.9411 Fax


VISTA HILLS DR.
GRAND VISTA FUTURE RESIDENTIAL
EDGE OF FIELD 93.42
EDGE OF DECK 95.06
EDGE OF DECK 94.93
EDGE OF DECK 94.76
DECK COPING 95.25
FFE 95.5
HP 94.22
HP 93.12
HP 92.58
HP 95.25
TG 93.3
TG 92.75
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GENERAL NOTES

1. THE LOCATION OF ALL UTILITIES SHOWN ON THESE PLANS WAS TAKEN FROM AVAILABLE SURVEY INFORMATION AND/OR EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES MUST BE DETERMINED BY CONTRACTOR. IT SHALL BE THE DUTY AND RESPONSIBILITY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT. CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF A DISCREPANCY AND/OR CONFLICT IS DISCOVERED. CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO EXISTING UTILITIES DURING CONSTRUCTION.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PUBLIC UTILITIES, PAVEMENT TO REMAIN, CURBS, SIDEWALKS, SIGNS, TREES, ETC. IN THE CONSTRUCTION OF THIS PROJECT. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES. DURING CONSTRUCTION ALL DAMAGES SHALL BE REPAIRED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE OWNING/OPERATING AUTHORITY, WITH NO COST TO THE CITY, COUNTY, PRIVATE UTILITY OWNERS, ENGINEER, OR THE OWNER.
3. CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND UTILITY LINES AND SHALL NOTIFY THE FOLLOWING AGENCIES 72 HOURS PRIOR TO EXCAVATING OR AUGERING NEAR EXISTING FACILITIES:

   A. TEXAS ONE CALL SYSTEM AT 1-800-245-4545
   B. LONE STAR NOTIFICATION CENTER AT 1-800-669-8344
   C. TEXAS EXCAVATION SAFETY SYSTEM AT 1-800-344-8377
4. PRIOR TO ANY CONSTRUCTION ACTIVITY, CONTRACTOR IS TO ACQUIRE ALL REQUIRED CONSTRUCTION PERMITS FROM APPROPRIATE AUTHORITIES. CONTRACTOR SHALL GIVE AT LEAST 48 HOURS NOTICE TO ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS, OR PERSONS IN CHARGE OF PUBLIC AND PRIVATE UTILITY LINES AFFECTED BY HIS OPERATIONS PRIOR TO COMMENCEMENT OF WORK.
5. THE ENGINEER AND THE CITY/COUNTY OR MUD SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO THE CONTRACTOR CONNECTING TO ANY EXISTING UTILITY LINES.
6. NO CONNECTIONS SHALL BE MADE TO EXISTING PUBLIC WATER LINES OR PUBLIC SANITARY SEWERS UNTIL ALL PROPOSED WATER OR SEWER LINES HAVE BEEN THOROUGHLY CLEANED, TESTED (AS REQUIRED) AND APPROVED BY THE APPROPRIATE AUTHORITIES.
7. HORIZONTAL AND VERTICAL INFORMATION REGARDING UTILITY CONNECTIONS TO PROPOSED BUILDINGS ON THIS SET OF PLANS TERMINATE AT FIVE (5) FEET FROM THE NEAREST BUILDING WALL.
8. ALL MANHOLES, CLEAN-OUTS, VALVE BOXES, FIRE HYDRANTS, ETC MUST BE ADJUSTED TO PROPER LINE AND GRADE BY THE CONTRACTOR PRIOR TO AND AFTER THE PLACING OF PERMANENT PAVING. UTILITIES MUST BE MAINTAINED TO PROPER LINE AND GRADE DURING CONSTRUCTION OF THE PAVING FOR THIS DEVELOPMENT.
9. ALL APPURTENANCES WILL BE ASSUMED TO BE IN GOOD CONDITION UNLESS OTHERWISE CONFIRMED IN WRITING PRIOR TO COMMENCEMENT OF WORK.
10. OVERHEAD LINES EXIST ON THE PROPERTY. WE HAVE NOT ATTEMPTED TO MARK THOSE LINES SINCE THEY ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH AND SAFETY CODE, FORBIDS ALL ACTIVITIES IN WHICH PERSON OR EQUIPMENT MAY COME WITHIN 6 FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES. CONTRACTORS ARE LEGALLY RESPONSIBLE FOR SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CIVIL AND CRIMINAL LIABILITY.
11. CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND ALL REGULATIONS OF UTILITY COMPANIES CONCERNING SAFETY AND HEALTH PRACTICES. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SITE TRENCH SAFETY REQUIREMENTS IN ACCORDANCE WITH CITY/COUNTY STANDARDS, TEXAS STATE LAW, AND O.S.H.A. STANDARDS FOR ALL EXCAVATION.
12. PRIOR TO THE START OF CONSTRUCTION, OWNER AND CONTRACTOR ARE RESPONSIBLE FOR SUBMITTING THE "NOTICE OF INTENT" (N.O.I.) AND ANY ADDITIONAL INFORMATION REQUIRED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ). UPON COMPLETION OF THE PROJECT, OWNER AND CONTRACTOR ARE RESPONSIBLE FOR SUBMITTING THE "NOTICE OF TERMINATION" (N.O.T.).
13. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE AT ALL TIMES DURING CONSTRUCTION
14. CONTRACTOR SHALL REMOVE ALL MUD, DIRT, AND DEBRIS DEPOSITED OR DROPPED ON THE EXISTING ROADWAY AT THE END OF EACH WORK DAY. MATERIAL THAT IS HAZARDOUS TO TRAFFIC OR OTHERWISE PRESENTS A SAFETY CONCERN, SHALL BE REMOVED IMMEDIATELY.
15. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL STATE AND LOCAL REGULATIONS RELATED TO STORM WATER POLLUTION AND QUALITY. REFER TO EROSION CONTROL PLAN.
16. CONTRACTOR SHALL REESTABLISH ALL TURF DISTURBED DURING CONSTRUCTION TO ACCEPTABLE OPERATING CONDITION, AS DETERMINED BY OWNER AND/OR REGULATORY AGENCIES.
17. CONTRACTOR SHALL MAINTAIN A WORKSITE FREE OF TRASH AND DEBRIS.
18. CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES. NO TREE SHALL BE REMOVED OR ALTERED WITHOUT WRITTEN PERMISSION FROM OWNER OR ENGINEER. EQUIPMENT OR MATERIALS SHALL NOT BE STAGED UNDER THE DRIP LINE OF EXISTING TREES.
19. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A SET OF "AS BUILT" PLANS FOR ALL WORK PERFORMED ON AND OFF SITE. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL PROVIDE AS-BUILT PLANS IDENTIFYING ALL DEVIATIONS OR VARIATIONS FROM ORIGINAL PLANS TO THE OWNER AND THE ENGINEER.
20. ALL TRAFFIC CONTROL AND WARNING SIGNS SHALL BE IN ACCORDANCE WITH TEXAS MARNUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
21. ALL SIDEWALKS, RAMPS, AND HANDRAILS TO MEET OR EXCEED CITY/COUNTY, TAS, AND ADA REQUIREMENTS.
22. ALL MATERIAL AND CONSTRUCTION SHALL CONFORM TO APPLICABLE CITY/COUNTY RULES AND REGULATIONS, CONSTRUCTION SPECIFICATIONS AND CONSTRUCTION DETAILS.
23. ALL SPOIL MATERIAL GENERATED FROM CONSTRUCTION ACTIVITY TO BE HAULED OFFSITE AND DISPOSED IN ACCORDANCE WITH LOCAL LAWS, RULES, AND REGULATIONS.
24. AT THE END OF ALL CONSTRUCTION PROJECTS, THE CONTRACTOR SHALL RESTORE THE EXISTING FACILITIES, TO EQUAL TO BETTER THAN EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION. ALL FINISHED GRADES SHALL VARY UNIFORMLY BETWEEN THE FINISHED ELEVATIONS SHOWN.
25. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING LANDSCAPING AND IRRIGATION. NO SEPARATE PAY.
26. PRIOR TO SUBMITTAL OF BID OR PROPOSAL, CONTRACTOR SHALL VISIT PROJECT SITE AND BECOME FAMILIAR WITH THE PROJECT AND THE EXISTING CONDITIONS ON THE SITE. NO ADDITIONAL CONSIDERATION WILL BE GIVEN FOR ADDITIONAL WORK CAUSED BY FIELD CONDITIONS VISIBLE ON SITE DURING BIDDING BUT NOT SHOWN ON THESE PLANS.
27. THERE WILL BE NO SEPARATE PAYMENT FOR WORK SHOWN ON THESE PLANS, UNLESS SPECIFICALLY ESTABLISHED IN THE BID SECTION OF THE CONTRACT DOCUMENTS. INCLUDE COST OF SAME TO WHICH THIS WORK IS A COMPONENT PART.
28. IN THE EVENT OF A DISCREPANCY WITHIN THESE PLANS, OR BETWEEN THESE PLANS AND THE GEOTECHNICAL REPORT, THE MOST CONSERVATIVE CRITERIA SHALL APPLY.
29. ALL UTILITY TRENCHES BELOW PROPOSED OR FUTURE PAVING SHALL BE BACKFILLED WITH CEMENT SAND.
30. UTILITY TRENCHES ARE A COMMON SOURCE OF WATER INFILTRATION AND MIGRATION. ALL UTILITY TRENCHES THAT PENETRATE BENEATH THE BUILDING SHOULD BE EFFECTIVELY SEALED TO RESTRICT WATER INTRUSION AND FLOW THROUGH THE TRENCHES THAT COULD MIGRATE BELOW THE BUILDING. WE RECOMMEND CONSTRUCTING AN EFFECTIVE CLAY "TRENCH PLUG" THAT EXTENDS AT LEAST 5 FEET OUT FROM THE FACE OF THE BUILDING EXTERIOR. THE PLUG MATERIAL SHOULD CONSIST OF CLAY COMPACTED AT A WATER CONTENT AT OR ABOVE THE SOILS OPTIMUM WATER CONTENT. THE CLAY FILL SHOULD BE PLACED TO COMPLETELY SURROUND THE UTILITY LINE AND BE COMPACTED IN ACCORDANCE WITH RECOMMENDATIONS IN THIS REPORT.
31. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL UTILITY TIE IN LOCATIONS FOR MATERIAL, SIZE, ELEVATION AND FIELD CONDITIONS. IN THE EVENT THE PLANS DO NOT REPRESENT FIELD CONDITIONS THE CONTRACTOR IS TO CONTACT THE ENGINEER AND OWNER IMMEDIATELY AND PRIOR TO PERFORMING ANY WORK.
32. PRIOR TO THE START OF CONSTRUCTION, CONTRACTOR TO CONFIRM POSSESSION OF LATEST DRAWINGS, INCLUDING ANY REVISIONS. IF THE DRAWINGS ARE NOT LABELED AS "CONSTRUCTION SET" ON THE COVER PAGE, CONTRACTOR TO CONTACT ENGINEER IMMEDIATELY.
33. CONTRACTOR TO OBTAIN ALL PERMITS. OWNER WILL PROVIDE PAYMENT AS NECESSARY AND REQUESTED BY CONTRACTOR.

FRANCHISE UTILITY NOTES

1. CONTRACTOR SHALL CALL THE TEXAS ONE CALL AND DIG-TESS AT LEAST 72 HOURS PRIOR TO COMMENCING DEMOLITION OR CONSTRUCTION ACTIVITIES. THE CONTRACTOR BEARS SOLE RESPONSIBILITY FOR VERIFYING LOCATIONS OF EXISTING UTILITIES, SHOWN OR NOT SHOWN, AND FOR ANY DAMAGE TO THESE FACILITIES.
2. CONTRACTOR SHALL INSTALL LONG SWEEPS FOR DRY UTILITY CONDUITS WHERE A BEND IS GRAPHICALLY SHOWN.

WATER LINES

1. WATER LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST FORT BEND COUNTY, MUD DISTRICT AND TCEQ REGULATIONS, STANDARD SPECIFICATIONS, AND CONSTRUCTION DETAILS.
2. 4" THRU 12" WATER LINES SHALL BE P.V.C. CLASS 150, DR-18, AWWA C-900 AND 1" THRU 3" WATER LINES SHALL BE PVC SCHEDULE 40. 4" THRU 54" D.I.P. WATER LINES SHALL BE AWWA C151 (ANSI A21.51) AND DOUBLE WRAPPED IN 8-MIL POLYETHYLENE. PIPE SHALL BE LINED IN ACCORDANCE WITH AWWA C104 (ANSI A21.4).
3. CONCRETE THRUST BLOCKS SHALL BE PROVIDED AS NECESSARY TO PREVENT PIPE MOVEMENT. WHERE PREVENTING MOVEMENT OF 18" OR GREATER PIPE IS NECESSARY DUE TO THRUST, USE RESTRAINED JOINTS.
4. ALL WATER LINES UNDER PROPOSED OR FUTURE PAVING AND TO A POINT ONE (1) FOOT BACK OF ALL PROPOSED OR FUTURE CURBS SHALL BE ENCASED IN BANK SAND TO 12" OVER PIPE AND BACKFILLED WITH CEMENT STABILIZED SAND TO WITHIN ONE (1) FOOT OF SUBGRADE.
5. ALL WATER LINE AND SEWER LINE CROSSINGS SHALL BE CONSTRUCTED PER TCEQ REGULATIONS.
6. ALL WATER VALVES SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA C-500 AND SHALL BE OF THE RESILIENT SEAT TYPE.
7. ALL WATER LINES TO BE DISINFECTED IN CONFORMANCE WITH AWWA C-651 AND THE TEXAS STATE DEPARTMENT OF HEALTH. AT LEAST ONE BACTERIOLOGICAL SAMPLE SHALL BE COLLECTED FOR EACH 1,000 LINEAR FEET OF WATER LINE AND SHALL BE REPEATED IF CONTAMINATION PERSISTS.
8. ALL BELOW GRADE VALVES SHALL BE GASKETED, HUB-END GATE VALVES WITH A CAST IRON BOX, EXCEPT WHERE FLANGES ARE CALLED OUT ON THE PLANS.
9. 4" THRU 12" FITTINGS SHALL BE CEMENT MORTAR LINED COMPACT DUCTILE IRON PRESSURE FITTINGS PER ANSI A21.53, OR PUSH ON FITTINGS PER ANSI A21.10 PRESSURE RATED AT 250 PSIG.
10. HYDROSTATIC TESTING: ALL WATER PIPE SHALL BE TESTED FOR LEAKAGE IN ACCORDANCE WITH THE LATEST FORT BEND COUNTY, MUD DISTRICT AND TCEQ REQUIREMENTS. TESTS ARE TO BE PERFORMED ON THE TOTAL FOOTAGE OF WATER PIPE LINE INCLUDED IN THE PROJECT.
11. ALL WATER LINES TO HAVE 4' MINIMUM COVER TO FINISHED GRADE AND MINIMUM 12" CLEAR TO OTHER UTILITES AT CROSSING UNLESS OTHERWISE NOTED ON PLANS. ALL WATER LINE INSTALLED OVER 8' DEEP SHALL UTILIZE RESTRAINED JOINT FITTINGS.
12. CONTRACTOR SHALL KEEP WATER PIPE CLEAN AND CAP (OR OTHERWISE EFFECTIVELY COVER) OPEN PIPE ENDS TO EXCLUDE INSECTS, ANIMALS OR OTHER SOURCES OF CONTAMINATION FROM UNFINISHED PIPE LINES AT TIMES WHEN CONSTRUCTION IS NOT IN PROGRESS.
13. ALL FIRE LINES TO BE INSTALLED AND TESTED PER NFPA REGULATIONS.

SANITARY SEWERS

1. ALL SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST FORT BEND COUNTY, MUD DISTRICT AND TCEQ CRITERIA AND BE SUBJECT TO A REQUIRED FIELD TESTING. TESTS ARE TO BE PERFORMED ON THE TOTAL FOOTAGE OF SEWER LINE INCLUDED IN THE PROJECT. REQUIREMENTS OF TEXAS ADMINISTRATIVE CODE, TITLE 30 CHAPTER 217, "DESIGN CRITERIA FOR SEWERAGE SYSTEMS" SHALL COVERN WHERE CONFLICTS EXIST EXCEPT WHERE CITY REQUIREMENTS ARE OF HIGHER STANDARDS.
2. SANITARY SEWER PIPE USED FOR CONNECTION TO SEWER IN PUBLIC RIGHT-OF-WAY SHALL BE C900 P.V.C. PIPE MEETING ASTM SPECIFICATION D3034 WITH RUBBER GASKET JOINTS. ALL OTHER PRIVATE SANITARY SEWER PIPE MATERIAL SHALL CONFORM TO THE FOLLOWING CRITERIA:

   A) POLYVINYL CHLORIDE (PVC) SCHEDULE 40 TO BE USED FOR PIPE SIZES 6 INCHES AND SMALLER.

   B) STANDARD DIMENSION RATIO (SDR) 35 PVC OR 26 PVC CAN BE USED FOR PIPE SIZES 8 INCHES AND LARGER. SEE NOTE 5 BELOW REGARDING SDR 26 FITTINGS.
3. ALL SANITARY SEWER LINES UNDER PROPOSED OR FUTURE PAVING AND TO A POINT (1) FOOT BACK OF ALL PROPOSED OR FUTURE CURBS SHALL BE ENCASED IN BAND SAND TO 12" OVER PIPE AND BACKFILLED WITH CEMENT STABILIZED SAND TO WITHIN ONE (1) FOOT OF SUBGRADE.
4. ALL SANITARY SEWERS AND WATER LINES CROSSINGS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FORT BEND COUNTY, MUD DISTRICT, AND TCEQ REGULATIONS.
5. SANITARY SEWER MANHOLE RIMS OUTSIDE OF PROPOSED PAVING WILL BE SET 3"- 6" ABOVE THE SURROUNDING LEVEL FINISHED GRADE AFTER PAVING AND GRADING OPERATIONS.
6. SDR 26 P.V.C. PIPE USES "FULL BODIED" SDR 26 P.V.C. FITTINGS OR D.I.P. FITTINGS WITH APPROPRIATE ADAPTERS. AWWA C-900 DR-18 P.V.C. PIPE USES EITHER AWWA C900 DR-18 P.V.C. FITTINGS OR D.I.P. FITTINGS.
7. DEFLECTION TEST: DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE AND SEMI-RIGID SEWER PIPE BETWEEN MANHOLES. SERVICE LEADS SHALL NOT BE TESTED. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF 5%. THE DEFLECTION TEST SHALL USE A RIGID 7-SIDED MANDREL WITH A DIAMETER EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE. NO MECHANICAL PULLING IS ALLOWED.
8. INFILTRATION, EXFILTRATION OR LOW-PRESSURE AIR TEST: EITHER OF THE FOLLOWING TESTS SHALL BE PERFORMED AS PER TAC, TITLE 30 217.2 WITHIN THE SPECIFIED TOLERANCES ON ALL GRAVITY SEWERS.
9. NO CONNECTIONS SHALL BE MADE TO THE EXISTING SANITARY SEWER LINES UNTIL ALL PROPOSED SEWER LINES HAVE BEEN THOROUGHLY CLEANED, TESTED AND APPROVED BY THE ENGINEER. THE ENGINEER AND MUD DISTRICT SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO THE CONTRACTOR CONNECTING TO ANY EXISTING SEWER LINES.
10. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE CITY/COUNTY AT LEAST 48 HOURS PRIOR TO PRESSURE AND DEFLECTION TEST ON ALL SANITARY LINES.
11. ALL SEWER LINES ENTERING A MANHOLE AT A FLOWLINE HIGHER THAN 3.0' OR 36" ABOVE THE MANHOLE INVERT MUST BE PROVIDED WITH A DROP PIPE OUTSIDE OF THE MANHOLE.

TRAFFIC NOTES

1) CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH PART VI OF TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD – LATEST EDITION WITH REVISIONS) DURING CONSTRUCTION.

2) NO LANES SHALL BE BLOCKED FROM 7 A.M. TO 9 A.M. AND 4 P.M. TO 6:30 P.M. MONDAY THRU FRIDAY.

3) OFF DUTY POLICE OFFICERS/FLAGGERS ARE REQUIRED TO DIRECT TRAFFIC WHEN LANES ARE BLOCKED.

4) CONTRACTOR SHALL COVER THE EXCAVATION WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS AND ALLOW NORMAL TRAFFIC FLOW. IF COVERING IS NOT FEASIBLE, USE TRANTEX FR 330 EFX 36" DELINEATOR OR APPROVED EQUAL WITH SHEETING AND BASE EPOXED TO PAVEMENT NEXT TO EXCAVATION DURING NON-WORKING HOURS.

5) APPROVED COPIES OF "TRAFFIC CONTROL PLANS" SHALL BE AVAILABLE FOR INSPECTION AT ALL TIMES.

*THESE PLANS SHALL BE DRAWN TO SCALE ON REPRODUCIBLE MYLARS AND SEALED BY A LICENSED ENGINEER IN THE STATE OF TEXAS. PLANS WILL BECOME A PART OF THE CONTRACT DRAWINGS.

**THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND OPERATION FOR ANY AND ALL TRAFFIC CONTROL MEASURES AS REQUIRED BY REGULATING AGENCIES OR FOR THE SAFE EXECUTION OF THE WORK SHOWN WITHIN THESE CONSTRUCTION DOCUMENTS. NO SEPERATE PAY.

TXDOT STANDARDS ARE TO BE USED FOR THE TRAFFIC CONTROL PLAN.

SWPPP NOTES

1. POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION SITE:

   -ADHESIVES, PESTICIDES, DETERGENTS, PAINTS, FUELS, SOLVENTS, SEALANTS, FERTILIZERS, OILS, HERBICIDES, CLEANING SOLUTIONS, CONCRETE/CEMENT/PLASTER
2. STORM WATER QUALITY MEASURE IMPLEMENTATION RELATIVE TO LAND DISTURBING ACTIVITIES:

   A. PRIOR TO CONSTRUCTION: SILT FENCING SHALL BE INSTALLED IN ALL LOCATIONS SHOWN ON SITE MAP THAT WILL NOT BE DISTURBED DURING THE INITIAL GRADING PROCESS. THE STABILIZED CONSTRUCTION EXIT SHALL BE INSTALLED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

   B. DURING CONSTRUCTION:

      B.1: IMMEDIATELY AFTER PAVING CONSTRUCTION IS COMPLETE, INLET PROTECTION TRAPS WILL BE INSTALLED ON ALL NEWLY CONSTRUCTED INLETS.

      B.2. WHEN EXISTING SILT FENCING NEEDS TO BE REMOVED FOR CONSTRUCTION OR ACCESS PURPOSES, IT WILL BE REPLACED AS SOON AS POSSIBLE AFTER CONSTRUCTION IN THE VICINITY OF THE REMOVED FENCE IS COMPLETE.

      B.3. AS SOON AS PRACTICABLE AFTER SITE GRADING IS COMPLETE, FINAL STABILIZATION PROCEDURES SUCH AS TURF ESTABLISHMENT AND INSTALLATION OF PLANT MATERIAL WILL BE COMMENCED.

   C. AFTER CONSTRUCTION: AFTER CONSTRUCTION ACTIVITY AND SITE STABILIZATION PROCEDURES ARE COMPLETE, STRUCTURAL EROSION AND SEDIMENT CONTROLS WILL BE REMOVED. SOIL DISTURBED BY THE REMOVAL OF CONTROLS WILL BE STABILIZED.
3. PERMANENT STORM WATER CONTROLS: AFTER CONSTRUCTION ACTIVITY IS COMPLETE, AREAS NOT COVERED BY CONCRETE PAVEMENT OR BY STRUCTURES WILL BE LANDSCAPED AND IRRIGATED. ONCE ESTABLISHED, THIS VEGETATION WILL HELP PREVENT SEDIMENT RUNOFF IN THE FUTURE STORM EVENTS. NEWLY GRADED AREA WILL BE FERTURED TO REDUCE FLOW VELOCITY.
4. MATERIAL HANDLING AND SPILL PREVENTION PLAN:

   A. HAZARDOUS MATERIALS WILL BE STORED AND USED IN CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS. DISPOSAL WILL BE PERFORMED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION, AND IN ACCORDANCE WITH STATE AND LOCAL LAWS AND REGULATIONS.

   B. THE FOLLOWING PROCEDURES WILL BE FOLLOWED FOR CONTAINMENT AND CLEAN-UP OF SPILLS:

      B.1. ALL SPILLS WILL BE CLEANED UP AND PROPERLY REMOVED IN ACCORDANCE WITH STATE REGULATIONS AND LOCAL ORDINANCES

      B.2. SOIL AND SPILLED MATERIALS WILL BE COLLECTED UNTIL NO VISIBLE EVIDENCE OF SPILLED MATERIAL REMAINS

      B.3. THE TYPE OF MATERIAL AND QUANTITY OF RELEASE SHALL BE DETERMINED, AND APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (PPE) SHALL BE WORN AS RECOMMENDED BY THE PRODUCT-SPECIFIC MSDS.

      B.4. SPILL CONTAINMENT MAY BE INCLUDE CONSTRUCTION OF EARTH DIKES AROUND THE SPILL AREA, DEPLOYMENT OF ABSORBENT MATERIALS, OR USE OF COMMERCIALLY AVAILABLE KITS.

      B.5. CONTAMINATED SOIL AND SPILLED MATERIAL WILL BE STORED IN APPROPRIATE AND PROPERLY LABELED CONTAINERS, AND DISPOSED OF IN ACCORDANCE WITH STATE, LOCAL, AND FEDERAL RULES AND REGULATIONS.
5. GENERAL PERMIT MAINTENANCE REQUIREMENTS (FROM GENERAL PERMIT):

   A. ALL PROTECTIVE MEASURES IDENTIFIED IN THIS SWPPP MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION. IF, THROUGH INSPECTION OR OTHER MEANS, THE PERMITEE DETERMINES THAT BMPS ARE NOT OPERATING EFFECTIVELY, THEN THE PERMITEE SHALL PERFORM MAINTENANCE AS NECESSARY TO MAINTAIN THE CONTINUED EFFECTIVENESS OF STORM WATER CONTROLS, AND PRIOR TO THE NEXT RAIN EVENT, IF FEASIBLE. IF MAINTENANCE PRIOR TO THE NEXT RAIN EVENT IS IMPRACTICABLE, THE REASON SHALL BE DOCUMENTED IN THE SWPPP AND MAINTENANCE MUST BE SCHEDULED AND ACCOMPLISHED AS SOON AS PRACTICABLE. EROSION AND SEDIMENT CONTROLS THAT HAVE BEEN INTENTIONALLY DISABLED, BUM-OVER, REMOVED, OR OTHERWISE RENDERED INEFFECTIVE MUST BE REPLACED OR CORRECTED IMMEDIATELY UPON DISCOVERY.

   B. IF PERIODIC INSPECTIONS OR OTHER INFORMATION INDICATES A CONTROL HAS BEEN USED INCORRECTLY, IS PERFORMING INADEQUATELY, OR IS DAMAGED, THEN THE OPERATOR MUST REPLACE OR MODIFY THE CONTROL AS SOON AS PRACTICABLE AFTER MAKING THE DISCOVERY.

   C. SEDIMENT MUST BE REMOVED FROM SEDIMENT TRAPS AND SEDIMENTATION PONDS NO LATER THAN THE TIME THAT DESIGN CAPACITY HAS BEEN REDUCED BY 50%. FOR PERIMETER CONTROLS SUCH AS SILT FENCES, BERMS, ETC., THE TRAPPED SEDIMENT MUST BE REMOVED BEFORE IT REACHES 50% OF THE ABOVE GROUND HEIGHT.

   D. IF SEDIMENT ESCAPES THE SITE, ACCUMULATIONS MUST BE REMOVED AT A FREQUENCY THAT MINIMIZES OFF-SITE IMPACTS, AND PRIOR TO THE NEXT RAIN EVENT, IF FEASIBLE. IF THE PERMITEE DOES NOT OWN THE OFFSITE CONVEYANCE, THEN THE PERMITEE MUST WORK WITH THE OWNER OR OPERATOR OF THE PROPERTY TO REMOVE THE SEDIMENT.
6. EROSION AND SEDIMENT CONTROLS:

   A. THE FOLLOWING NON-STRUCTURAL EROSION AND SEDIMENT CONTROLS WILL BE UTILIZED ON THE PROJECT SITE:

      A.1. WHERE PRACTICAL, CARE WILL BE TAKEN TO PROTECT NATURAL VEGETATION THAT DOES NOT NEED TO BE REMOVED FOR CONSTRUCTION PURPOSES.

      A.2. PLACEMENT OF CONCRETE PARKING AND DRIVEWAY AREAS WILL BE PERFORMED AS SOON AS POSSIBLE AFTER SUB-GRADE STABILIZATION, TO MINIMIZE THE AMOUNT OF TIME DISPOSED SOIL IS EXPOSED TO THE ELEMENTS. THIS PRACTICE WILL REDUCE THE FREQUENCY THAT MAINTENANCE IS REQUIRED ON THE STRUCTURAL BMP.

      A.3. THE GENERAL PERMIT REQUIRES THAT EROSION AND STABILIZATION MEASURES MUST BE INITIATED WITHIN 14 DAYS IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS CEASED. IF CONSTRUCTION ACTIVITY IS SCHEDULED TO RESUME WITHIN 21 DAYS FROM THE CESSATION OF CONSTRUCTION ACTIVITY, EROSION AND STABILIZATION MEASURES ARE NOT REQUIRED FOR THAT PORTION OF THE SITE.

      A.4. STABILIZATION PROCEDURES SUCH AS TURF ESTABLISHMENT AND INSTALLATION OF PLANT MATERIAL SHOULD BE COMMENCED AS SOON AS PRACTICABLE AFTER SITE GRADING IS COMPLETE AND FINAL.

   B. THE FOLLOWING STRUCTURAL EROSION AND SEDIMENT CONTROLS WILL BE UTILIZED ON THE PROJECT SITE:

      B.1. A STABILIZED CONSTRUCTION EXIT WILL BE INSTALLED AT THE LOCATION WHERE CONSTRUCTION TRAFFIC EXITS THE PROJECT SITE

      B.2. INLET PROTECTION TRAPS WILL BE INSTALLED AT ALL INLETS IMMEDIATELY AFTER CONCRETE PAVEMENT IS PLACED

      B.3. SILT FENCING (FILTER FABRIC FENCE OR REINFORCED FILTER FABRIC FENCE) WILL BE INSTALLED ALONG THE PROPERTY BOUNDARY AND ADJACENT TO EXISTING DITCHES, BAYOUS, STREAMS, RIVERS, AND/OR CHANNELS.

      B.4. ANY SEDIMENT THAT ENTERS THE STORM SEWER SYSTEM WILL BE REMOVED IMMEDIATELY (NOT FLUSHED).

      B.5. SINCE ALL PROPOSED INLETS DRAIN LESS THAN 10-ACRES, SEDIMENT BASINS ARE NOT REQUIRED FOR THIS SITE.

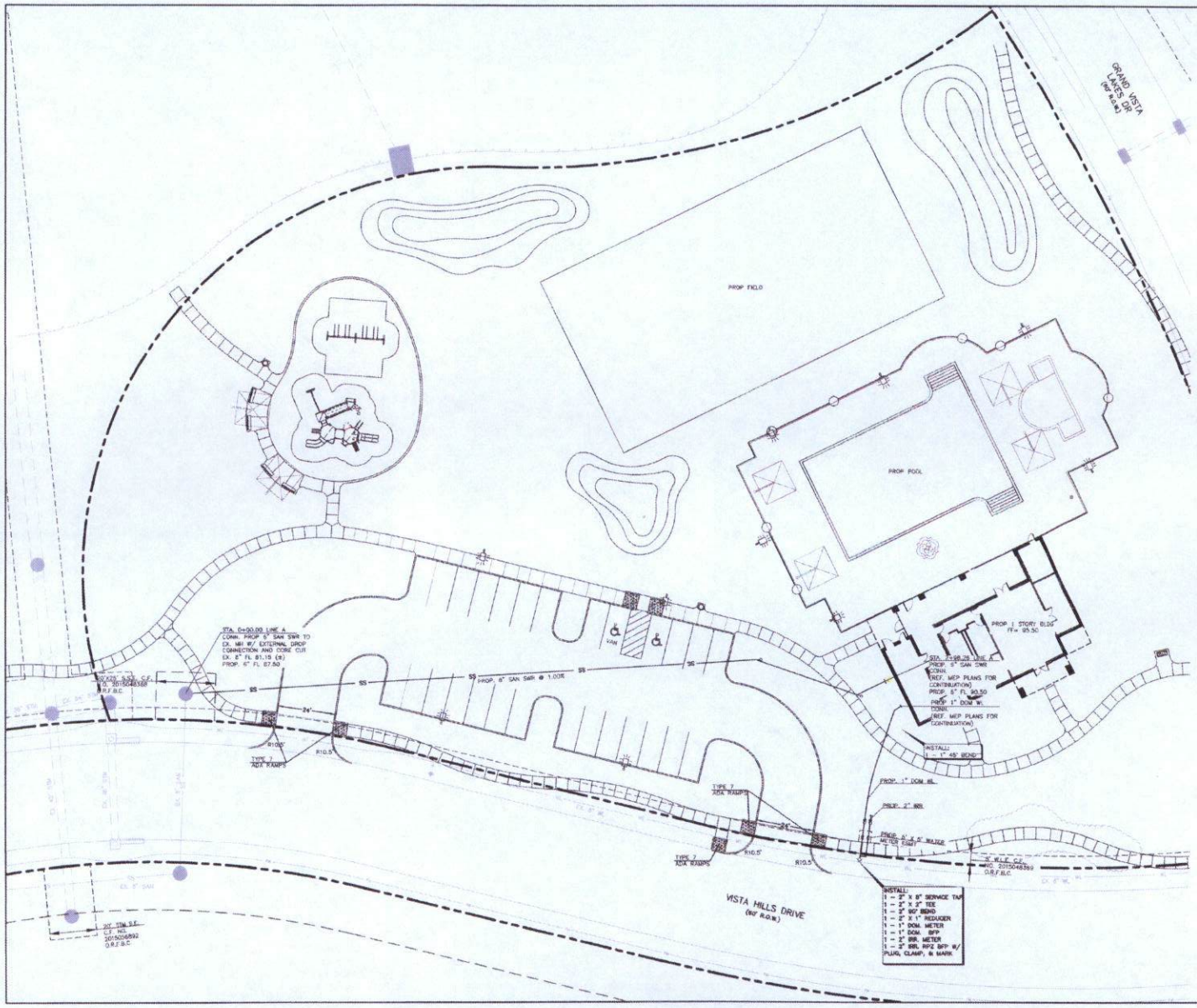
      B.6. WHERE PRACTICAL, CARE WILL BE TAKEN TO PROTECT NATURAL VEGETATION THAT DOES NOT NEED TO BE REMOVED FOR CONSTRUCTION PURPOSES.

FORT BEND COUNTY NOTES:

1. FORT BEND COUNTY MUST BE INVITED TO THE PRE-CONSTRUCTION MEETING.
2. CONTRACTOR SHALL NOTIFY FORT BEND COUNTY ENGINEERING DEPARTMENT 48 HOURS PRIOR TO COMMENCING CONSTRUCTION AND 48 HOUR NOTICE TO ANY CONSTRUCTION ACTIVITY WITHIN THE LIMITS OF THE PAVING AT CONSTRUCTIONREPORT@FORTBENDCOUNTYTX.GOV.
3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FROM FORT BEND COUNTY PRIOR TO COMMENCING CONSTRUCTION OF ANY IMPROVEMENTS WITHIN COUNTY ROAD RIGHT OF WAYS.
4. ALL PAVING IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FORT BEND COUNTY "RULES, REGULATIONS AND REQUIREMENTS RELATING TO THE APPROVAL AND ACCEPTANCE OF IMPROVEMENTS IN SUBDIVISIONS AS CURRENTLY AMENDED.
5. ALL ROAD WIDTHS, CURB RADII AND CURB ALIGNMENT SHOWN INDICATES BACK OF CURB.
6. A CONTINUOUS LONGITUDINAL REINFORCING BAR SHALL BE USED IN THE CURBS.
7. ALL CONCRETE PAVEMENT SHALL BE 5 ½ SACK CEMENT WITH A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI AT 28 DAYS. TRANSVERSE EXPANSION JOINTS SHALL BE INSTALLED AT EACH CURB RETURN AND AT A MAXIMUM SPACING OF 60 FEET.
8. ALL WEATHER ACCESS TO ALL EXISTING STREETS AND DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES.
9. 4" X 12" REINFORCED CONCRETE CURB SHALL BE PLACED IN FRONT OF SINGLE FAMILY LOTS ONLY. ALL OTHER AREAS SHALL BE 6" REINFORCED CONCRETE CURB.
10. AT ALL INTERSECTION LOCATIONS, TYPE 7 RAMPS SHALL BE PLACE IN ACCORDANCE WITH TXDOT PED-12A STANDARD DETAIL SHEET. A.D.A. – HANDICAP RAMPS SHALL BE INSTALLED WITH STREET PAVING AT ALL INTERSECTIONS AND COMPLY WITH CURRENT A.D.A. REGULATIONS.
11. CURB HEADERS ARE REQUIRED AT CURB CONNECTIONS TO HANDICAP RAMPS, WITH NO CONSTRUCTION JOINT WITHIN 5' OF RAMPS.
12. ALL INTERSECTIONS UTILIZING TRAFFIC CONTROL MEASURES SHALL HAVE A.D.A. WHEEL CHAIR RAMPS INSTALLED.
13. GUIDELINES ARE SET FORTH IN THE TEXAS "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" AS CURRENTLY AMENDED, SHALL BE OBSERVED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE FLAGMEN, SIGNING, STRIPING AND WARNING DEVICES, ETC., DURING CONSTRUCTION – BOTH DAY AND NIGHT.
14. ALL R1-1 STOP SIGNS SHALL BE 30" X 30" WITH DIAMOND GRADE SHEETING PER TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
15. STREET NAME SIGNAGE SHALL BE ON A 9" HIGH SIGN FLAT BLADE W/ REFLECTIVE GREEN BACKGROUND. STREET NAMES SHALL BE UPPER AND LOWERCASE LETTERING WITH UPPERCASE LETTERS OF 6" MINI

BENCHMARK:
CONTROL BENCH - R47"(CNSB) BRASS DISK SET IN EAST END OF SOUTH HEADWALL, APPROX. 0.45 MILE WEST OF MILEPOST NO. 25 & APPROX. 17' SOUTH OF CENTERLINE OF FM 1093 (RCSID: CONB). POINT IS WEST OF THE INTERSECTION OF HARLEM ROAD & FM 1093 (RED LIGHT). 5.03 MILES
ELEVATION = 105.52' (NGVD 1929, 1987 ADJ.)

TEMPORARY BENCHMARK "A"
CUT BOX ON CL @ GRAND VISTA SPRINGS BLVD. +/-147 SOUTH OF THE C/L INTERSECTION OF GRAND VISTA SPRINGS BLVD AND GRASSMERE ROAD.
ELEVATION = 93.64' (NGVD 1929, 1987 ADJ.)



GRAPHIC SCALE

LEGEND

SS — W/ CLEAN OUT	PROPOSED SANITARY SEWER
WL	PROPOSED WATER LINE
FIRE	PROPOSED FIRE LINE
	EX. STORM SEWER
	EX. WATER LINE
	EX. SANITARY SEWER LINE
	EX. CONTOUR

GENERAL NOTES

1. REFERENCE SANITARY SEWER AND WATER LINE NOTES SHEET C0.1 FOR PIPE MATERIAL REQUIREMENTS.
2. REFER TO SITE ELECTRICAL PLAN FOR PROPOSED SITE LIGHTING LAYOUT.
3. REFERENCE MEP PLANS FOR CONTINUATION OF SANITARY AND WATER FACILITIES INSIDE BUILDING.
4. ALL CLEANOUTS LOCATED WITHIN CONCRETE PAVEMENT TO BE TRAFFIC RATED.

MULTIPLE EXISTING PUBLIC AND PRIVATE UTILITY LINES EXIST ON THIS SITE. THE UTILITY LINES SHOWN ON THESE DRAWINGS REFLECT INFORMATION OBTAINED FROM RECORD DRAWINGS AND MAY NOT INCLUDE ALL EXISTING UTILITIES. CONTRACTOR IS TO USE EXTREME CAUTION DURING ALL CONSTRUCTION ACTIVITIES AND IS SOLELY RESPONSIBLE FOR DAMAGE TO EXISTING FACILITIES.

FBCMUD NO. 30 NOTES

1. CONTACT THE DISTRICT'S OPERATOR (MUNICIPAL UTILITIES SERVICES, INC.) FOR TAP FEES AND INSPECTION OF WATER TAPS AND SANITARY SEWER CONNECTIONS.

APPROVED: _____ DEVELOPMENT COORDINATOR
DATE: 7-11-17

CALL BEFORE YOU DIG
TEXAS ONE CALL PARTICIPANTS REQUIRE 72 HOURS NOTICE BEFORE YOU DIG, DRILL OR BLAST – STOP CALL
TEXAS ONE CALL SYSTEM
1-800-545-6005
IN HOUSTON
(713)-223-4567

No.	REVISIONS	DATE

ALJ Lindsey
Civil Engineers
9111 FM 1093 Rd., Suite 200
Richmond, Texas 77407
281 501 8400
FIRM # F-1038

A. LESTER JONES
102152
REGISTERED
PROFESSIONAL ENGINEER
11 JANUARY 2017

UTILITY PLAN

GRAND VISTA NORTH RECREATION CENTER

FORT BEND COUNTY, TEXAS

SHEET
C1.0

APPROVED: _____
DEVELOPMENT COORDINATOR

DATE: _____

BENCHMARK:
CONTROL BENCH - RIM (CONN BRASS DISK SET IN EAST END OF SOUTH HEADWALL, APPROX. 0.15 MILE WEST OF MILEPOST NO. 25 & APPROX. 17' SOUTH OF CENTERLINE OF FM 1093 (RECD 60-12/68). POINT IS WEST OF THE INTERSECTION OF HARLEM ROAD & FM 3683 (RED LIGHT) 3.03 MILES ELEVATION = 105.52' (NGVD 1929, 1967 ADJ.)

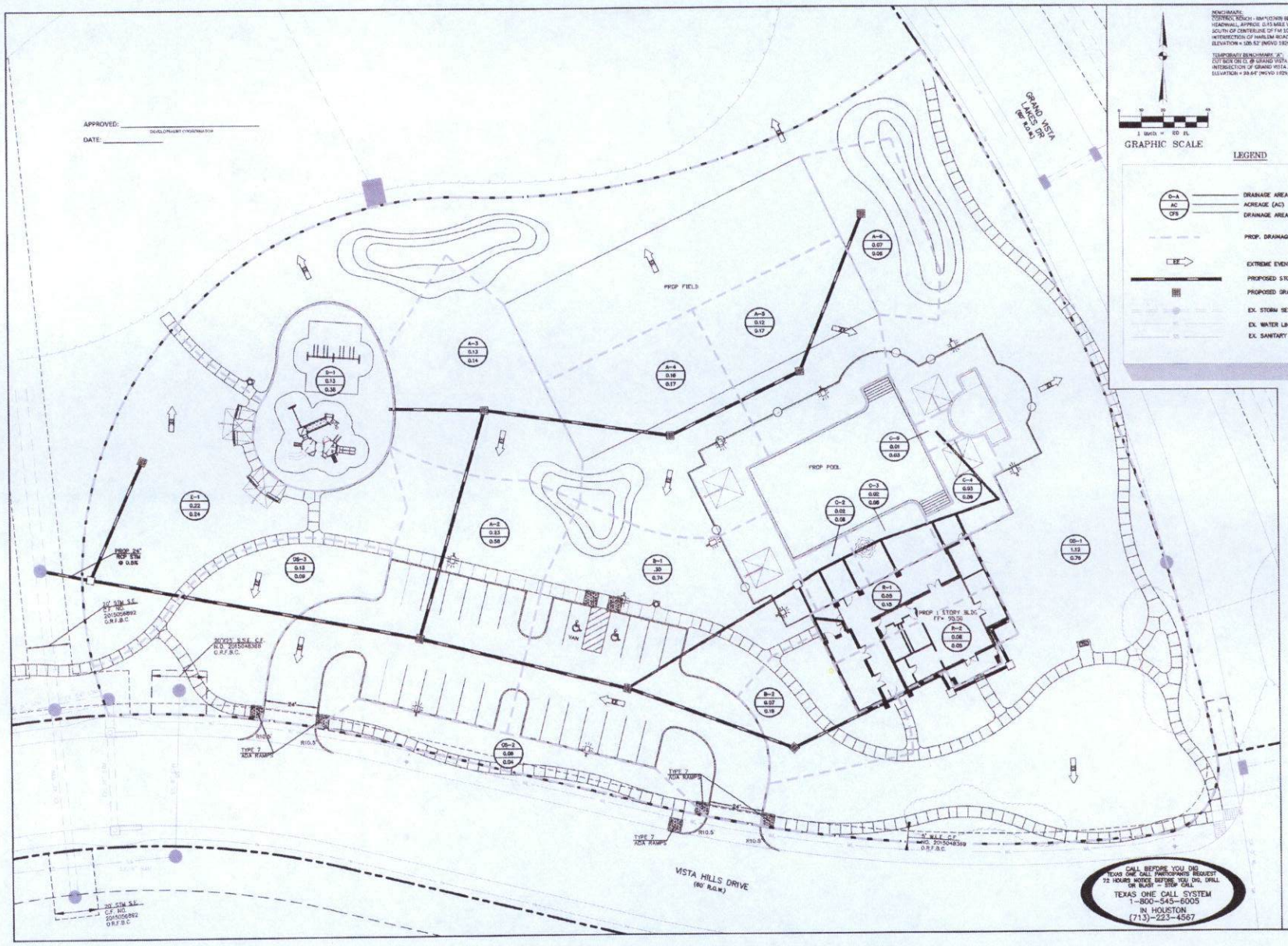
TEMPORARY BENCHMARK #1:
EXT BOX ON CL @ GRAND VISTA SPRINGS BLVD, +/-247 SOUTH OF THE C/L INTERSECTION OF GRAND VISTA SPRINGS BLVD AND GRASSWREN ROAD. ELEVATION = 38.67 (NGVD 1929, 1967 ADJ.)

1 inch = 60 ft.

GRAPHIC SCALE

LEGEND

- D-A / AC / CFS — DRAINAGE AREA NUMBER / ACREAGE (AC) / DRAINAGE AREA FLOW (CFS)
- PROP. DRAINAGE AREA BOUNDARY
- EXTREME EVENT OVERLAND FLOW
- PROPOSED STORM SEWER
- PROPOSED GRATE INLET/JUNCTION BOX
- EX. STORM SEWER
- EX. WATER LINE
- EX. SANITARY SEWER LINE



Cassandra Lee for Development Coordinator
2/10/17
DATE

NO.	REVISIONS	DATE

AL Lindsey
Civil Engineers
Texas Registered Firm
Number 13-1900
FIRM #F-1900

A. LESTER JONES
102152
REGISTERED
PROFESSIONAL ENGINEER

11 JANUARY 2017

DRAINAGE BOUNDARIES

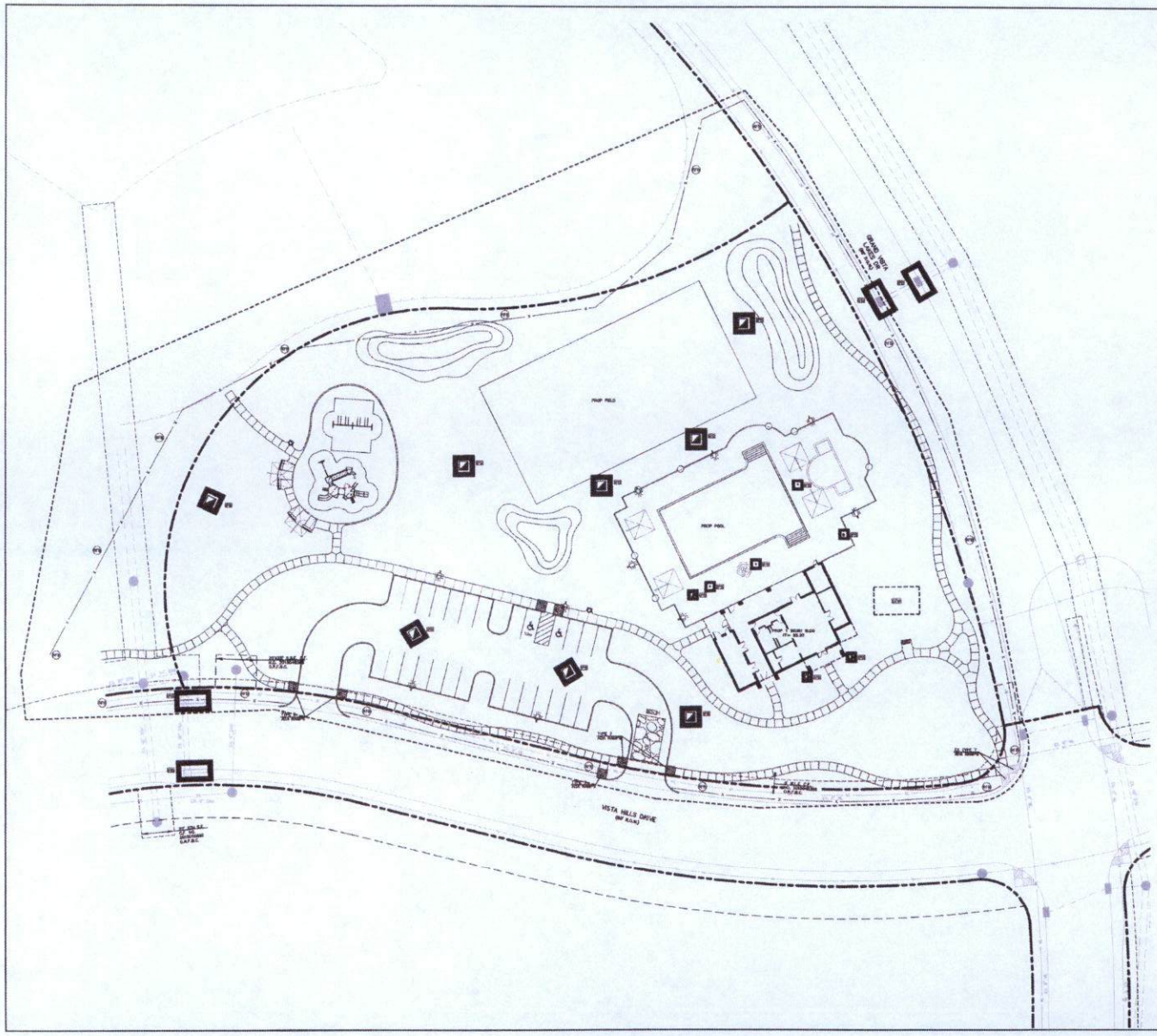
GRAND VISTA NORTH RECREATION CENTER

FORT BEND COUNTY, TEXAS

SHEET
C2.0

BENCHMARKS:
CONTROL BENCH = RM#7(STAIN BRASS DISK SET IN EAST END OF SOUTH HEADWALL, APPROX. 0.43 MILE WEST OF MILEPOST NO. 25 & APPROX. 17' SOUTH OF CENTERLINE OF FM 1093 (FNCSD ID: 22168). POINT IS WEST OF THE INTERSECTION OF HARLEM ROAD & FM 1093 (RED LIGHT) (1.18 MILES
ELEVATION = 105.57' (NGVD 1929, 1987 ADJ.)

TEMPORARY BENCHMARK "A":
CUT NOTCH ON C/L @ GRAND VISTA SPRINGS BLVD. +/-147 SOUTH OF THE C/L INTERSECTION OF GRAND VISTA APRINGS BLVD AND GRASSWREN ROAD.
ELEVATION = 98.64' (NGVD 1929, 1987 ADJ.)



1 inch = 30 ft.
GRAPHIC SCALE

LEGEND

- STABILIZED CONSTRUCTION ENTRANCE (SEE DETAIL, SHEET C4.1)
- CONCRETE TRUCK WASHOUT (SEE DETAIL, SHEET C4.1)
- SILT FENCE (SEE DETAIL, SHEET C4.1)
- LIMITS OF DISTURBED AREA
- INLET PROTECTION BARRIER SEE SHEET C4.1)

GENERAL NOTES

1. CONTRACTOR TO MAINTAIN A CLEAN PROJECT SITE AND ENSURE THAT ALL DEBRIS IS PLACED IN DESIGNATED AREA PER PLANS. ALL SPOIL MATERIAL GENERATED FROM CONSTRUCTION ACTIVITY TO BE HAULED OFFSITE AND DISPOSED IN ACCORDANCE WITH LOCAL LAWS, RULES, AND REGULATIONS.

MULTIPLE EXISTING PUBLIC AND PRIVATE UTILITY LINES EXIST ON THIS SITE. THE UTILITY LINES SHOWN ON THESE DRAWINGS REFLECT INFORMATION OBTAINED FROM RECORD DRAWINGS AND MAY NOT INCLUDE ALL EXISTING UTILITIES. CONTRACTOR IS TO USE EXTREME CAUTION DURING ALL CONSTRUCTION ACTIVITIES AND IS SOLELY RESPONSIBLE FOR DAMAGE TO EXISTING FACILITIES.

APPROVED: [signature]
DEVELOPMENT COORDINATOR
DATE: 2-16-17

CALL BEFORE YOU DIG
TEXAS ONE CALL PARTICIPANTS REQUIRE 72 HOURS NOTICE BEFORE YOU DIG, DRILL OR BLAST – STOP CALL
TEXAS ONE CALL SYSTEM
1-800-545-6005
IN HOUSTON
(713)-223-4567

NO.	REVISION	DATE
1	RE-ISSUED	

ALJ Lindsey
Civil Engineers
Surveyors
Houston, TX 77056
(713) 621-8100
FIRM # 10083

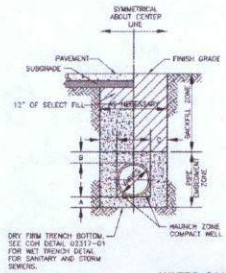
A. LESTER JONES
102152
REGISTERED
PROFESSIONAL ENGINEER
11 JANUARY 2017

EROSION CONTROL PLAN

GRAND VISTA NORTH RECREATION CENTER

FORT BEND COUNTY, TEXAS

SHEET
C3.0



DIMENSIONAL REQUIREMENTS

PIPE SIZE	A	B	C
24" AND SMALLER	6"	12"	9"
27" THRU 48"	8"	12"	12"
54" THRU 66"	9"	12"	12"
72" AND LARGER	12"	18"	15"

MATERIAL REQUIREMENTS

BACKFILL ZONE

1. IN PAVED AREAS, USE CEMENT STABILIZED SAND, PLACE IN 8" LIFTS AND COMPACT TO 93% STANDARD PROCTOR DENSITY, TO WITHIN 12" OF SUBGRADE.

2. IN UNPAVED AREAS, USE SOIL EXCAVATED FROM TRENCH, PLACE IN 8" LIFTS AND COMPACT TO 95% STANDARD PROCTOR DENSITY.

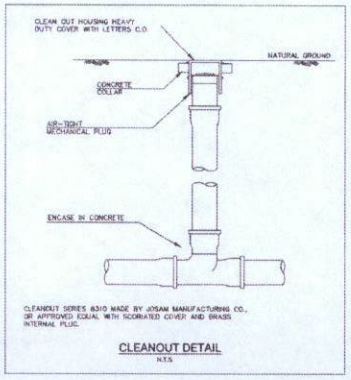
PIPE EMBEDMENT ZONE

1. FOR STORM AND SANITARY SEWERS, USE CEMENT STABILIZED SAND, PLACE IN 8" LIFTS AND COMPACT TO 93% STANDARD PROCTOR DENSITY.

2. FOR WATER LINES, USE SAND, PLACE IN 8" LIFTS AND COMPACT TO 95% STANDARD PROCTOR DENSITY.

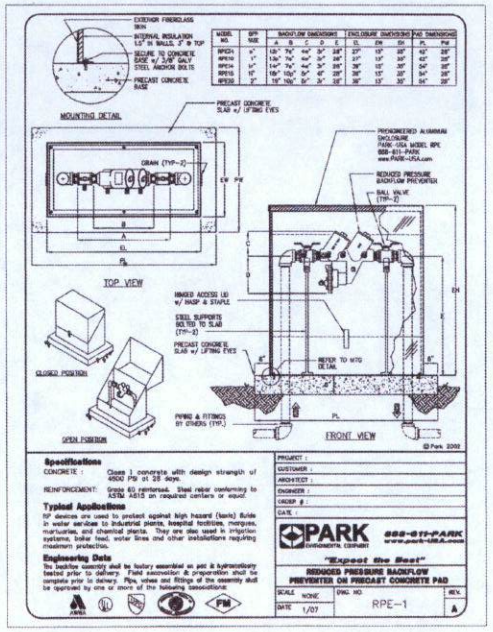
WATER, SANITARY AND STORM BEDDING AND BACKFILL FOR DRY STABLE TRENCH

N.T.S.



CLEANOUT DETAIL

N.T.S.



MODEL NO.	RPE SIZE	SHOCKFLOW DIMENSIONS A	B	C	D	E	ENCLOSURE DIMENSIONS EL	EW	EH	PAD DIMENSIONS PL	PW
RPE06	6"	18"	74"	44"	9"	24"	27"	15"	30"	42"	28"
RPE10	1"	13.5"	74"	44"	9"	24"	27"	15"	30"	42"	28"
RPE14	1.5"	14.5"	74"	44"	9"	24"	28"	15"	30"	42"	28"
RPE16	2"	16.5"	102"	64"	9"	28"	28"	15"	30"	54"	28"
RPE20	3"	19"	102"	64"	9"	32"	28"	15"	30"	54"	28"

Specifications

CONCRETE : Class 3 concrete with design strength of 4500 PSI at 28 days.

REINFORCEMENT: Grade 60 reinforced. Steel rebar conforming to ASTM A615 in required centers or equal.

Typical Applications

RP devices are used to protect against high hazard (toxic) fluids in water services to industrial plants, hospital facilities, morgues, mortuaries, and chemical plants. They are also used in irrigation systems, boiler feed, water lines and other installations requiring maximum protection.

Engineering Data

The backflow assembly shall be factory assembled on pad & hydrostatically tested prior to delivery. Field excavation & preparation shall be complete prior to delivery. Pipe, valves and fittings of the assembly shall be approved by one or more of the following associations:

PROJECT :
CUSTOMER :
ARCHITECT :
ENGINEER :
CHGRP # :
DATE :

PARK ENVIRONMETAL COMPANY 888-611-PARK www.park-usa.com

"Expect the Best"

REDUCED PRESSURE BACKFLOW PREVENTER ON PRECAST CONCRETE PAD

SCALE	DWG. NO	REV.
NONE	RPE-1	A
DATE 1/07		

APPROVED: Cassandra R. Sg
DEVELOPMENT COORDINATOR
DATE: 2-10-17

NO.	REVISIONS	DATE

ALJLindsey
Civil Engineers
4111 FM 1960 W., Suite 200
Houston, Texas 77068
281.301.1000
FIRM # 11929

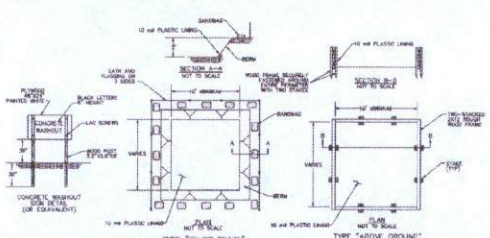
A. LESTER JONES 102182 REGISTERED PROFESSIONAL ENGINEER

11 JANUARY 2017

CONSTRUCTION DETAILS (1 OF 2)

GRAND VISTA NORTH RECREATION CENTER
FORT BEND COUNTY, TEXAS

SHEET
C4.0



NOTES:

1. DURING WASHOUT FACILITIES ARE TO BE LOCATED AT LEAST 50' FROM STORM DRAIN INLETS, OPEN DRAINAGE FACILITIES, OR WATER BODIES.
2. A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 50' OF THE CONCRETE WASHOUT FACILITY.
3. ONCE 75% OF THE ORIGINAL VOLUME OF THE WASHOUT PIT IS FILLED OR IF THE LINER IS TORN, THE MATERIAL MUST BE REMOVED AND PROPERLY DISPOSED OF. ONCE IT IS COMPLETELY HARDENED, ONCE THE HARDENED CONCRETE IS REMOVED, THE LINER MUST BE REPLACED OR TORN. A NEW PIT MUST BE CONSTRUCTED IF THE WASHOUT PIT IS NOT BEING MAINTAINED PROPERLY.
4. ONCE THE PIT IS NO LONGER NEEDED, ENSURE ALL WASHOUT MATERIAL HAS COMPLETELY HARDENED, THEN REMOVE AND PROPERLY DISPOSE OF ALL MATERIALS.

CONCRETE TRUCK WASHOUT
N.T.S.

SWPPP NOTES

1) POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION SITE:

–ADHESIVES, PESTICIDES, DETERGENTS, PAINTS, FUELS, SOLVENTS, SEALANTS, FERTILIZERS, OILS, HERBICIDES, CLEANING SOLUTIONS, CONCRETE/CEMENT/PLASTER

2) STORM WATER QUALITY MEASURE IMPLEMENTATION RELATIVE TO LAND DISTURBING ACTIVITIES:

A) PRIOR TO CONSTRUCTION: SILT FENCING SHALL BE INSTALLED IN ALL LOCATIONS SHOWN ON SITE MAP THAT WILL NOT BE DISTURBED DURING THE INITIAL GRADING PROCESS. THE STABILIZED CONSTRUCTION EXIT SHALL BE INSTALLED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

B) DURING CONSTRUCTION:

a)IMMEDIATELY AFTER PAVING CONSTRUCTION IS COMPLETE, INLET PROTECTION TRAPS WILL BE INSTALLED ON ALL NEWLY CONSTRUCTED INLETS.

b)WHEN EXISTING SILT FENCING NEEDS TO BE REMOVED FOR CONSTRUCTION OR ACCESS PURPOSES, IT WILL BE REPLACED AS SOON AS POSSIBLE AFTER CONSTRUCTION IN THE VICINITY OF THE REMOVED FENCE IS COMPLETE.

c)AS SOON AS PRACTICABLE AFTER SITE GRADING IS COMPLETE, FINAL STABILIZATION PROCEDURES SUCH AS TURF ESTABLISHMENT AND INSTALLATION OF PLANT MATERIAL WILL BE COMMENCED.

C) AFTER CONSTRUCTION: AFTER CONSTRUCTION ACTIVITY AND SITE STABILIZATION PROCEDURES ARE COMPLETE, STRUCTURAL EROSION AND SEDIMENT CONTROLS WILL BE REMOVED. SOIL DISTURBED BY THE REMOVAL OF CONTROLS WILL BE STABILIZED.

3) PERMANENT STORM WATER CONTROLS: AFTER CONSTRUCTION ACTIVITY IS COMPLETE, AREAS NOT COVERED BY CONCRETE PAVEMENT OR BY STRUCTURES WILL BE LANDSCAPED AND IRRIGATED. ONCE ESTABLISHED, THIS VEGETATION WILL HELP PREVENT SEDIMENT RUNOFF IN THE FUTURE STORM EVENTS. NEWLY GRADED AREA WILL BE TEXTURED TO REDUCE FLOW VELOCITY.

4) MATERIAL HANDLING AND SPILL PREVENTION PLAN.

A) HAZARDOUS MATERIALS WILL BE STORED AND USED IN CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS. DISPOSAL WILL BE PERFORMED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION, AND IN ACCORDANCE WITH STATE AND LOCAL LAWS AND REGULATIONS.

B) THE FOLLOWING PROCEDURES WILL BE FOLLOWED FOR CONTAINMENT AND CLEAN-UP OF SPILLS:

a)ALL SPILLS WILL BE CLEANED UP AND PROPERLY REMOVED IN ACCORDANCE WITH STATE REGULATIONS AND LOCAL ORDINANCES.

b)SOIL AND SPILLED MATERIALS WILL BE COLLECTED UNTIL NO VISIBLE EVIDENCE OF SPILLED MATERIAL REMAINS

c)THE TYPE OF MATERIAL AND QUANTITY OF RELEASE SHALL BE IDENTIFIED, AND APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (PPE) SHALL BE WORN AS RECOMMENDED BY THE PRODUCT-SPECIFIC MSDS.

d)SPILL CONTAINMENT MAY BE INCLUDE CONSTRUCTION OF EARTH DIKES AROUND THE SPILL AREA, DEPLOYMENT OF ABSORBENT MATERIALS, OR USE OF COMMERCIALLY AVAILABLE KITS.

e)CONTAMINATED SOIL AND SPILLED MATERIAL WILL BE STORED IN APPROPRIATE AND PROPERLY LABELED CONTAINERS, AND DISPOSED OF IN ACCORDANCE WITH STATE, LOCAL, AND FEDERAL RULES AND REGULATIONS.

5) GENERAL PERMIT MAINTENANCE REQUIREMENTS (FROM GENERAL PERMIT):

A) ALL PROTECTIVE MEASURES IDENTIFIED IN THIS SWPPP MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION. IF, THROUGH INSPECTION OR OTHER MEANS, THE PERMITEE DETERMINES THAT BMP'S ARE NOT OPERATING EFFECTIVELY, THEN THE PERMITEE SHALL PERFORM MAINTENANCE AS NECESSARY TO MAINTAIN THE CONTINUED EFFECTIVENESS OF STORM WATER CONTROLS, AND PRIOR TO THE NEXT RAIN EVENT, IF FEASIBLE. IF MAINTENANCE PRIOR TO THE NEXT ANTICIPATED STORM EVENT IS IMPRACTICABLE, THE REASON SHALL BE DOCUMENTED IN THE SWPPP AND MAINTENANCE MUST BE SCHEDULED AND ACCOMPLISHED AS SOON AS PRACTICABLE. EROSION AND SEDIMENT CONTROLS THAT HAVE BEEN INTENTIONALLY DISABLED, RUN-OVER, REMOVED, OR OTHERWISE RENDERED INEFFECTIVE MUST BE REPLACED OR CORRECTED IMMEDIATELY UPON DISCOVERY.

B) IF PERIODIC INSPECTIONS OR OTHER INFORMATION INDICATES A CONTROL HAS BEEN USED INCORRECTLY, IS PERFORMING INADEQUATELY, OR IS DAMAGED, THEN THE OPERATOR MUST REPLACE OR MODIFY THE CONTROL AS SOON AS PRACTICABLE AFTER MAKING THE DISCOVERY.

C) SEDIMENT MUST BE REMOVED FROM SEDIMENT TRAPS AND SEDIMENTATION PONDS NO LATER THAN THE TIME THAT DESIGN CAPACITY HAS BEEN REDUCED BY 50%. FOR PERIMETER CONTROLS SUCH AS SILT FENCES, BERMS, ETC., THE TRAPPED SEDIMENT MUST BE REMOVED BEFORE IT REACHES 50% OF THE ABOVE GROUND HEIGHT.

D) IF SEDIMENT ESCAPES THE SITE, ACCUMULATIONS MUST BE REMOVED AT A FREQUENCY THAT MINIMIZES OFF-SITE IMPACTS, AND PRIOR TO THE NEXT RAIN EVENT, IF FEASIBLE. IF THE PERMITEE DOES NOT OWN THE OFFSITE CONVEYANCE, THEN THE PERMITEE MUST WORK WITH THE OWNER OR OPERATOR OF THE PROPERTY TO REMOVE THE SEDIMENT.

6) EROSION AND SEDIMENT CONTROLS:

A) THE FOLLOWING NON-STRUCTURAL EROSION AND SEDIMENT CONTROLS WILL BE UTILIZED ON THE PROJECT SITE:

a)WHERE PRACTICAL, CARE WILL BE TAKEN TO PROTECT NATURAL VEGETATION THAT DOES NOT NEED TO BE REMOVED FOR CONSTRUCTION PURPOSES.

b)PLACEMENT OF CONCRETE PARKING AND DRIVEWAY AREAS WILL BE PERFORMED AS SOON AS POSSIBLE AFTER SUB-GRADE STABILIZATION, TO MINIMIZE THE AMOUNT OF TIME DISPOSED SOIL IS EXPOSED TO THE ELEMENTS. THIS PRACTICE WILL REDUCE THE FREQUENCY THAT MAINTENANCE IS REQUIRED ON THE STRUCTURAL BMP'S.

c)THE GENERAL PERMIT REQUIRES THAT EROSION AND STABILIZATION MEASURES MUST BE INITIATED WITHIN 14 DAYS IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS CEASED, IF CONSTRUCTION ACTIVITY IS SCHEDULED TO RESUME WITHIN 21 DAYS FROM THE CESSATION OF CONSTRUCTION ACTIVITY. EROSION AND STABILIZATION MEASURES ARE NOT REQUIRED FOR THAT PORTION OF THE SITE.

e)STABILIZATION PROCEDURES SUCH AS TURF ESTABLISHMENT AND INSTALLATION OF PLANT MATERIAL SHOULD BE COMMENCED AS SOON AS PRACTICABLE AFTER SITE GRADING IS COMPLETE AND FINAL.

B) THE FOLLOWING STRUCTURAL EROSION AND SEDIMENT CONTROLS WILL BE UTILIZED ON THE PROJECT SITE:

a)A STABILIZED CONSTRUCTION EXIT WILL BE INSTALLED AT THE LOCATION WHERE CONSTRUCTION TRAFFIC EXITS THE PROJECT SITE.

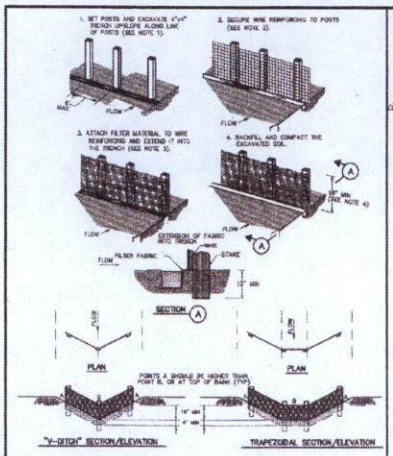
b)INLET PROTECTION TRAPS WILL BE INSTALLED AT ALL INLETS IMMEDIATELY AFTER CONCRETE PAVEMENT IS PLACED.

c)SILT FENCING (FILTER FABRIC FENCE OR REINFORCED FILTER FABRIC FENCE) WILL BE INSTALLED ALONG THE PROPERTY BOUNDARY AND ADJACENT TO EXISTING DITCHES, BAYOUS, STREAMS, RIVERS, AND/OR CHANNELS.

d)ANY SEDIMENT THAT ENTERS THE STORM SEWER SYSTEM WILL BE REMOVED IMMEDIATELY (NOT FLUSHED).

e)SINCE ALL PROPOSED INLETS DRAIN LESS THAN 10-ACRES, SEDIMENT BASINS ARE NOT REQUIRED FOR THIS SITE.

f)WHERE PRACTICAL, CARE WILL BE TAKEN TO PROTECT NATURAL VEGETATION THAT DOES NOT NEED TO BE REMOVED FOR CONSTRUCTION PURPOSES.

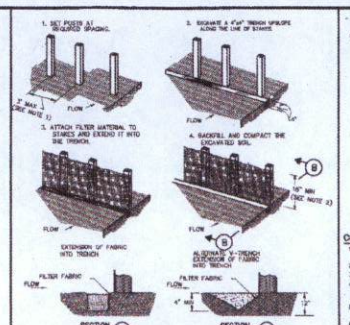


CONSTRUCTION NOTES:

1. SET 2 INCH THICK BY 2 INCH WOODEN STAKES SPACED A MAX OF 6 FEET APART AND EMBEDDED A MIN OF 12 INCHES.
2. WOVEN WIRE REINFORCING TO BE FASTENED SECURELY TO SAWEDD POSTS WITH STAPLES.
3. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE REINFORCING WITH TIES SPACED EVERY 24 INCHES AT TOP AND MIDDLE/TOP.
4. MINIMUM DEPTH OF FILTER SHOULD BE 16 INCHES AND A MAXIMUM OF 30 INCHES ABOVE NATURAL GROUND.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
6. SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.

SYMBOL

REINFORCED FILTER FABRIC BARRIER

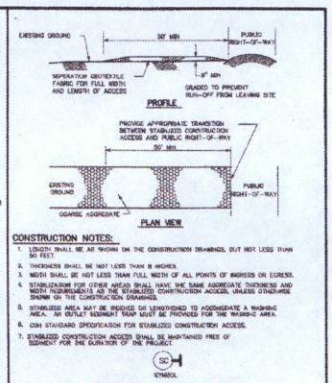


CONSTRUCTION NOTES:

1. 2 INCH THICK BY 2 INCH WOODEN STAKES TO BE SET AT MAX SPACING OF 3 FEET AND EMBEDDED A MIN OF 8 INCHES. IF PREASSEMBLED BARRIER WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAX.
2. ATTACH FILTER FABRIC TO WOODEN STAKES. FILTER FABRIC BARRIER SHALL HAVE A MIN HEIGHT OF 18 INCHES AND MAX HEIGHT OF 36 INCHES ABOVE NATURAL GROUND.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHOULD BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
4. SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.

SYMBOL

FILTER FABRIC BARRIER

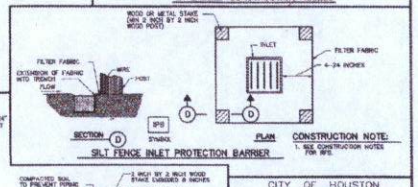


CONSTRUCTION NOTES:

1. LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS, BUT NOT LESS THAN 50 FEET.
2. THICKNESS SHALL BE NOT LESS THAN 8 INCHES.
3. WIDTH SHALL BE NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
4. STABILIZATION FOR OTHER AREAS SHALL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION ACCESS, UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS.
5. STABILIZED AREA MAY BE REDUCED OR LENGTHENED TO ACCOMODATE A WASHING AREA. AN OUTLET SEDIMENT TRAP MUST BE PROVIDED FOR THE WASHING AREA.
6. COH STANDARD SPECIFICATION FOR STABILIZED CONSTRUCTION ACCESS.
7. STABILIZED CONSTRUCTION ACCESS SHALL BE MAINTAINED FREE OF SEDIMENT FOR THE DURATION OF THE PROJECT.

SC
SYMBOL

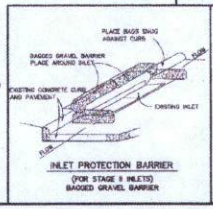
STABILIZED CONSTRUCTION ACCESS



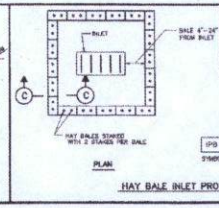
CONSTRUCTION NOTE:

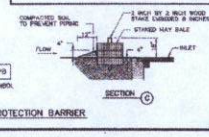
1. SEE CONSTRUCTION NOTES FOR SIPB

SILT FENCE INLET PROTECTION BARRIER



INLET PROTECTION BARRIER
(FOR STAGE II INLETS)
BAGGED GRAVEL BARRIER





HAY BALE INLET PROTECTION BARRIER

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

STORM WATER POLLUTION PREVENTION PLAN DETAILS
(NOT TO SCALE)

CITY ENGINEER | DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EXP DATE: JULY-01-2010 | DWG NO: 01571-01

APPROVED: Clarence A. Se
SEA DEVELOPMENT CORPORATION
DATE 2-10-17

No.	REVISIONS	DATE

ALJLindsey
ALJ Lindsey & Associates, Inc.
9111 Fm 1960 W., Suite 200
Houston, TX 77070
(281) 807-8000
FIRM F-10008

A. LESTER JONES
102182
REGISTERED PROFESSIONAL ENGINEER
11 JANUARY 2017

CONSTRUCTION DETAILS
(2 OF 2)

GRAND VISTA NORTH
RECREATION CENTER
FORT BEND COUNTY, TEXAS

SHEET
C4.1

TUBULAR STEEL / STEEL CONSTRUCTION NOTES

1. THE CONTRACTOR ASSURES THAT ALL COMPONENTS, SPECIFIED OR REQUIRED TO SATISFACTORILY COMPLETE THE INSTALLATION ARE COMPATIBLE WITH EACH OTHER, WITH ADJOINING SUBSTRATES, MATERIALS AND WORK BY OTHER TRADES, AND WITH THE CONDITIONS OF INSTALLATION AND EXPECTED USE.
2. ALL TUBULAR STEEL POSTS, PICKETS, CHANNELS, RAILS AND ALL AS STEEL MOUNTING PLATES OR WELD PLATES THROUGHOUT AND SET ARE TO BE PRE-GALVANIZED STEEL.
3. CONTRACTOR SHALL PAINT ANY AREAS WHICH HAVE BEEN CUT OR WELDED WITH A COLD GALVANIZING COMPOUND PRIOR TO PAINTING, USE "ZRC COLD GALVANIZING COMPOUND" OR APPROVED EQUAL.
4. ALL PRE GALVANIZED STEEL PARTS MUST BE CLEANED WITH AN ALCOHOL PHOSPHORIC ACID SOLUTION (LAC PRIDE ACID CLEANER WE PHONE # 713-750-0081) TO REMOVE ALL SOILS (OILS, GREASE, ETC.) TO LIGHTLY ETCH THE SURFACE SO THAT THE PRIMER WILL HAVE AN ANCHOR PATTERN ON THE STEEL PRIME BY USING P-629 UNIVERSAL PRIMER BY INTERCOASTAL PAINT CO. OR EQUAL.
5. ALL METAL MEMBERS ARE TO BE PAINTED WITH A TWO-PART POLYURETHANE PAINT SYSTEM (INCLUDES POLYURETHANE CATALYST). PAINT BY INTERCOASTAL PAINT COMPANY (281-495-9268) OR SHERWIN WILLIAMS "POLANE HS PLUS" TWO-PART POLYURETHANE, COLOR TO MATCH SHERWIN WILLIAMS SW 6258 "FRENCH ROAST".
6. TAKE FIELD MEASUREMENTS PRIOR TO PREPARATION OF SHOP DRAWINGS AND FABRICATION WHERE POSSIBLE, TO ENSURE PROPER FITTING OF THE WORK. HOWEVER, DO NOT DELAY JOB PROGRESS; ALLOW FOR ADJUSTMENTS AND FITTINGS WHEREVER THE TAKING OF FIELD MEASUREMENTS BEFORE FABRICATION MIGHT DELAY THE WORK.
7. PRE-ASSEMBLE ITEMS IN THE SHOP TO THE GREATEST EXTENT POSSIBLE, SO AS TO MINIMIZE FIELD WELDING AND ASSEMBLY OF UNITS AT THE PROJECT SITE. DISASSEMBLE UNITS ONLY TO THE EXTENT NECESSARY FOR SHIPPING AND HANDLING LIMITATIONS. CLEARLY MARK UNITS FOR REASSEMBLY AND COORDINATE INSTALLATION.
8. SUBMIT SHOP DRAWINGS FOR THE FABRICATION AND INSTALLATION OF ALL CUSTOM FABRICATED ORNAMENTAL METAL WORK. INCLUDE PLANS, ELEVATIONS AND DETAIL SECTIONS, SHOW JOINTING, ANCHORING AND ACCESSORY ITEMS, AND SPECIFY FINISHES. FURNISH SETTING DIAGRAMS AND TEMPLATES FOR ITEMS SET IN OTHER WORK. ESPECIALLY SHOW DETAILS FOR TUBULAR STEEL JUNCTION AT BRICK COLUMNS AND ALL TUBULAR STEEL CONNECTIONS.
9. SUBMIT SAMPLES, 6" (20.5 M) SQUARE, METAL FINISH REQUIRED. SHOW EACH COMBINATION OF MECHANICAL AND CHEMICAL TREATMENTS TO BE USED ON EACH ALLOY, WHEN VISIBLE VARIATIONS WILL OCCUR. SAMPLES SHALL INDICATE THE EXTREMES. PREPARE SAMPLES ON METAL OF THE SAME ALLOY AND GAUGE TO BE USED FOR THE WORK. SHOW TYPICAL WELDS, FASTENERS AND SCREWS FOR COMPATIBLE FINISH. ADDITIONALLY, PROVIDE COMPLETED PAINTED SAMPLE FOR APPROVAL.
10. SAMPLE SHALL BE SUBMITTED PRIOR TO FABRICATION OF ITEMS. APPROVED WORKING MODELS SHALL BE USED ON THE PROJECT AS BASIS FOR APPROVAL OF ALL FUTURE WORK.
11. STORE ALL ORNAMENTAL METAL ITEMS UNDER COVER AND OFF THE GROUND. HANDLE IN SUCH A MANNER SO AS TO PROTECT SURFACES AND TO PREVENT DAMAGE TO FABRICATED PIECES DURING STORAGE, ERECTION AND DURING CONSTRUCTION.
12. ARCHITECTURAL METALS SHALL BE OF THE BEST COMMERCIAL QUALITY AND THEIR VARIOUS FORMS SHALL BE STRAIGHT AND TRUE. ALL STEEL TO BE ST 37 (ASTM A36). ALL REINFORCED STEEL TO BE FY 60 KSI, AND ALL TUBES TO BE ASTM A 500, (GRADE B). THERE SHALL BE NO SCRATCHES, SCARS OR CREASES, BUCKLES, RIPPLES OR CHATTER MARKS. FINISHED SURFACES MUST BE SMOOTH AND TRUE.
13. MATERIAL SHALL BE SELECTED FOR SURFACE FLATNESS, SMOOTHNESS AND FREEDOM FROM SURFACE BLEMISHES WHEN EXPOSED TO VIEW IN THE FINISHED UNIT. EXPOSED-TO-VIEW SURFACES WHICH EXHIBIT PITTING, SEAM MARKS, ROLLER MARKS, "ORE CANNING", STAINS, DISCOLORATIONS OR OTHER IMPERFECTIONS ON THE FINISHED UNITS WILL NOT BE ACCEPTABLE.
14. AFTER COMPLETION OF SPECIFIED FINISHES ON WORK, COAT CONCEALED SURFACES WHICH WILL BE IN CONTACT WITH CONCRETE OR FOOTINGS WITH A HEAVY COAT OF BITUMINOUS PAINT TO PREVENT CORROSION AND GALVANIC ACTION. DO NOT EXTEND COATING ONTO EXPOSED SURFACES.
15. ITEMS SHALL BE SHOP FABRICATED SO FAR AS PRACTICABLE. JOINTS SHALL BE FLUSH TO CONCEAL REINFORCEMENT, OR WELDED WHERE THICKNESS OF SECTION PERMITS. ALL WELDS SHALL BE GROUND SMOOTH AND FREE OF JAGGED EDGES OR LUMPS.
16. CONTACT SURFACES OF CONNECTED MEMBERS SHALL BE GROUND TRUE. PARTS SHALL BE ASSEMBLED SO THAT JOINTS WILL BE TIGHT & PRACTICALLY UNNOTICEABLE, WITHOUT USE OF FILLING COMPOUND.
17. PERFORM ALL CUTTING, DRILLING, AND FITTING REQUIRED FOR THE INSTALLATION OF THE ORNAMENTAL METAL ITEMS. SET THE WORK ACCURATELY IN LOCATION, ALIGNMENT AND ELEVATION, PLUMB, LEVEL, AND TRUE, MEASURED FROM ESTABLISHED LINES AND LEVELS. PROVIDE TEMPORARY BRACING OR ANCHORS IN FORM WORK FOR ITEMS WHICH ARE TO BE BUILT IN CONCRETE.
18. FORM TIGHT JOINTS WITH EXPOSED CONNECTIONS ACCURATELY FITTED WITH UNIFORM REVEALS AND SPACED FOR SEALANTS AND JOINT FILLERS. ALL TUBE TO TUBE WELDS SHALL BE PARTIAL PENETRATION GROOVE WELDS. WHERE CUTTING, WELDING AND GRINDING ARE REQUIRED FOR PROPER SHOP FITTING AND JOINTING OF THE WORK, RESTORE FINISHES AND REPLACE.
19. DO NOT CUT FINISHED WORK (WHICH CANNOT BE COMPLETELY RESTORED IN THE FIELD). RETURN ITEMS WITH SUCH FINISHES TO THE SHOP FOR REQUIRED ALTERATIONS, FOLLOWED BY COMPLETE REFINISHING OR PROVIDE NEW UNITS AT CONTRACTOR'S OPTION.

TUBULAR STEEL THICKNESS NOTED

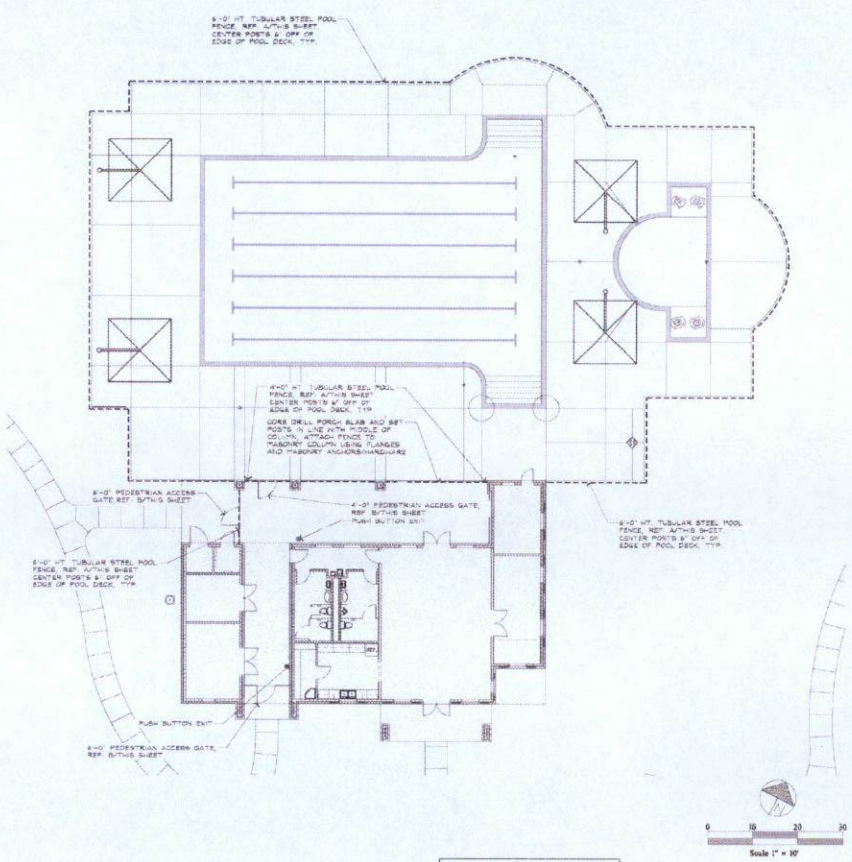
1. ALL PICKETS ARE TO BE 12 GA. THICKNESS
2. ALL RAILS AND POSTS ARE TO BE MIN 3/16" THICKNESS

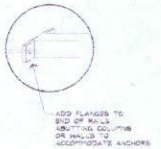
ACCESS CONTROL EQUIPMENT

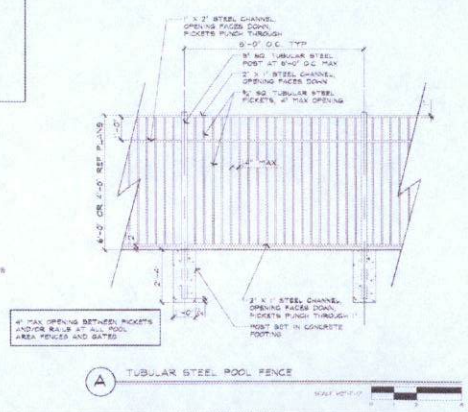
1. CONTRACTOR SHALL FURNISH AND INSTALL (1) LINEAR AM-8PLUS ACCESS CONTROLLER BY LINEARCORP 1-800-421-1587
2. CONTRACTOR SHALL INSTALL (2) PROXIMITY CARD READERS - LINEAR AM-DPR (DUAL PROXIMITY READERS) (1) READER AT EACH EXTERIOR PEDESTRIAN GATE
3. CONTRACTOR SHALL INSTALL A WALL MOUNTED PUSH-BUTTON EXIT FOR EACH EXTERIOR GATE LOCATED AT THE BREEZEWAY/REAR WALL OF THE BUILDING
4. CONTRACTOR TO INTEGRATE "CLICK 2 ENTER" EMERGENCY ACCESS CONTROLLER INTO ACCESS CONTROL SYSTEM. LOCATE AND MOUNT UNIT PER MANUFACTURER'S INSTRUCTIONS

CONTACT "CLICK 2 ENTER" AT 1-877-939-3800
WWW.CLICK2ENTER.NET

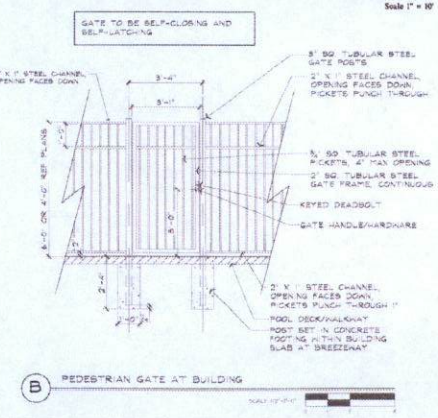
INCLUDE ALL WIRING FROM READER TO ACCESS CONTROL UNIT IN PRICING







A TUBULAR STEEL POOL FENCE



B PEDESTRIAN GATE AT BUILDING

SOA ARCHITECTS, LLC
LANDSCAPE ARCHITECTURE

"For regulatory approval, permitting or construction."

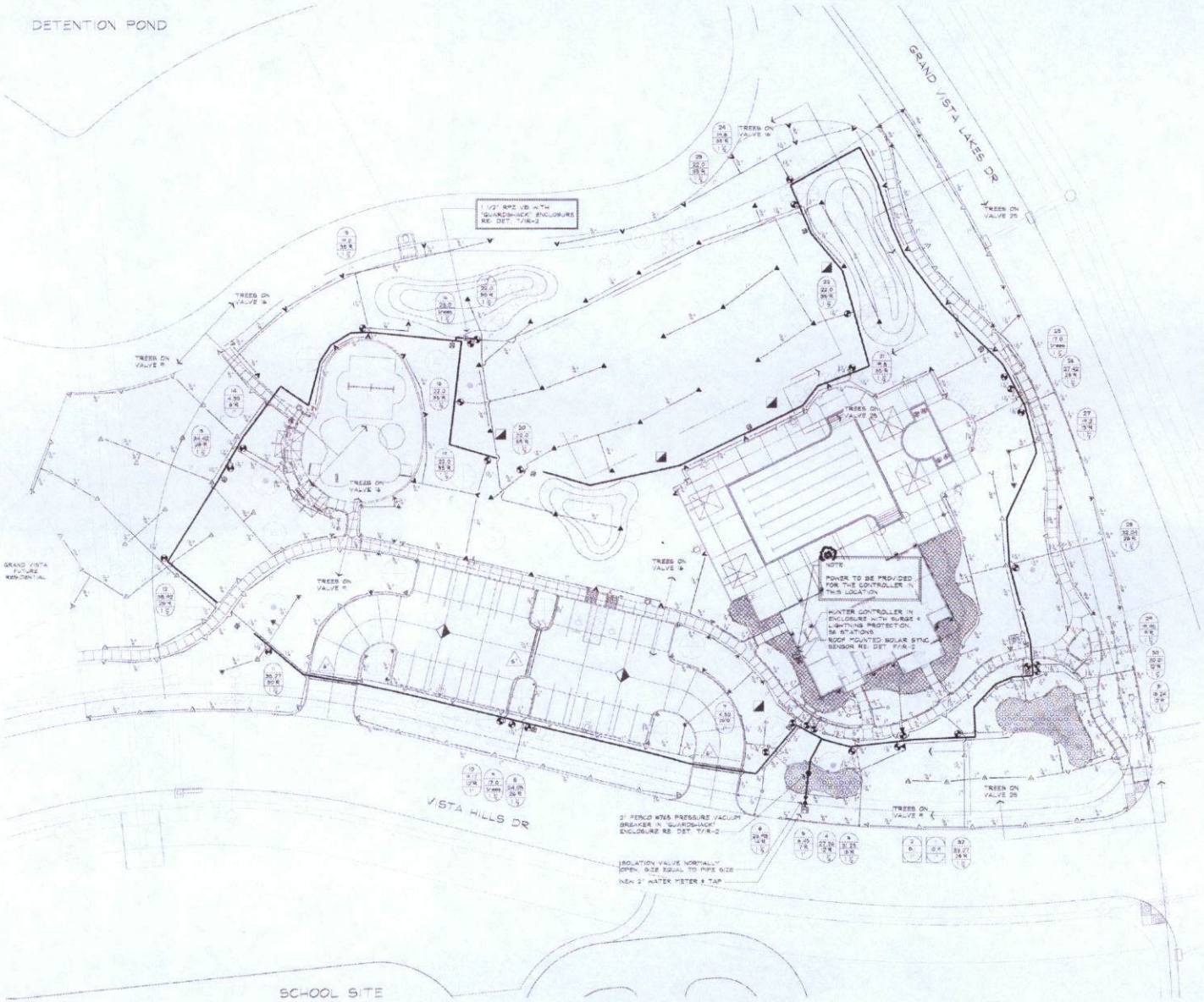
Grand Vista
North Recreation Center
Taylor Morrison
Fort Bend County, Texas

APPROVED: [signature]
DATE: 2-10-17

Fencing Plan

Date: 9/27/16
Scale: SEE PLANS
Job No.: 245-18-58
Revised:

LF-1



GARDEN GREEN, L.L.C.
LANDSCAPE ARCHITECTURE
9841 Grace Ranch Blvd. Suite A-200
Katy Texas 77494
281.646.1002 281.646.1041
Phone Fax

9/27/2016

"For regulatory approval, permitting or construction."

Grand Vista
North Recreation Center
Taylor Morrison
Fort Bend County, Texas

APPROVED: Charles Hill
by Development Coordinator
DATE: 2-10-17

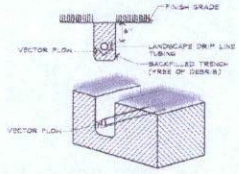
Irrigation Plan

Date: 9/27/16
Scale: SEE PLANS
Job No. 245-16-58
Revised:

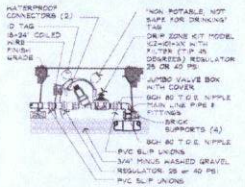
LIR-1

IRRIGATION NOTES

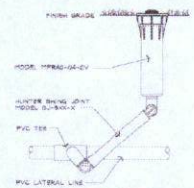
1. The contractor shall make arrangements and pay costs for installation of irrigation water meters at the appropriate locations. Verify with Owner's Representative for the addresses for each.
2. Except as otherwise noted, the contractor shall procure permits and licenses, pay charges and fees and give notices necessary and incidental to the due fulfillment of the work.
3. The contractor shall follow the applicable City Department of Public Works requirements for installation of water meter and not tapping.
4. The contractor shall notify pertinent utility companies 48 hours prior to construction for current utility locations. Extreme care shall be exercised in excavating and working near existing utilities. Contractor shall verify the location and condition of utilities and be responsible for damage to utilities.
5. The contractor shall at all times protect his work from damage and theft, and replace all damaged or stolen parts until the work is accepted in writing by owner.
6. The contractor shall not willfully install the sprinkler system as shown on the drawings when it is obvious in the field that obstructions, grade differences or differences in the areas dimensions exist that might not have been in the design. Such obstructions or differences shall be brought to the attention of the Landscape Architect. In the event this notification is not performed, the irrigation contractor shall assume full responsibility for any revisions necessary.
7. The contractor shall properly mark exposed sprinklers, materials and equipment. Cover or barricade trenches when contractor is not on site.
8. For purposes of clarity, some irrigation lines and pipes may be shown outside of property or in paved areas. Locate all lines and valves in planting area unless otherwise noted.
9. Adjust and or irrigation heads for even coverage. Head layout shall be as per plans.
10. Avoid existing or future location of tree roots when laying pipe.
11. **The contractor shall stake particular and PVB locations for approval by Landscape Architect prior to their installation.**
12. The contractor shall place valves, flow and irrigation heads adjacent to but have a minimum of 24" within landscape areas.
13. When connecting to an existing irrigation system, schedule to have existing system shut down for as short a time as possible.
14. Patch and repair any and all damage done to existing plant material and grading during installation of this work.
15. Contractor shall provide original and 2 copies of "Pressure Vacuum Breaker certification to the Owner at completion of project.
16. Note: Guardshack Enclosure by Backflow Prevention Service Inclusions Enclosure To Be Determined By Size Of Backflow Preventer. 1-800-264-5411 or local rep Armstrong/Hackney 713-472-0066
17. All pop-up design or rotary sprinkler heads must be installed so closer that 6" from a handscape. All pipes and underground electrical wires must be buried a minimum of 18" deep.
18. PVC pipe and fittings must be primed with solvent primer.



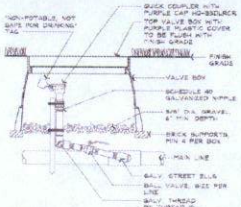
R Hunter LANDSCAPE DRIP LINE "TRENCHING" NTS



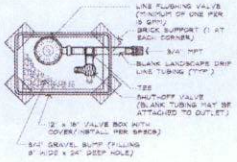
M Hunter DRIP CONTROL ZONE ICZ-101-xx KIT NTS



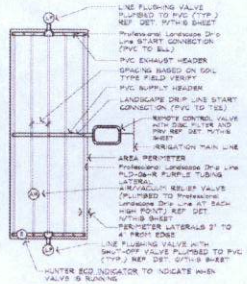
H Hunter MP-R ROTATOR SPRINKLER SWING INSTALLATION DETAIL NTS



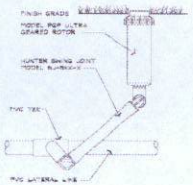
D QUICK COUPLING NTS



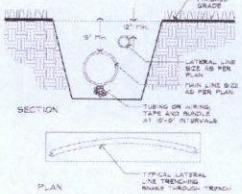
Q Hunter LANDSCAPE DRIP LINE "FLUSHING & SHUT-OFF VALVE" NTS



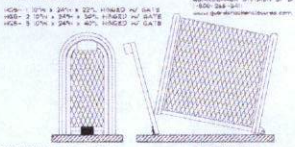
L Hunter LANDSCAPE DRIP LINE "CENTER FEED" LAYOUT NTS



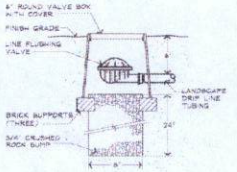
G Hunter PGP ULTRA-CV-R GEAR DRIVE SWING INSTALLATION DETAIL NTS



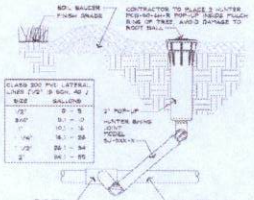
C MAIN LINE IN TRENCH NTS



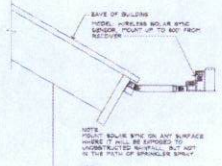
T GUARDSHACK™ ENCLOSURES HGS SERIES NTS



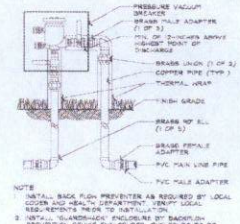
P Hunter LANDSCAPE DRIP LINE "FLUSHING VALVE" NTS



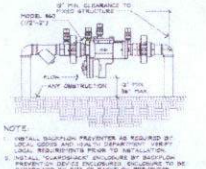
K Hunter BUBBLER HEAD SWING INSTALLATION DETAIL NTS



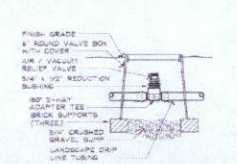
F Hunter SOLAR SYNC INSTALLATION DETAIL NTS



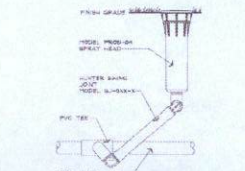
B PRESSURE VACUUM BREAKER-- FEBCO #765 PVB NTS



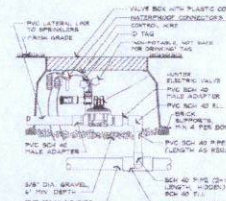
S REDUCED PRESSURE VACUUM BREAKER FEBCO #880 SUPT VB NTS



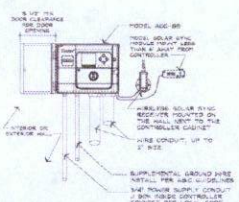
N Hunter LANDSCAPE DRIP LINE RELIEF VALVE NTS



J Hunter PROS-04-CV-R SPRAY HEAD SWING INSTALLATION DETAIL NTS



E Hunter ICV-PS-R-A9 VALVE WITH ACCU-SYNC INSTALLATION DETAIL NTS



A Hunter ACC-SS CONTROLLER WALL MOUNTED STAINLESS STEEL CABINET NTS

LEGA GARDEN DESIGN, LLC
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Katy, Texas 77494
281.646.1800 281.646.1801
Phone Fax

"For regulatory approval, permitting or construction."

APPROVED: Development Coordinator
DATE: 2-16-17

Grand Vista North Recreation Center

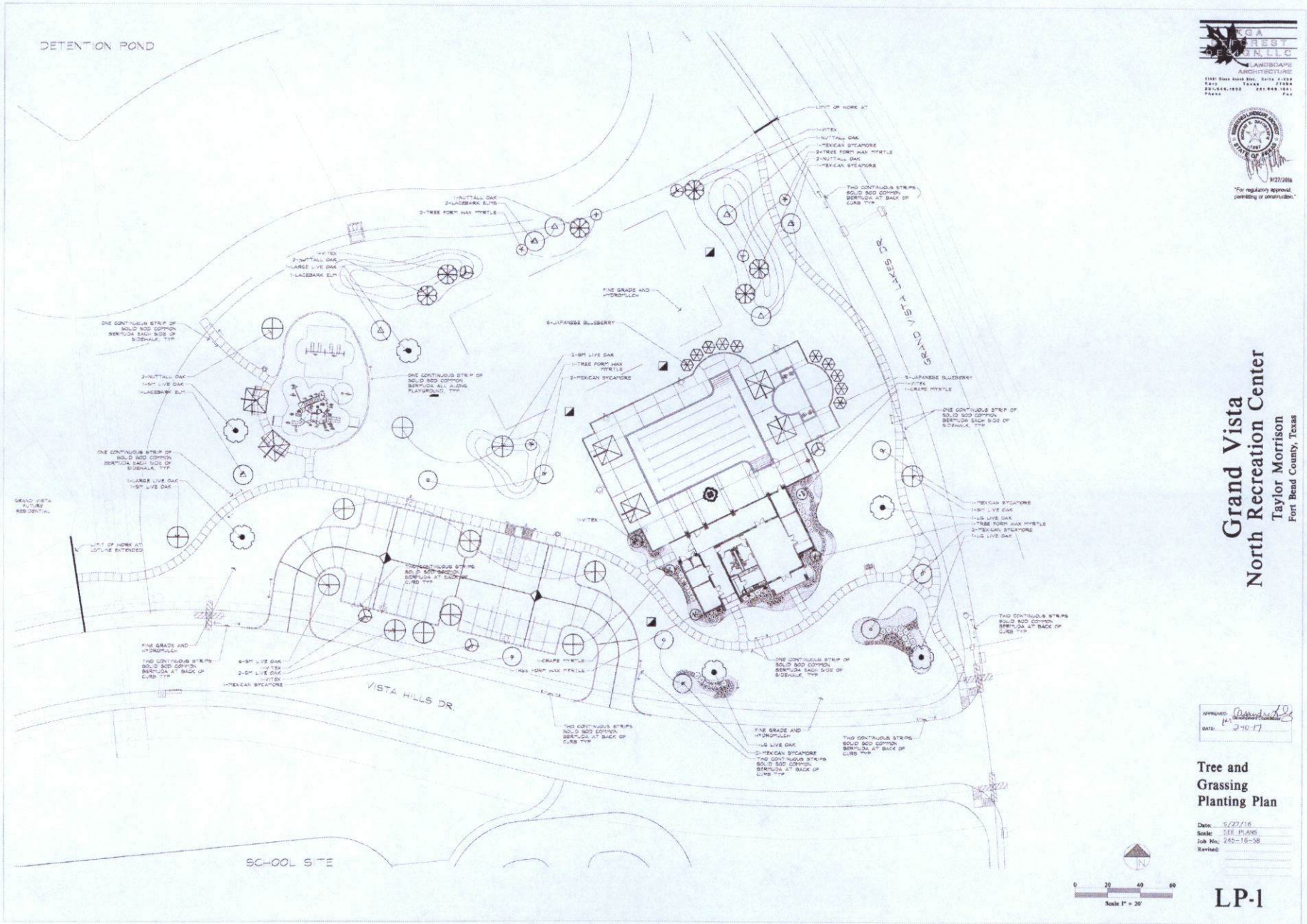
Taylor Morrison

Fort Bend County, Texas

Irrigation Details & Notes

Date: 9/27/16
Scale: AS SHOWN
Job No: 245-16-58
Revised:

LIR-2



GA Forestry Design, L.L.C.
LANDSCAPE ARCHITECTURE
Phone Fax

9/27/2016

"For regulatory approval, permitting or construction."

Grand Vista North Recreation Center

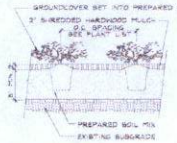
Taylor Morrison
Fort Bend County, Texas

APPROVED: [signature]
DATE: 2-10-17

Tree and Grassing Planting Plan

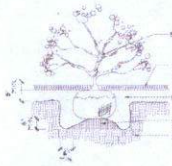
Date: 9/27/16
Scale: SEE PLANS
Job No.: 245-16-58
Revised:

LP-1



A GROUNDCOVER PLANTING

NTS



B BED PLANTED SHRUB

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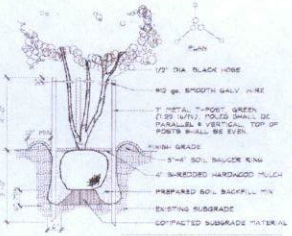
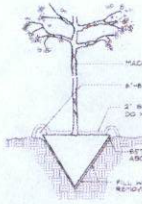


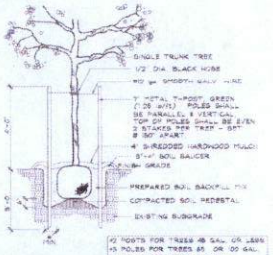
C MULTI TRUNK TREE STAKING

NTS



D MACHINE MOVED TREE

NTS



E STAKING DETAIL

NTS

PLANTING NOTES:

1. Contractor shall locate all utilities prior to commencing work. Contact all utility companies a minimum 48 hours prior to any work. Any damage done to existing utilities shall be repaired or replaced at no additional cost to the Owner.
2. Contractor shall raise or lower all water valves, fire hydrants, manholes, etc. as required by the grading work in this package. Coordinate with Landscape Architect for correct heights of each element in relation to final grade.
3. All areas designed to receive hydromulch or solid sod Common Bermuda shall be approved by Landscape Architect prior to grassing operations. Finish grade at turf areas shall be 3/4"- 1" below top of adjacent pavement or curbs.
4. Landscape Contractor shall coordinate for irrigation to be available for all trees prior to their installation.
5. All sod edges and tree locations shall be staked for approval by the Landscape Architect prior to commencing bed preparation or tree planting.
6. Grade entire site to finish grade prior to scheduling tree installation.
7. Contractor shall coordinate his work with all contractors working on the site.
8. Contractor shall apply for and procure all required permits prior to commencing work.
9. The quantities shown on the Plant List are for the Contractor's convenience. Contractor shall verify all quantities and report all discrepancies to the Landscape Architect immediately during the Bid Period so that corrections may be made prior to the Bid.
10. All plants are to be specimen quality, full pot and heads, symmetrical foliage and branching structure. Shrubs shall be full to ground.
11. Contractor to provide samples of each shrub and groundcover species for approval by Landscape Architect prior to delivery to the site.
12. Plant material of the same species shall be obtained from the same source.
13. Alternate spacing of plant material when planting large masses, unless otherwise noted.

OVER SEEDING:

IF THE CONTRACT WARRANTY PERIOD FALLS DURING THE WINTER SEASON (OCT. 2 - APRIL 14) OVERSEEDING SHALL BE WINTER RYE GRASS. IF THE CONTRACT WARRANTY PERIOD FALLS DURING THE SPRING SEASON (APRIL 5 - OCT. 1) OVERSEEDING SHALL BE BERMUDA GRASS.

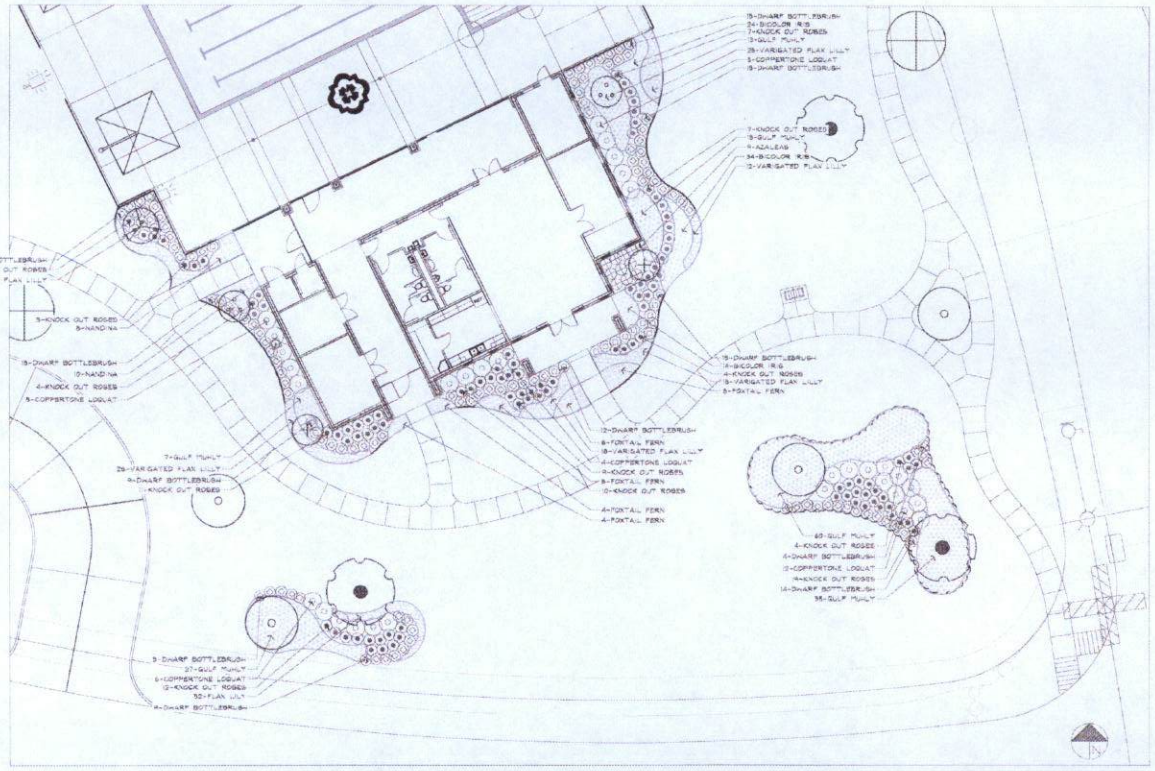
BOTH SEASONS SHALL INCLUDE THE APPLICATION OF PRE-EMERGENT HERBICIDE AND POST-EMERGENT HERBICIDE AT ALL TREE RINGS AND SHRUB BED AREAS. ALL AREAS THAT ARE HYDROMULCHED AND SODDED AS PART OF THE INITIAL LANDSCAPE INSTALLATION SHALL BE OVERSEEDED.

AT THE END OF EACH SEASON, ALL GRASSED AREAS THAT ARE THICK AND WELL-ESTABLISHED SHALL BE MOWED LOW TO ALLOW THE SEED TO REACH THE SOIL LAYER. CONTRACTORS SHALL APPLY FERTILIZERS AS NECESSARY FOR THE ESTABLISHMENT OF THE RYE OR BERMUDA GRASS, WHICHEVER APPLIES TO CONTRACT.

NOTE:
COMMON BERMUDA OVERSEEDING SHALL ALSO BE MIXED IN W/ THE APPLICATION OF RYE GRASS DURING WINTER SEASON.

GRAND VISTA - PLANT LIST

BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	REMARKS
Quercus virginiana	Live Oak Tree	4" caliper	Container (Trees)	6' min. ht., 8' min. spread, full, symmetrical crown, NO trees minimum, specimen quality
Quercus virginiana	Live Oak	65 Gal.	Container	10'-12' ht., 5'-6' spread, full, straight trunk
Fraxinus cuspidata	Texas Ash Tree	65 Gal.	Container	10'-12' ht., 5'-6' spread, full, straight trunk
Quercus texana	Nuttall Oak	65 Gal.	Container	10'-12' ht., 5'-6' spread, full, straight trunk
Ulmus parvifolia	Drake Elm	30 Gal.	Container	3.5" trunk, 6'-7' ht., 3'-4' spread, 3 to 5 canes, full
Ulmus crassifolia	Elm	15 Gal.	Container	1.5" trunk, 6'-7' ht., 3' spread, 3 to 5 canes, full
Pinus taeda	Loblolly Pine	4" to 6" ht.	Container (Trees)	Tree tree, 6'-8' ht., 3' spread, full, straight, NO snags
Salix nigra 'Nankeen'	Weeping Willow	30 Gal.	Container	Multi-trunk, 6' ht., 3' spread, full
Ernestum x Lagerstroe	Crape Myrtle	7 Gal.	Container	Full pot, 36"-72" ht., 24" spread, well rooted, 4" caliper
Nandina domestica	Nandina	3 Gal.	Container	18"-24" ht., 18" min. spread, full pot, 24" o.c.
Calliandra tortuosa (Texas Little Red)	Desert Bottlebrush	3 Gal.	Container	18"-24" ht., 18"-24" spread, full pot, 36" o.c. - Red
Ilex x 'Nellie R'	Nellie R. Stevens Holly	7 Gal.	Container	36"-48" ht., 18"-24" spread, full pot, 36" o.c. - Red
Chamaerops humilis	Dwarf Palmetto	3 Gal.	Container	Full pot, well rooted, 18"-24" ht., 12"-18" spread, 30" o.c.
Asparagus meyeri	Foxtail Fern	5 Gal.	Container	Full pot, well rooted, 12"-18" ht., and spread 24" o.c.
Chasmanthe aethiopica	Pincushion	5 Gal.	Container	Full pot, well rooted, 18"-24" ht., 12" spread, 18" o.c.
Aloe vera 'Formosa'	Formosa Aloe	3 Gal.	Container	24"-36" ht., 18" min. spread, full pot, 30" o.c. Plant in rocky soil mix only.
Dianella tasmanica 'Variegata'	Variegated Flax Lily	1 gal.	Container	Full pot, well rooted, 12"-18" ht. & spread, 18" o.c.
Gaillardia pulchella	Indian Blanket (Orange)	1 gal.	Container	Full pot, well rooted 18"-24" ht. (Flowering Flower stalks) & spread, 18" o.c., Orange
Ruellia brittoniana 'Katie'	Tropical Petunia	4" pot	Container	Flowering specimen, contractor to submit specimen prior to ordering, 18" o.c.



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9/27/2016

"For regulatory approval, permitting or construction."

Grand Vista
North Recreation Center
Taylor Morrison
Fort Bend County, Texas

APPROVED: Development Coordinator
DATE: 3-18-17

Building Planting Plan Details and Notes

Date: 9/27/16
Scale: SEE PLANS
Job No: 245-16-58
Revised:

LP-2