

## 17090 PEAK AVENUE, MORGAN HILL, CA 95037

1. NEW 2 STORY AND 1 STORY RESIDENTIAL HOME CARE FACILITY BUILDINGS
2. NEW PARKING TO BOTH BUILDINGS
3. REQUIRED SITE WORK INCLUDING NEW DRIVEWAY, RAMPS, FENCING, UTILITIES, TRASH ENCLOSURE TO MEET MORGAN HILL CITY STANDARDS
4. INTERIOR REMODEL TO BUILDING #1

[illegible]

<b>ARCHITECTURAL</b>	A0.1	TITLE SHEET
	A1.0	EXISTING & DEMO SITE PLAN
	A1.1	OVERALL SITE PLAN

2.1 - 6.6

—●— DESCRIBES AN "AREA" OR "FIELD"

RM NAME — ROOM NAME  
101 — ROOM NUMBER

ELEVATION  
Elevation Reference Number  
Sheet Number when shown

SECTION  
Section Reference Number  
Sheet Number when shown

ROOM ELEVATION  
Detail Reference Number  
Elevation Reference Number  
Sheet Number where shown

TYPICAL DETAIL  
Detail Reference Number  
Sheet Number where shown

PHOTO REFERENCE  
Direction Indicator  
Detail Reference Number  
Sheet Number where shown

TYPICAL COLUMN or SHEAR LINE  
Column or Shear Line Designation  
Center Line of Column or Shear Wall

TRUE NORTH  
NORTH  
NORTH ARROW

<b>OWNER</b>	<p>AMAS HOME CARE 17090 PEAK AVENUE MORGAN HILL, CA 95037</p> <p>ATTN: NELLY AMAS PHONE: 1-408-993-9268 FAX: 1-408-947-1923</p>
<b>ARCHITECT</b>	<p>WESTON MILES ARCHITECTS, INC. 17500 DEPOT STREET, SUITE #120 MORGAN HILL, CA 95037</p> <p>ATTN: LESLEY MILES, A.I.A. PHONE: 1-408-779-6686 FAX: 1-408-778-9417</p>
<b>CIVIL</b>	<p>SMP CIVIL ENGINEERS 1534 CAROB LANE LOS ALTOS, CA 94024</p> <p>ATTN: SAIED RAZAVI PHONE: 1-650-941-0055</p>
<b>LANDSCAPE</b>	<p>WESTON MILES ARCHITECTS, INC. 17500 DEPOT STREET, SUITE #120 MORGAN HILL, CA 95037</p> <p>ATTN: LESLEY MILES, A.I.A. PHONE: 1-408-779-6686 FAX: 1-408-778-9417</p>

1. THE FIRE SPRINKLER SYSTEM SHALL BE HYDRAULICALLY DESIGNED PER NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) STANDARD #31. (CFC CHAPTER 9 AS AMENDED BY MIMC 15.44.175)
2. REQUIRED FIRE FLOW FOR THIS PROJECT IS 3750 GPM AT 20 PSI RESIDUAL PRESSURE. THE REQUIRED FIRE FLOW IS NOT AVAILABLE FROM AREA FIRE DEPARTMENTS AND FIRE HYDRANT(S) WHICH ARE SPACED AT THE REQUIRED SPACING. (CFC APPENDIX B)
3. REQUIRED FIRE FLOW MAY BE REDUCED UP TO 75% IN BUILDINGS EQUIPPED WITH AUTOMATIC FIRE SPRINKLER SYSTEMS BUT, CAN BE NO LESS THAN 1500 GPM. THEREFORE, THE REQUIRED FIRE FLOW IS 3750 GPM AT 20 PSI RESIDUAL PRESSURE. THIS FLOW SHALL BE TAKEN FROM ANY TWO FIRE HYDRANTS, ON OR NEAR THE SITE SPACED AT A MAXIMUM SPACING OF 250 FEET.
4. PROVIDE 1 PUBLIC FIRE HYDRANT(S) AT LOCATION(S) TO BE DETERMINED JOINTLY BY THE FIRE DEPARTMENT AND THE CITY OF MORGAN HILL PUBLIC WORKS DEPARTMENT. MAXIMUM HYDRANT SPACING SHALL BE 250 FEET AND MAXIMUM SINGLE HYDRANT FLOW SHALL BE 1500 GPM. IF PROVIDED, A LOCKS SHALL BE THE CITY OF MORGAN HILL PROPERTY. INSTALLATIONS SHALL BE SUBJECT TO THE CITY OF MORGAN HILL FIRE DEPARTMENT AND FIRE SPECIFICATIONS 11-6. (CFC SECTION 11.003 AS AMENDED BY MIMC 15.44.140)

APN #	767-03-017
SITE ACREAGE	87,196 SQ. FT.
ZONING	R3 (C)
GENERAL PLAN	MULTI-FAMILY LOW
<u><b>&lt;E&gt; BUILDING ONE - SPINKLERED</b></u>	
OCCUPANCY TYPE:	1 -2
NUMBER OF STORIES:	1
TYPE OF CONSTRUCTION:	2B
ALLOWABLE SQ.FT. (TABLE 503)	SEE SITE ANALYSIS
ACTUAL SQ. FT.	SEE SITE ANALYSIS
TOTAL ROOMS	(13) 2 BED/PATIENT ROOMS
TOTAL BEDS/PATIENTS BLDG 1	26

OCCUPANCY TYPE:	I-2
NUMBER OF STORIES:	1
TYPE OF CONSTRUCTION:	2B
ALLOWABLE SQ.FT. (TABLE 503)	SEE SITE ANALYSIS
ACTUAL SQ.FT.	SEE SITE ANALYSIS
TOTAL ROOMS	(8) 2 BED/PATIENT ROOMS
TOTAL BEDS/PATIENTS BLDG 2	16

OCCUPANCY TYPE:	1-2
NUMBER OF STORIES:	2
TYPE OF CONSTRUCTION:	2B
ALLOWABLE SQ.FT. (TABLE 503)	SEE SITE ANALYSIS
ACTUAL SQ.FT.	SEE SITE ANALYSIS
TOTAL ROOMS	(16) 2 BED/PATIENT ROOMS (10) 1 BED/PATIENT ROOMS
TOTAL BEDS/PATIENTS BLDG 3	42

MORGAN HILL MUNICIPAL CODE (CHAPTER 18.50) REQUIRES 1 SPACE FOR EACH 2 BEDS FOR HOSPITALS, REST HOMES, AND NURSING HOMES.

## PARKING SPACES PROVIDED

STANDARD STALLS	23 PROVIDED
COMPACT STALLS	11 PROVIDED
ACCESSIBLE STALLS (1-50") 2 REQUIRED	
-1 VAN ACCESSIBLE	3 PROVIDED
<b>TOTAL PARKING PROVIDED</b>	<b>37 PROVIDED</b>

▪ NUMBER OF ADA PARKING SPACES REQUIRED PER CBC TABLES 11B-208, 11B-501 & 11B-502

ALL WORK & MATERIAL SHALL BE PERFORMED & INSTALLED IN COMPLIANCE WITH THE FOLLOWING CODES AS ADOPTED AND AMENDED BY THE GOVERNING JURISDICTION. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CALIFORNIA CODES. EFFECTIVE JANUARY 1, 2014

2013 CALIFORNIA ADMINISTRATIVE CODE, PART 1, TITLE 24 CCR

2013 CALIFORNIA BLDG CODE (CBC), PART 1, TITLE 24, CCR  
(2012 INTERNATIONAL BLDG CODE VOLUME 1-2 AND 2013 AMENDMENTS)

2013 CALIFORNIA ELECTRICAL CODE (CEC), PART 7, TITLE 34 CCR  
(2011 NATIONAL ELECTRICAL CODE AND 2013 CA AMENDMENTS)

2013 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR  
(2012 UNIFORM MECHANICAL CODE AND 2013 CA AMENDMENTS)

2013 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR  
(2012 UNIFORM PLUMBING CODE AND 2013 CA AMENDMENTS)

2013 CALIFORNIA ERECTOR CODE (CE-CO), PART 6, TITLE 24 CCR

2013 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR  
(2012 INTERNATIONAL FIRE CODE AND 2013 CA AMENDMENTS)

2013 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24 CCR  
(2012 CALIFORNIA GREEN BUILDING STANDARDS CODE AND 2013 CA AMENDMENTS)

2013 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 CCR

TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHALL REGULATIONS

2010 AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS FOR ACCESSIBLE DESIGN

2013 NFPA 13, INSTALLATION OF AUTOMATIC SPRINKLER SYST. (CA AMENDED)

2013 NFPA 14, INSTALLATION OF STANDPIPE & HOLD SYSTEMS (CA AMENDED)

2013 NFPA 17, DRY CHEMICAL EXTINGUISHING SYSTEMS

2013 NFPA 17A, WET CHEMICAL EXTINGUISHING SYSTEMS

2013 NFPA 20, INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION

2013 NFPA 22, WATER TANKS FOR PRIVATE FIRE PROTECTION

2013 NFPA 24, INSTALLATION OF PRIVATE FIRE SERVICE MAINS & THEIR APPURTENANCES (CA EDITED)

2014 NFPA 25, INSPECTION, TESTING, MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS (CA AMENDED)

2014 NFPA 72, NATIONAL FIRE ALARM CODE (CA AMENDED; SEE UL STD 1071 FOR "VULNERA DEVICES")

2013 NFPA 80, FIRE DOORS AND OTHER OPENING PROTECTIVES

2013 NFPA 110, EMERGENCY AND STANDBY POWER SYSTEMS

2012 NFPA 170, STANDARD FOR FIRE SAFETY & EMERGENCY SYMBOLS

2012 NFPA 2001, CLEAN AGENT FIRE EXTINGUISHING SYSTEMS

SFM 12-10-1, POWER OPERATED EXIT DOORS

SFM 12-10-2, SINGLE POINT LATCHING OR LOADING DEVICES

SFM 12-10-3, EMERGENCY EXIT & PANIC HARDWARE

SFM 13, MANUAL OPERATING SIGNAL BOXES (2008 EDITION)

UL 268, SMOKE DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS (2009 EDITION)

UL 268A, SMOKE DETECTORS DUCT APPLICATIONS (2008 EDITION)

UL 300, FIRE TESTING OF FIRE EXTINGUISHING SYST. FOR PROTECT-ION OF RESTAURANT COOKING AREAS (2005 EDITION)

UL 305, PANIC HARDWARE (2012 EDITION)

UL 464, AUDIBLE SIGNAL APPLICATIONS (2009 EDITION)

UL 524, HEAT DETECTORS FOR FIRE PREVENTING SIGNALING SYSTEM (1999 EDITION)

UL 864, CONTROL UNITS FOR FIRE PROTECTIVE SIGNALING SYSTEMS (2003 EDITION WITH REVISIONS THROUGH JULY 14,2005)

CCR TITLE 8, DIVISION 1, CHAPTER 4, SUBCHAPTER 6, ELEVATOR SAFETY ORDINANCES, COMMENCING WITH SECTION 3094.2.

ASME A17.1 - 2007 (W/AS17.1/ASCA 8444-08 ADDENDUM) SAFETY CODE FOR ELEVATORS AND ESCALATORS

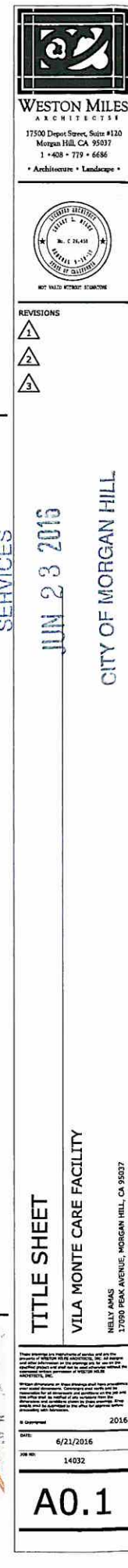
ASME A18.1 - 2003, SAFETY STANDARD FOR PLATFORM LIFTS AND STAIRWAY CHAIRLIFTS, COMMENCING WITH SECTION 2.

ICC 300-2012 STANDARD FOR BLEACHERS, FOLDING AND TELESCOPIC SEATING AND GRANDSTANDS

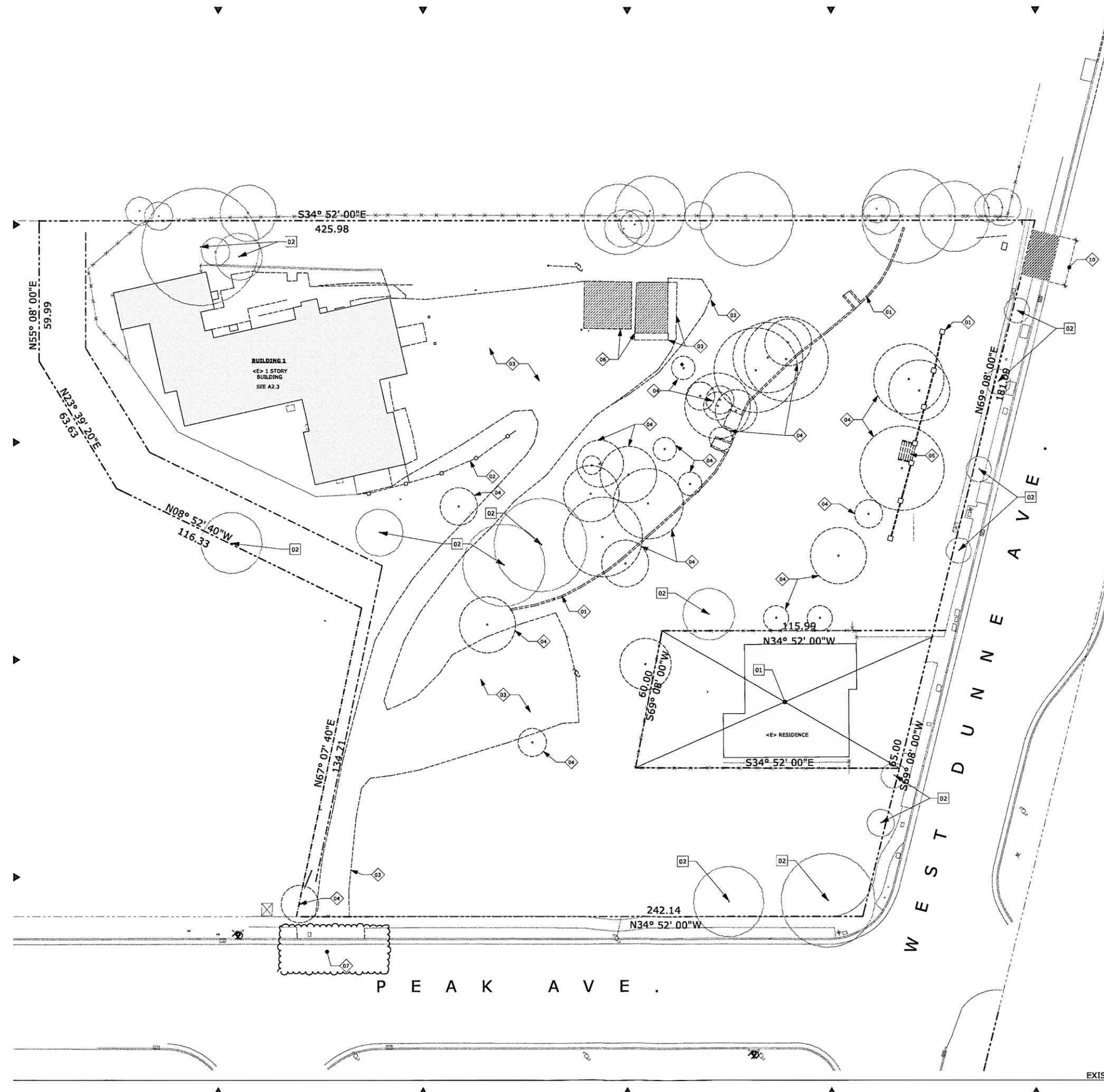
COMPLIANCE WITH CFC CHAPTER 14 "FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION" & CFC CHAPTER 13 WILL BE ENFORCED.

EMERGENCY VEHICLE ACCESS ROADS AND ON SITE FIRE HYDRANTS SHALL BE IN SERVICE AND OPERABLE PRIOR TO LOADING THE SITE WITH COMBUSTIBLE MATERIALS.

DEVELOPMENT







#### GENERAL NOTES

1. CONTRACTOR SHALL VERIFY LOCATION OF ALL <E> ABOVE GROUND UTILITIES AND PROVIDE FOR THEIR TEMPORARY DISCONNECTION, PROTECTION, REMOVAL AND/OR STORAGE AS MAY BE REQUIRED DURING CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH THE COUNTY/DISTRICT TO DETERMINE WHETHER TEMPORARY SERVICES ARE NECESSARY.
2. ALL SPOILS, DEBRIS, AND INCIDENTAL ITEMS SHALL BE HAULED OFF SITE BY CONTRACTOR AND BE DISPOSED OF IN A LAWFUL MANNER AS IT ACCUMULATES.
3. CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE IN ANY WAY, ANY EXISTING ELEMENTS NOT DESIGNATED FOR REMOVAL. SUCH DAMAGE IS THE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL COST TO THE COUNTY/DISTRICT.
4. COORDINATE SHUT-OFF OF ALL UTILITIES PRIOR TO ANY DEMOLITION.
5. CONTRACTOR IS TO PROTECT AND KEEP <E> TREES.
6. THE <E> BUILDINGS ARE TO REMAIN IN USE DURING CONSTRUCTION.
7. THE SITE MUST BE CLEANED AT THE END OF EACH BUSINESS DAY.
8. CONTRACTOR TO MAINTAIN A SAFE, SECURE SITE.
9. THIS DRAWING IS TO OUR BEST KNOWLEDGE AND REFLECTS THE <E> SITE CONDITIONS.

#### DEMOLITION KEY NOTES

- 01 <E> WALL AND FOOTINGS TO BE REMOVED & DISCARDED
- 02 <E> FENCE AND FOOTINGS TO BE REMOVED & DISCARDED
- 03 <E> PAVING TO BE REMOVED & DISCARDED AS REQUIRED TO ACCOMMODATE NEW PAVING
- 04 <E> BATCH OF TREES AND ROOT BALL TO BE REMOVED & DISCARDED
- 05 <E> STAIRS AND FOOTINGS TO BE REMOVED & DISCARDED
- 06 <E> BUILDING AND FOUNDATION TO BE REMOVED & DISCARDED
- 07 REMOVE DRIVEWAY PER CIVIL PLANS
- 10 REMOVE CURB, OPEN TRENCH, CONCRETE DRAIN & REPLACE PER CIVIL

#### KEY NOTES

- 01 <E> RESIDENCE LOT N.I.C.
- 02 <E> TREES TO REMAIN PROTECT DURING DEMOLITION AND CONSTRUCTION

#### SYMBOL LEGEND

- PROPERTY LINE
- EASEMENT LINE
- ITEMS TO BE DEMOLISHED



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#### REVISIONS

- 1
- 2
- 3

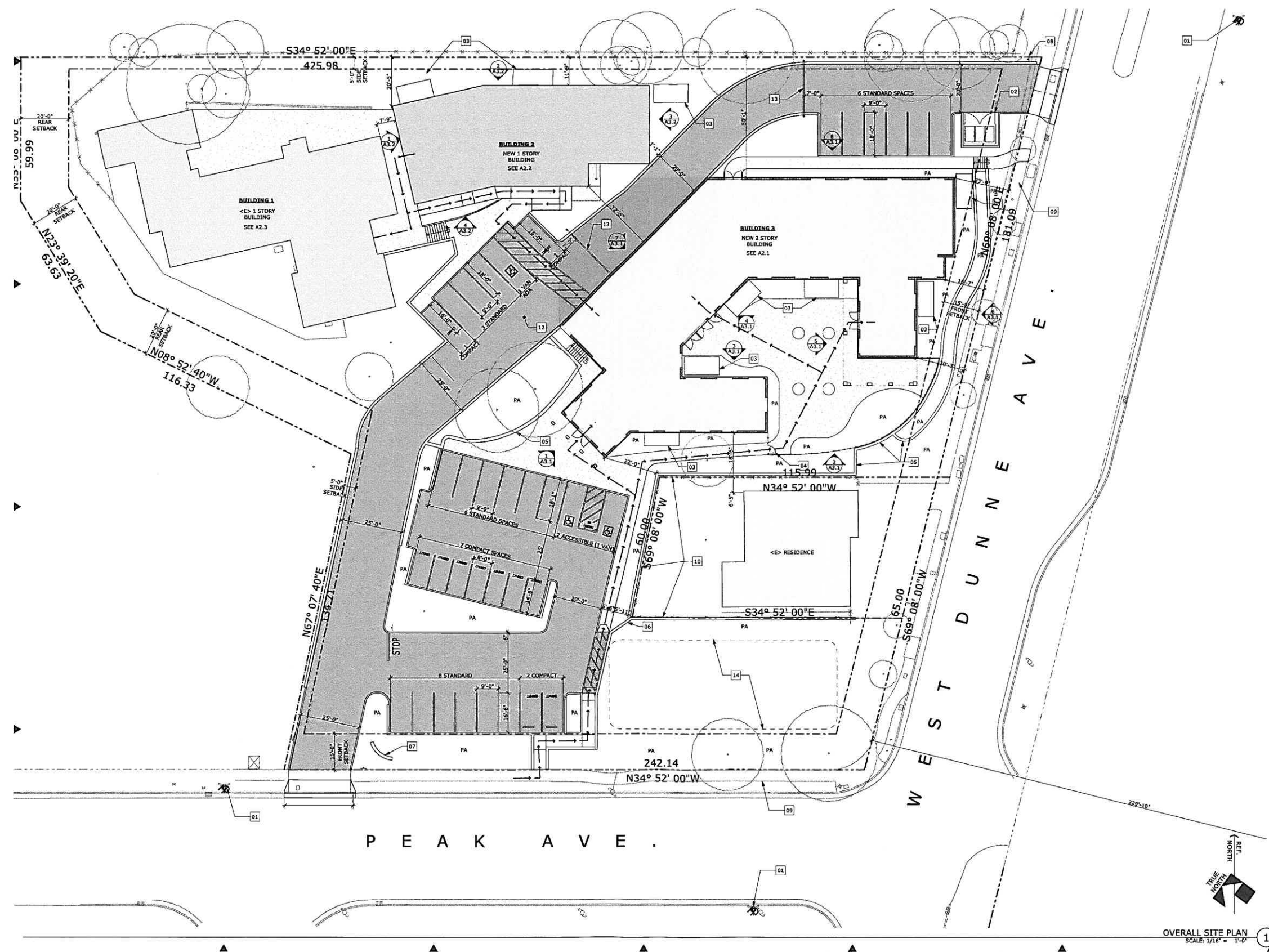
#### EXISTING & DEMO SITE PLAN

VILA MONTE CARE FACILITY

NELLY AMAS  
17500 PEAK AVENUE, MORGAN HILL, CA 95037

Project: 17500 Peak Avenue, Morgan Hill, CA 95037  
Scale: 1/16" = 1'-0"  
Date: 6/21/2016  
Job No: 14032

A1.0



GENERAL NOTES

1. FOR SITE AND BUILDING DATA PLEASE SEE A0.1
2. FOR PARKING CALCULATIONS SEE A0.1
3. PA = PLANTING AREA - SEE LANDSCAPE PLAN L1.0
4. PROVIDE ON ALL PUBLICLY ACCESSIBLE EXTERIOR DOORS, AUTOMATIC DOOR OPERATORS THAT ARE LISTED FOR USE BY THE STATE OF CALIFORNIA.

KEY NOTES

- 01 <E> FIRE HYDRANT
- 02 TRASH ENCLOSURE WITH SOLID COVERING
- 03 ABOVE GRADE PLANTER SEE L1.1 & C-6
- 04 BLACK METAL DECORATIVE FENCE AND GATE
- 05 SPLIT FACE CMU PLANTER WALL
- 06 CMU RETAINING WALL / PLANTER - SEE DETAIL 2/L1.1
- 07 MAIN ENTRY SIGNAGE
- 08 SIGNAGE TO READ "DELIVERIES AND FIRE ACCESS LANE ONLY"
- 09 <E> SIDEWALK
- 10 <E> WOOD FENCE
- 11 NEW CITY STANDARD STREET LIGHT
- 12 80'+ OF FIRETRUCK DRIVEWAY THAT IS 0%-6% SLOPE
- 13 POLE GATE SEE DETAIL 1/A9.1
- 14 DETENTION POND

SYMBOL LEGEND

- PROPERTY LINE
- SETBACK
- PATH OF TRAVEL
- [Symbol] <E> BLDG
- [Symbol] (N) BLDG
- [Symbol] (N) PERVIOUS AC
- [Symbol] (N) PERVIOUS CONCRETE

ACCESSIBILITY NOTES

1. PEDESTRIAN PATH OF TRAVEL (P.O.T.) INDICATED AS A BARRIER FREE, COMMON, ACCESS ROUTE WITHOUT ANY ABRUPT VERTICAL CHANGES EXCEEDING 1/2" REVELED AT 1:12 MAXIMUM SLOPE, EXCEPT THAT LEVEL CHANGES DO NOT EXCEED 1/4" VERTICAL. THE PATH'S SURFACE SHALL BE AT LEAST 48" WIDE, SLIP RESISTANT, STABLE, FIRM AND SMOOTH. PASSING SPACES (CBC 11B-403.5.3) SHALL BE AT LEAST 60" X 60" ARE LOCATED NOT MORE THAN 200' APART. PARTS OF POT WITH CONTINUOUS GRADIENTS SHALL HAVE 60" LEVEL AREAS (CBC 11B403.7) NOT MORE THAN 400' APART. THE CROSS SLOPE SHALL NOT EXCEED 2% AND THE SLOPES IN THE DIRECTION OF TRAVEL THAT EXCEED 5% SHALL BE CONSTRUCTED AS ACCESSIBLE RAMPS. THE P.O.T. SHALL BE FREE OF OVERHEAD OBSTRUCTIONS UP TO 80" MINIMUM (CBC 11B-307.4). OBJECTS PROJECTING FROM WALLS WITH LEADING EDGES BETWEEN 27" AND 80" A.F.F. SHALL NOT PROTRUDE MORE THAN 4" FROM THE WALL (CBC 11B-307.2). THE P.O.T. SHALL COMPLY WITH CBC 1133B.7.
2. ARCHITECT AND CONTRACTOR TO VERIFY THAT ALL BARRIERS IN THE PATH OF TRAVEL HAVE BEEN REMOVED PER SECTION 11-B403.3.
3. ACCESSIBLE PATH OF TRAVEL SHALL BE SLIP RESISTANT & COMPLY WITH SECTIONS 11B-303 OF TITLE 24.
4. ACCESSIBLE GROUND FLOOR ENTRY/ EXITS SHALL COMPLY WITH:
  - CBC 11B-404.2.4
  - 24" STROKE SIDE CLEARANCE AT EXTERIOR PULL SIDE OF DOORS
  - 60" MIN LEVEL AREA (2% MAX SLOPE) PERPENDICULAR TO DOOR @ EXTERIOR & INTERIOR
  - LEVEL LANDING AREA CONNECTED TO ACCESSIBLE ROUTE THROUGHOUT SITE.
5. ALL GATES TO AREAS OF REFUGE TO BE EQUIPPED WITH PANIC HARDWARE.
6. ALL EXTERIOR DOORS SHALL COMPLY WITH ADA STANDARDS

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- REVISIONS
- 1
  - 2
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**OVERALL SITE PLAN**  
**VILA MONTE CARE FACILITY**  
NELLY ANAS  
17090 PEAK AVENUE, MORGAN HILL, CA 95037

DATE	6/21/2016
SHEET NO.	14032

**A1.1**

OVERALL SITE PLAN  
SCALE: 1/16" = 1'-0"



ABBREVIATIONS	
DESCRIPTION	DESCRIPTION
AB	AGGREGATE BASE (CLASS AS NOTED)
AC	ASPHALT CONCRETE
AD	AREA DRAIN
BC	BACK OF CURB
BFL	BACK FLOW WATER PREVENTOR VALVE
BOW	BOTTOM OF WALL
BW	BACK OF WALK
C&G	CURB AND GUTTER
CFF	GARAGE FINISH FLOOR (BACK)
C/L	CENTERLINE
CLSW	CENTERLINE SWALE
CD	CLEANOUT
CP	CONTROL POINT
DWY	DRIVEWAY
D-S	DORM SPOUT
DIL	DETAIL
ELEC	ELECTRIC
EP	EDGE OF PAVEMENT ELEVATION
EUC	EUCALYPTUS TREE
(E)EX	EXISTING
FF	FINISHED FLOOR
FG	FINISH GRADE
FL	FIRE HYDRANT
FL	FLOWLINE
FNC	FENCE
FOC	FACE OF CURB
GB	GRADE BREAK
GFT	GARAGE FINISHED FLOOR (FRONT)
GUY	GUY WIRE
HP	HIGH POINT
IP	IRON PIPE
INV	INVERT
JP	JOINT POLE
JB	JUNCTION BOX (UTILITY)
LP	UP OF OUTER
LP	LOW POINT
MON	MONUMENT
(N)	NEW
OG	ORIGINAL GROUND
ORE	OVERLAND RELEASE ELEVATION
PDEV	PG&E VAULT
R.P./L	PROPERTY LINE
PERF	PLASTIC PERFORATED PIPE
PSE	PUBLIC SERVICE EASEMENT
PVC	POLYVINYL CHLORIDE
R/W	RIGHT OF WAY
RCP	REINFORCED CONCRETE PIPE
SD	STORM DRAIN
SDH	STORM DRAIN MANHOLE
STD	STANDARD
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
SW	SIDEWALK
TC	TOP OF CURB
TF	TOP OF FOUNDATION
TOW	TOP OF GROUND
TOW	TOP OF SLAB
TOW	TOP OF WALL
TP	TOP OF PAVEMENT
(TYP)	TYPICAL
USS	UNDERGROUND SANITARY SEWER
UE	UTILITY EASEMENT
UT	UNDERGROUND TELEPHONE
UW	UNDERGROUND WATER
VCP	VITRIFIED CLAY PIPE
WL	WHITE LINE STRIPE
WM	WALKWAY
WM	WATER METER
WV	WATER VALVE

## CONCEPTUAL GRADING AND DRAINAGE PLANS AMAS HOME CARE 17090 PEAK AVE, MORGAN HILL CA

### EARTHWORK TABLE

	CUT (CY)	FILL (CY)	IMPORT (CY)	EXPORT (CY)
BUILDING 1 (SOUTHERLY)	1,260	910		
BUILDING 2 (NORTHERLY)	110	160		
ROAD (DRIVEWAY) & IT'S 2 SET OF STALLS	1,770	350		
LOWER PARKING LOT & IT'S LANDSCAPE	0	950		
UPPER PARKING LOT & IT'S LANDSCAPE	0	510		
COURT YARD, FRONT ENTRY YARD	0	630		
TOTAL	3,140	3,510	370	0

#### NOTES:

1. EARTHWORK QUANTITIES ON THIS TABLE ARE FOR INFORMATION ONLY. CONTRACTORS ARE TO PERFORM THEIR OWN QUANTITY TAKE OFFS.
2. ALL ESTIMATES ARE ENGINEER ESTIMATE, FROM EX. FINISH SURFACE TO PROPOSED FINISH SURFACE. THICKNESS OF EXISTING AND PROPOSED PAVEMENTS, SUB BASE, SLABS AND FOUNDATION TRENCHES TO BE CALCULATED BY CONTRACTORS FOR BIDDING PURPOSES.
3. FILL IS CONSIDERED COMPACTED, AND CUT IS CONSIDERED UNDISTURBED (COMPACT) ADD 5 TO 10% SHRINKAGE IF ORDERING IMPORT/ EXPORT (HAUL-OFF) LOOSE SOIL FOR EXCESS FILL/ CUT.

### LEGEND

PROPOSED	DESCRIPTION	EXISTING
---	PROPERTY LINE	---
F	FILL AREA LIMIT	---
C	CUT AREA LIMIT	---
102	CONTOUR	102
W	WATER LINE	W
SD	STORM DRAIN PIPE (SOLID)	SD
SS	SANITARY SEWER PIPE	SS
SUB	SUBDRAIN PIPE (PERFORATED)	SUB
OH	OVERHEAD UTILITIES WITH POLE	OH
G	GAS LINE	G
E	ELECTRIC LINE (UNDERGROUND)	E
JT	JOINT TRENCH	JT
---	ELECTRICAL CONDUIT	---
SLV	STREET LIGHT VAULT	SLV
SSCO	SANITARY SEWER CLEANOUT	SSCO
●	SANITARY SEWER MANHOLE	●
○	STORM DRAIN MANHOLE	○
✱	ELECTROLYZER	✱
WM	WATER METER	WM
●	TREE WITH TRUNK	●
102.23	6" WOODEN FENCE	102.23
102.23	SPOT ELEVATION	102.23
---	TREE PROTECTION FENCE	---
---	5' TALL CHAIN LINK	---
---	SWALE	---
→	DIRECTION OF FLOW IN PIPE	→
□	AREA DRAIN/ INLET	□
→	OVERLAND RELEASE PATH	→
---	GRADE TO DRAIN, 2% MIN. AWAY FROM HOUSE	---
---	1% MIN. FROM PROPERTY LINE TO SWALE	---
✱	(E) TREE TO BE REMOVE	✱
---	DOWN-SPOUT	---
---	ROOF DOWN-SPOUT, CONNECTED TO STORM DRAIN SYSTEM	---



LOCATION MAP  
N.T.S.

### SHEET INDEX:

- C-1 COVER SHEET/ NOTES/ DETAILS
- C-2 GRADING AND DRAINAGE PLAN
- C-3 CROSS SECTIONS, DETAILS
- C-4 STORMWATER CONTROL DATA/ NOTES/ MEASURES
- C-5 STORMWATER CONTROL PLAN
- C-6 STORMWATER CONTROL DATA/ NOTES/ DETAILS

### SITE BENCHMARK:

- SURVEY CONTROL
- SET MAG NAIL
- ELEVATION=376.00' (ASSUMED)

### DRAINAGE NOTES:

1. Surface water shall be directed away from all buildings into drainage swales, gutters, storm drain inlets and drainage systems.
2. Connect roof down spouts to 3" D.I.P. @ minimum 1% slope and 6" ground cover. Connect pipe to PLANTER BOXES per STORM WATER CONTROL PLANS. See architectural plans for roof downspout locations.
3. On site storm drain lines shall consist of solid PVC-SCH 40 OR PVC SDR-35 minimum or better. Use PVC SCH40 OR PVC SDR-35 for pipes running under driveway.
4. Storm drain inlets shall be precast concrete, Christy U23 type or equivalent. Use traffic grade cover for inlets in driveways and stalls.

### GEOTECHNICAL REVIEW:

GRADING AND DRAINAGE PLANS SHALL BE REVIEWED AND APPROVED BY THE PROJECT GEOTECHNICAL/ SOILS ENGINEER. GEOTECHNICAL/ SOILS ENGINEER TO PROVIDE AND FURNISH LETTER OF APPROVAL TO D.T.

### WORK IN R-O-W

ALL WORK WITHIN CITY R-O-W ARE TO BE DONE UNDER SEPARATE ENCROACHMENT PERMIT. INFORMATION REGARDING IMPROVEMENTS WITHIN PUBLIC RIGHT-OF-WAY SHOWN HERE ARE FOR REFERENCE ONLY.

#### NOTICE TO CONTRACTORS

CONTRACTOR TO NOTIFY U.S.A. (UNDERGROUND SERVICE ALERT) AT 800-277-2600 A MINIMUM OF 2 WORKING DAYS BEFORE BEGINNING UNDERGROUND WORK FOR VERIFICATION OF THE LOCATION AND DEPTH OF UNDERGROUND UTILITIES.



PRELIMINARY PLANS  
NOT APPROVED FOR CONSTRUCTION

CONCEPTUAL GRADING AND DRAINAGE PLANS

COVER SHEET

VILA MONTE CARE FACILITY

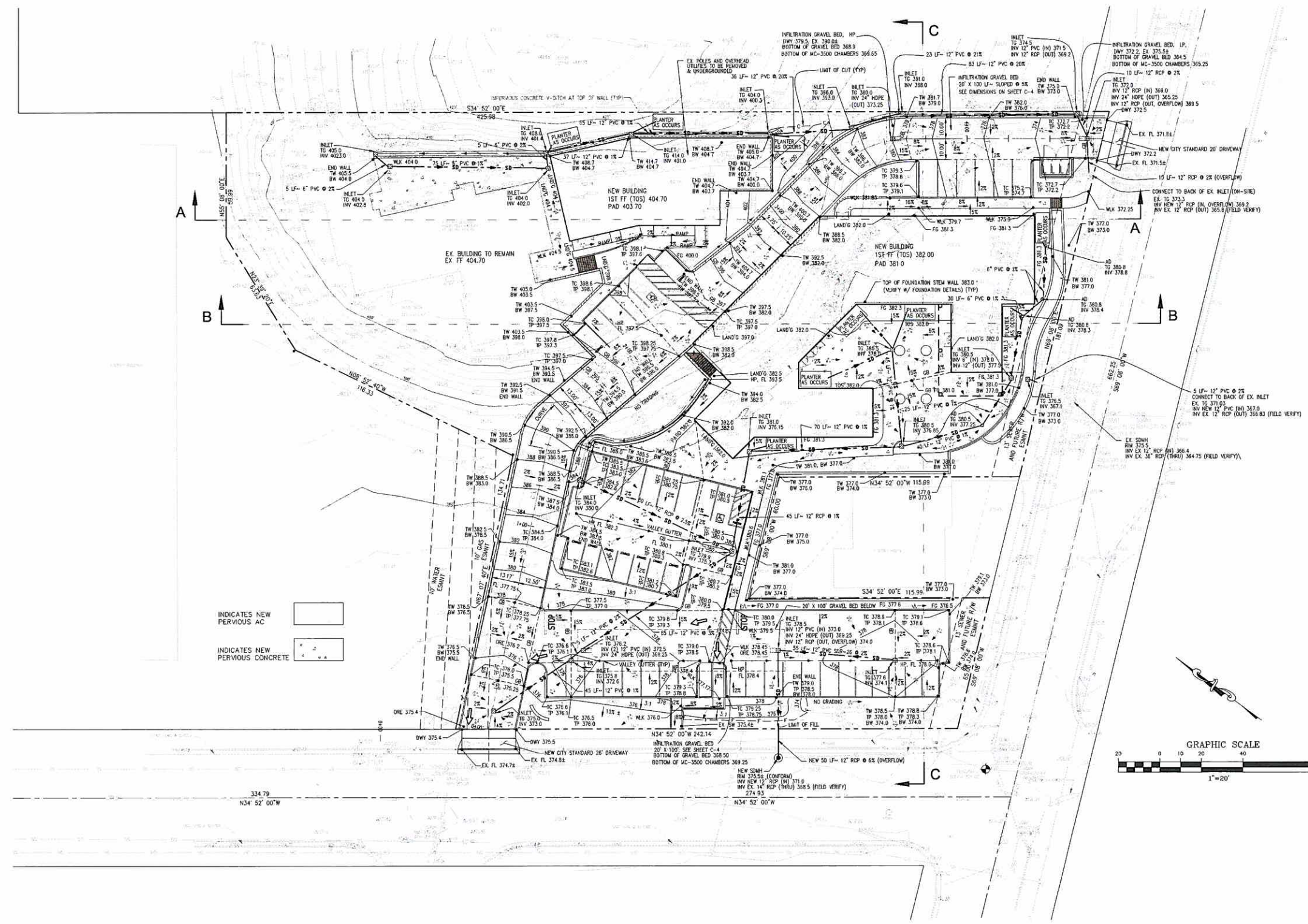
17090 PEAK AVENUE, MORGAN HILL, CA 95037

These drawings are prepared by Weston Miles Architects and SMP Engineers. They are not to be used for any other purpose without the written consent of Weston Miles Architects and SMP Engineers.

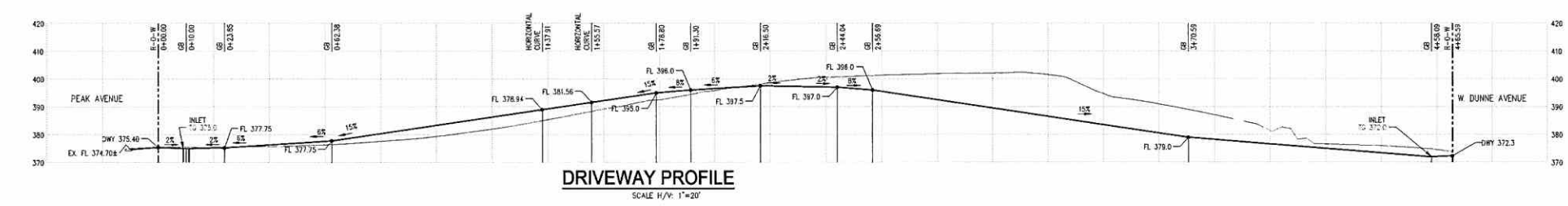
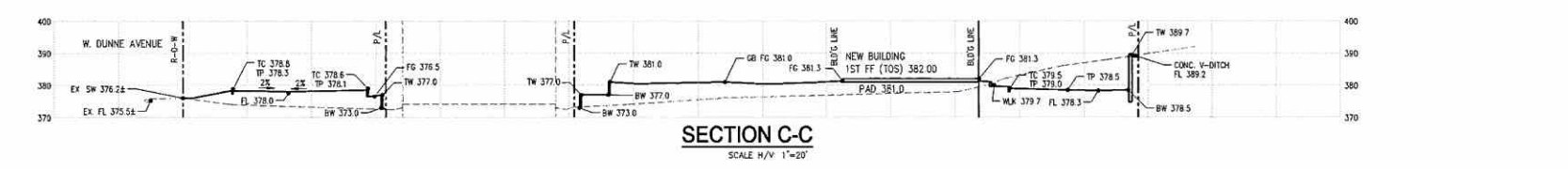
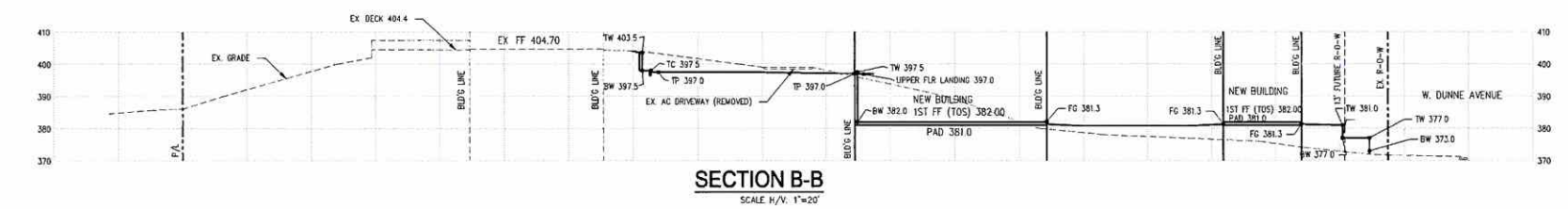
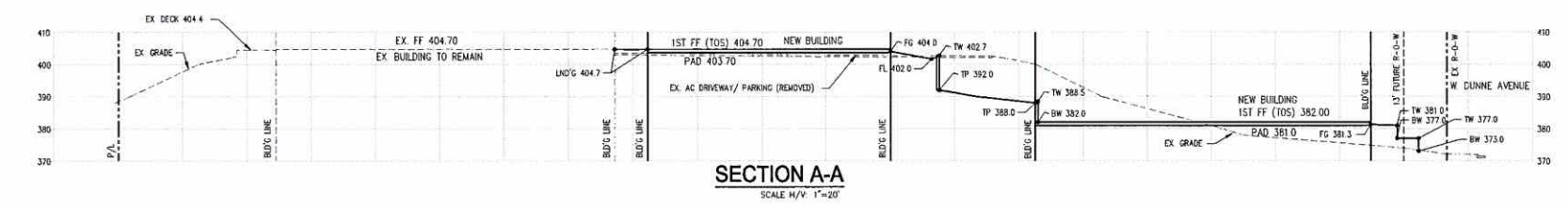
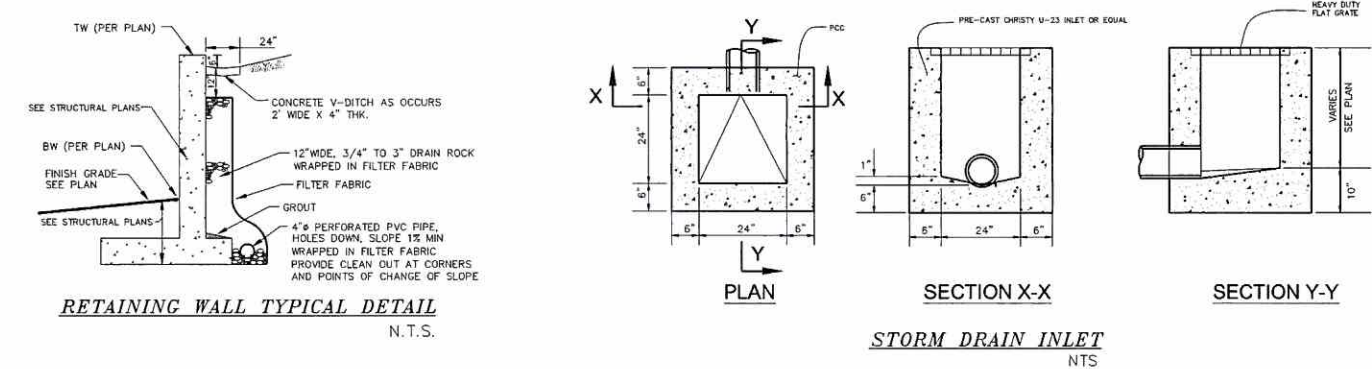
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**CONCEPTUAL GRADING AND DRAINAGE PLANS**  
**GRADING AND DRAINAGE PLAN**  
**VILA MONTE CARE FACILITY**





**Compliance with NPDES Water Quality Division:**  
Compliance with Post-Construction stormwater management Requirement's (PCR's) for CENTRAL COAST REGION:

The California Regional Water Quality Control Board (CRWQCB), Central Coast Region, on July 2013, Adopted Resolution R3-2013-0032 (as documented by the Stormwater Management Guidance Manual for Low Impact Development and Post-Construction Requirements), approving Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region.

These updated stormwater quality control requirements for this project include:

- Stormwater Control Plan Checklist and applicable calculations per the Stormwater Management Guidance Manual for Low Impact Development and Post-Construction Requirements.
- Post-Construction Requirements per Stormwater Management Guidance Manual for Low Impact Development as follows:
- Performance Requirement 1: Site Design and Runoff Reduction
- Performance Requirement 2: Water Quality Treatment
- Performance Requirement 3: Runoff Retention
- Performance Requirement 4: Peak Management

PERVIOUS AND IMPERVIOUS SURFACES COMPARISON TABLE				
Project Name	AMAS HOME CARE	Project Address	17000 PEAK AVE, MORGAN HILL, CA	
Project APN	767-03-017	Project Application	ZA-14-15 EA-14-15 PEAK-AMAS	
a. Project Phase Number	NA	b. Total Site (acres)	2.00	
IMA, 1, 2, 3, etc.				
c. Total Site Existing Impervious Surfaces (square feet)	22,052	d. Total Area of Site Disturbed (acres)	1.55	
e. Impervious Surfaces	Existing Condition of Site Area Disturbed (square feet)	Proposed Condition of Site Area Disturbed	Replace <sup>1</sup>	New <sup>2</sup>
Road Area(s)	706	706		16,600
Parking	13,452	0		0
Sidewalks, Patios, Paths, etc.	2,256	0		0
Streets (public)	0	0		0
Streets (private)	0	0		0
Total Impervious Surfaces: e.1:	15,414	e.2:	706	e.3: 16,600
f. Pervious Surfaces				
Landscaped Areas	51,930	15,836		0
Pervious Paving	0	33,872		0
Other Pervious Surfaces (green roof, etc.)	0	0		0
Total Pervious Surfaces: f.1:	51,930	f.2:	49,708	f.3: 0
g. Total Proposed Replaced + New Impervious Surfaces (e.2 + e.3):				17,636
h. Total Proposed Replaced + New Pervious Surfaces (f.2 + f.3):				49,708
i. Percent of Replacement of Impervious Area in redevelopment projects (e.2 + e.3 x 100):				3.2%
j. Total Site Post-construction Impervious Surfaces (square feet):				20,876
k. Reduced Impervious Area Credit (e - j):				1,156
l. Net Impervious Area, (g-i):				16,480

<sup>1</sup> Proposed Replacement Impervious Surface: All impervious surfaces added to any area of the site that was a perviously existing pervious surface and needed to build the project, allow access, and provide fire protection.

<sup>2</sup> Proposed New Impervious Surface: All impervious surfaces added to any area of the site that was a perviously existing pervious surface.

Project will comply with Performance requirements no. 1, 2, 3, and 4, as follows:

- Site Design and Runoff Reduction Measures, Incorporated into project design:
  - (i) Limit disturbance of creeks and natural drainage features
  - (ii) Minimize compaction of highly permeable soils
  - (iii) Limit clearing and grading of native vegetation at the site to the minimum area needed to build the project, allow access, and provide fire protection
  - (iv) Minimize impervious surfaces by concentrating improvements on the least-sensitive portions of the site, while leaving the remaining land in a natural undisturbed state
  - (v) Minimize stormwater runoff by implementing the following site design measures:
    - Construct bike lanes, driveways, uncovered parking lots, sidewalks, walkways and patios with permeable surfaces
- Water Quality Treatment Measures, Incorporated into project design: (on-site compliance achieved)
  - (i) OF RESOLUTION R3-2013-0032:
    - (a) FLOW-THRU PLANTER BOXES TO BE SIZED TO 4% OF BUILDING ROOF AREAS (project post-impervious areas), PER PROVISION 3) b) iii, (b).
    - (b) Flow Hydraulic Design Basis - Treatment systems whose primary mode of action depends on flow capacity shall be sized to treat:
      - (i) The flow of runoff resulting from a rain event equal to at least 0.2 inches per hour intensity.

- Flow-THRU PLANTER sizing Calculation:
  - PLANTER AREA CALCULATION: (Flow based design, simplified approach, i design = 0.2 in/hr)
  - Flow into planter, Q in-flow (CFS) = (design) x C (roof) A (roof) = 0.2 in/hr x 0.85 x A (roof) (Acres) = 0.19 x A (roof) (Acres) = (0.19 x A (roof) (SQFT)) / (43,560 SQFT / 1 Acre) =
  - Q in-flow (CFS) = 4.36 E-6 x A (roof) (SQFT)
  - Flow out of planter, Q out-flow (CFS) = Infiltration rate of soil media (FT/sec) x A planter (SQFT) = 5.0 in/hr x (1 FT/12 in) x (thru 3600 sec) x A planter (SQFT) = 1.57 E-4 A planter (SQFT)
  - Q out-flow (CFS) >= Q in-flow (CFS)
  - 1.57 E-4 A planter (SQFT) >= 4.36 E-6 x A (roof) (SQFT), or, A planter (SQFT) >= 0.6377 A (roof) (SQFT), or A planter (SQFT) = 0.64 A (roof) (SQFT)
- PLANTERS CRITERIA:
  - SURFACE STORAGE DEPTH (FROM TOP OF PLANTER SOIL TO OVERFLOW) = MIN. 8 INCHES
  - DEPTH OF TOP SOIL = 24 INCHES
  - INFILTRATION RATE OF SOIL MEDIA = 5 in/hr
  - SOIL MEDIA TYPE: SOIL MIXTURE, 20% SAND PER ASTM C33 AND 10% COMPOST
  - FILTER FABRIC MIRAFL 140N WITH 12" OVERLAP AT SEAMS BETWEEN SOIL MEDIA AND DRAIN ROCK LAYER BELOW DRAIN ROCK LAYER DEPTH: MIN. 18", WITH 8" PERFORATED UNDERDRAIN PLACED 12" ABOVE BOTTOM OF DRAIN ROCK.

Planters are located immediately next to building areas to receive direct discharge from roof down-spouts, planter sides FACING BUILDING and bottom are WATER TIGHT, so planters wouldn't infiltrate run-off into soil next to foundations, sides away from building to be pervious, so any water remaining in box, not evaporated or catch by under-drain would dissipate into natural soil.

Separate water infiltration devices are to be sized to address run-off retention as required by Performance Requirement No. 3: Runoff Retention.

- PERVIOUS ASPHALT AND PERVIOUS CONCRETE PAVEMENT WITH OPEN GRADED SUB-BASE, TO BE SIZED HOLD ITS RUN-OFF AND INFILTRATE INTO SOIL BELOW (self retaining)

- PERVIOUS ASPHALT AND PERVIOUS CONCRETE PAVEMENT drain rock (sub-base) thickness sizing Calculation: (Volume based design, simplified approach, BMP Volume = 1.9 inches of rain, that is 95th percentile 24 hr rain for site, SEE SHEET C-6 FOR ENLARGED MAP)

Drain rock porosity: 30%  
Drain rock thickness required (\*) below underdrain= 1.9 in/ 0.3 = 6.33 in.

SO LEST USE A MINIMUM OF 7 INCHES DRAIN ROCK BELOW UNDERDRAIN.

\*, minimum drain-rock depth required to address stormwater run-off storage capacity.

separate recommendation/ determination needed by project soils engineer, so pavement and it's sub-base thickness is adequate to carry traffic loads, without falling, while soil below compaction is minimal, and in saturated condition.

Statement: Water Quality Treatment, Runoff Retention, and Peak Management Performance Requirements have been met on-site.

Check drain rock Time of de-watering (preferred at most 24 to 72 hours to avoid standing water problems such as mosquitoes)

k. saturated, for UNDISTURBED (NATIVE) soils below:

PECULATIONS TEST:

test hole 1: 84 MPI, test hole 2: 336 MPI, test hole 3: 168 MPI, test hole 4: 84 MPI

Average site: 168 MPI, or k-saturated = 0.36 inches per hour.

Depth of water 1.9 in

Time of de-watering = 1.9 / 0.36 in/ hour = 5.2 hour

3: Performance Requirement No. 3: Runoff Retention incorporated into project design: (on-site compliance achieved)

Detention Basin sizing Calculation: (reference attachment of resolution R3-2013-0032)

Step 1: Determination of Retention Tributary Area

A. Retention Tributary Area = (entire project area) - (undisturbed or planted areas) - (impervious surface areas that discharges to infiltrating areas)

= (87,197) - (19,853 undisturbed areas + 15,836 planted area) - (0)

Retention Tributary Area = 51,508 SQFT

B. Adjustments for Redevelopment Project Retention Tributary Area - Where the Regulated Project includes replaced impervious surface, the following Retention Tributary Area adjustments apply:

Redevelopment Projects located within an approved Urban Sustainability Area (Section C.3) - The replaced impervious surface areas may be subtracted from the Retention Tributary Area. The total amount of runoff volume to be retained from replaced impervious surfaces shall be equivalent to the pre-project runoff volume retained.

Adjusted Retention Tributary Area = Retention Tributary Area - The replaced impervious surface areas = 51,508 - 706

Adjusted Retention Tributary Area = 50,802 SQFT

Step 2: Determination of Retention Volume

A. determine Project's Runoff Retention Requirement:

WMZ selected for Site WMZ-1, overlaid on Holister-Gilroy Underground Basin (SEE SHEET C-6 FOR MAP AND NOTES)

A PORTION OF SITE, FRONTING CORNER OF PEAK AVENUE AND W DUNNE AVENUE LIES WITHIN WMZ3, AND A PORTION (ABOUT HALF) FRONTING W DUNNE AVENUE WITHIN WMZ 5, AND REST OF SITE, IS LYING WITHIN WMZ 1, AS DELINEATED ON Technical Support Document, Attachment A: Watershed Management Zone Maps, MORGAN HILL, CA

• Since WMZ 1 has the most restricted requirements, WMZ 1 is selected for site whenever entered into equations.

• Project to retain 95th percentile storm event run-off.

B.

Determine the 95th percentile 24-hour rainfall event:

1.8 inches for site, per 55th Percentile Rainfall Depth Map, see sheet C-6.

C.

Compute the Runoff Coefficient "C" for the area tributary to the SCM, using the equation:

C = 0.858 \* 0.78 \* 0.774 + 0.04

Where "i" is the fraction of the tributary area that is impervious

i = Project Impervious area within Retention Tributary Area/ Project Adjusted Retention Tributary Area = 17,636 / 50,802

or i = 0.35, and C = 0.44

D.

Compute Retention Volume.

Retention Volume for 95th Percentile 24-hr Rainfall Depth = C x Rainfall Depth x Retention Tributary Area

Retention Volume = 0.44 x 1.9 in x (1 FT / 12 in) x 50,802 SQFT

or Required Retention Volume (V req) = 3,593 CF

E.

Step 3: Size infiltration basins:

SCM Capture Volume = Retention Volume for 95th Percentile 24-hr Rainfall Depth = 3,593 CF (simplified method)

If use Gravel Bed(s) for infiltration basin, with structural chamber to distribute run-off from drainage system to infiltration bottom and add capacity to basin

A.

Select structural Chamber:

use stormtech MC 3500 chamber with cross section as follows:



Check De-watering / Infiltration time for selected gravel bed:

k. saturated = 0.36 in/hr per percolation test result

Let's assume de-watering thru bottom area of basin and half of side walls area, (at side walls infiltration starts at full area, when basin is full and reaches to zero depth by the time de-watering has ended).

area of bottom of detention basins = 2 x (7.92 FT x 88 FT) = 1,394 SQFT

area of sides of detention basins = 2 x ( (7.92 FT x 88 FT) x 2 ) x 5.23 FT = 2,006 SQFT

Half of side area plus bottom area = 1,392 + (2,006 / 2) = 2,395 SQFT

rate of De-watering = 2,395 SQFT x 0.36 in/hr x (1 FT / 12 inches) = 72 CF / hr

Time of De-watering = 3,593 CF / 72 CF / hr = 49.9 hours,

or Time of De-watering = 50 hours, should be less than 24 hour

Let's try Width = 20 FT, and Length = 100 FT, to achieve De-watering time less than 24 hr:

area of bottom of detention basins = 2 x (20 FT x 100 FT) = 4,000 SQFT

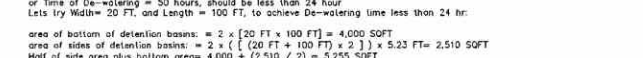
area of sides of detention basins = 2 x ( (20 FT x 100 FT) x 2 ) x 5.23 FT = 2,510 SQFT

Half of side area plus bottom area = 4,000 + (2,510 / 2) = 5,255 SQFT

rate of De-watering = 5,255 SQFT x 0.36 in/hr x (1 FT / 12 inches) = 157 CF / hr

Time of De-watering = 3,593 CF / 157 CF / hr = 22.9 hours,

or Time of De-watering = 23 hours, is less than 24 hour.



4: Performance Requirement No. 4: Peak Management

(on-site compliance achieved) and that Applicable to this project.

Since project proposes LESS than 22,500 SQFT of new + replaced impervious surface, therefore it is exempt from incorporating Peak management requirements into design.

Calculation and comparison of Pre-Construction and Post-Construction Peak-flow rates

Step 1: Area and Average Coefficient factor for pre and post condition, over entire site:

C impervious = 0.55, C pervious = 0.4

A.

Pre-Construction condition:

TOTAL IMPERVIOUS, 22,052 SQFT,

TOTAL PERVIOUS 61,157 SQFT

TOTAL SITE AREA (PROPERTY) 87,197 SQFT

C average = 0.54

B.

Post-Construction condition:

TOTAL IMPERVIOUS, 20,876 SQFT,

TOTAL PERVIOUS 49,708 SQFT

TOTAL SITE AREA (PROPERTY) 87,197 SQFT

C average = 0.53

C.

Step 2: Calculate Time of Concentration for pre and post:

A.

Pre-Construction condition:

Let longest path of run-off be from high point elevation 422.0' around middle of Northeastly property line along the existing earth swale easterly of existing access AC paved road and discharging to most Southerly corner of property at corner of Peak Avenue and Dunne Ave, elevation of 373.0', a total run length of 400 LF.

B.

Method 1 (Kirpich formula)

TC pre (minutes) = [k x 0.0078 x (L^0.77/S^0.385)] + 10, where:

HP elev = 422.0', LP elev = 373.0',

elev drop (d) = 422.0 - 373.0 = 49.0'

Length Run (L) = 400 LF

Effective Slope (S) = d/L = 49.0/400 = 0.122 FT/FT

k = Kirpich adjustment factor,

k = 1.0 for Overland flow on bare soil or roadside ditches

and 10 minutes allow for over surface ponding and start run-off along flow line,

TC pre (minutes) = [1 x 0.0078 x (400^0.77/0.122^0.385)] + 10 = [0.0078 x (100.83/0.445)] + 10 = 1.77 + 10 ~ 12 minutes

C.

Method 2 (FAA formula)

TC pre (minutes) = 1.8 x (11 - c) L^0.5 / (100 S)^1/3, Where

HP elev = 398.7', LP elev = 373.0',

elev drop (d) = 398.7 - 373.0 = 23.7'

Length Run (L) = 400 LF

Effective Slope (S) = d/L = 49.0/400 = 0.122 FT/FT

k = Kirpich adjustment factor,

k = 0.4 for Overland flow on concrete or asphalt surfaces

and 10 minutes allow for over surface ponding and start run-off along flow line,

TC pre = 1.8 x (11 - 0.54) x (400^0.5) / (12.2^0.33) = 1.8 x 0.56 x 20 / 2.28 = 8.8 ~ 9 minutes

D.

So lets select 10 Minutes for TC Pre-construction

E.

Post-Construction condition:

Route 1:

Let longest path of run-off be from roof peak to splash block, to flow-thru planter, into planters media soil, into perforated pipes in Drain rock layer, into nearest inlet (10 minutes minimum), and ignoring travel time within proposed drainage pipes, (as shorter time will require a bigger storage) and into infiltration Basin.

Route 2:

from Landing at bottom of stairs, elev 398.7, to high point of flow line at center of proposed road, along center line of proposed road to proposed inlet at Peak Avenue entry driveway, TC elev 375.0, a total run length of 250 LF and ignoring travel time within proposed drainage pipes.

Method 1 (Kirpich formula)

TC post (minutes) = [k x 0.0078 x (L^0.77/S^0.385)] + 10, where:

HP elev = 398.7', LP elev = 375.0',

elev drop (d) = 398.7 - 375.0 = 23.7'

Length Run (L) = 250 LF

Effective Slope (S) = d/L = 23.7/250 = 0.095 FT/FT

k = Kirpich adjustment factor,

k = 0.4 for Overland flow on concrete or asphalt surfaces

and 10 minutes allow for over surface ponding and start run-off along flow line,

TC post (minutes) = [0.4 x 0.0078 x (250^0.77/0.122^0.385)] + 10 = [0.0031 x (70.2/0.40)] + 10 = 0.54 + 10 ~ 11 minutes

C.

Method 2 (FAA formula)

TC post (minutes) = 1.8 x (11 - c) L^0.5 / (100 S)^1/3, Where

elev drop (d) = 398.7 - 375.0 = 23.7'

Length Run (L) = 250 LF

Effective Slope (S) = d/L = 23.7/250 = 0.095 FT/FT

k = Kirpich adjustment factor,

k = 0.4 for Overland flow on concrete or asphalt surfaces

and 10 minutes allow for over surface ponding and start run-off along flow line,

TC post = 1.8 x (11 - 0.53) x (250^0.5) / (9.5^0.33) = 1.8 x 0.57 x 15.8 / 2.1 = 7.7 ~ 8 minutes

D.

So lets select 10 Minutes for TC Post-construction

Time of concentration has been increased due to delay created. In peak flow from roof areas that have to go thru planters before reaching to Storm Drainage system, and run-off from pervious pavements will be also delayed going thru sub-base layer of pervious pavement.

Let's assume constant Time of Concentration= 10 minutes, for Both Pre and Post construction.

Step 3: Determine Intensity at 10 minutes Duration for 2, 10, 25 and 100 year Storm events:

For Site location, at 10 minutes duration:

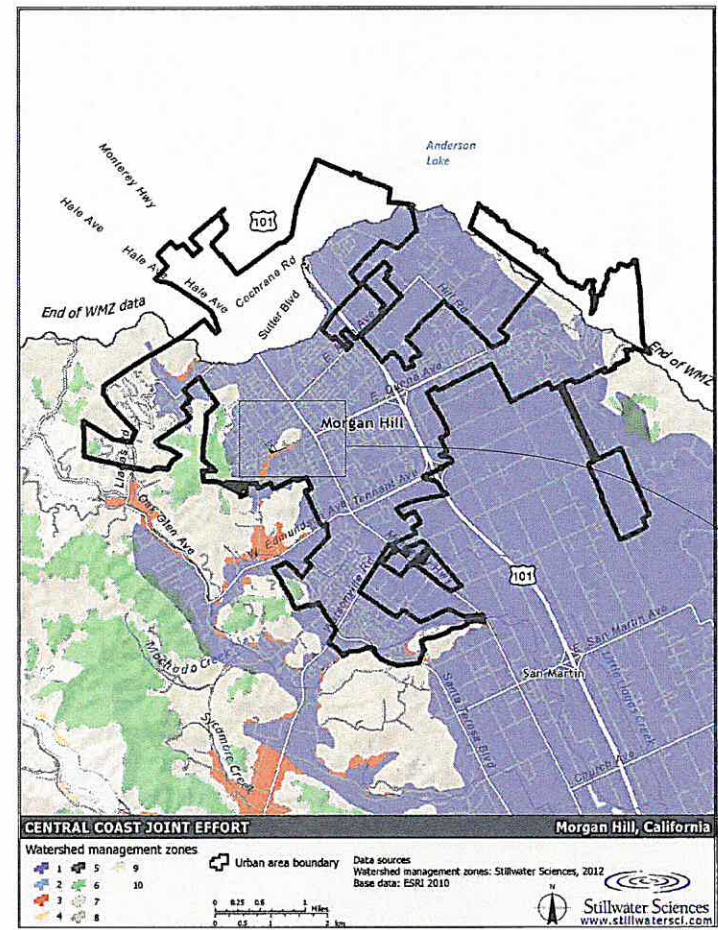
1.2yr = 0.21 in/hr (c design), 1.10yr = 1.6 in/hr and 1.100yr = 2.1 in/hr ,

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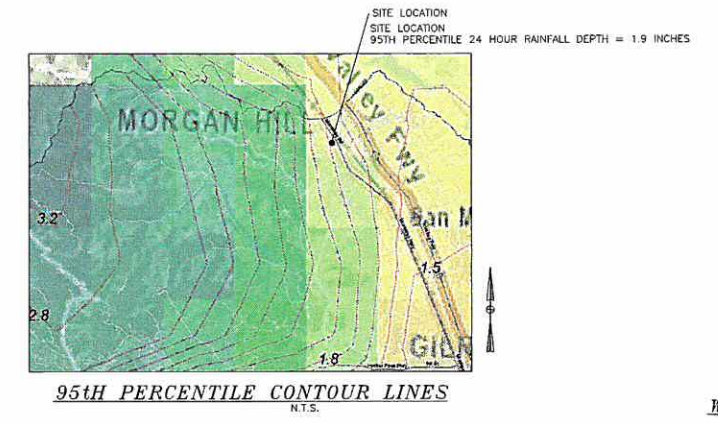




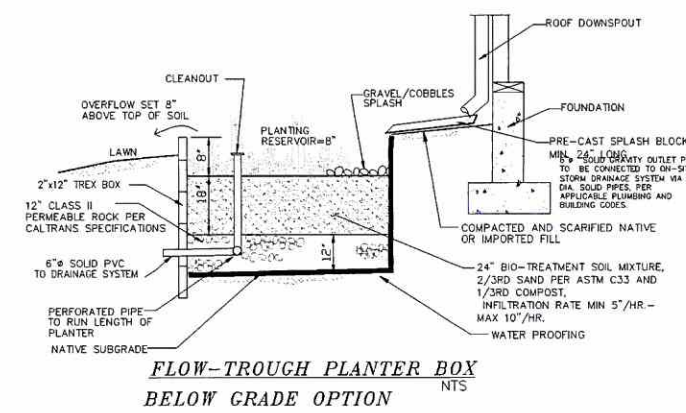




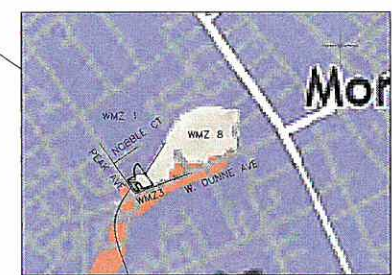
**WATER MANAGEMENT ZONES**  
N.T.S.



**95TH PERCENTILE CONTOUR LINES**  
N.T.S.

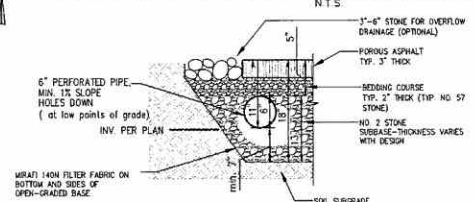


**FLOW-TROUGH PLANTER BOX**  
**BELOW GRADE OPTION**  
N.T.S.

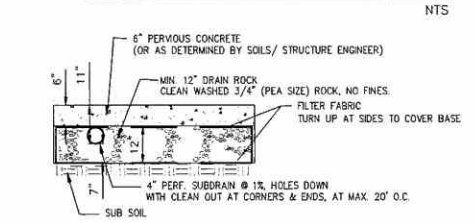


**SITE LOCATION**  
Lying within WMZ's 3, 8 and 1.  
Since WMZ 1 has the highest restrictions,  
all performance requirements have been  
done for WMZ 1.

**WATER MANAGEMENT ZONES, ENLARGED**  
N.T.S.

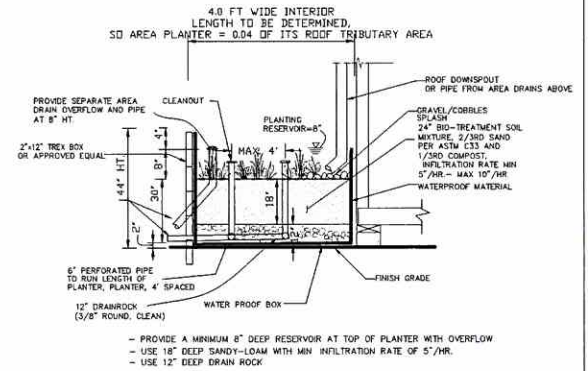


**TYPICAL POROUS ASPHALT PAVEMENT**  
**PARKING LOT AC PAVEMENT DETAIL**  
N.T.S.



**PERVIOUS CONCRETE DETAIL**  
**WALKWAY & PATIOS PERVIOUS PAVEMENT DETAIL**  
N.T.S.

NOTE:  
PROJECT SOILS ENGINEER TO REVIEW THE DESIGN AND INSPECT THE CONSTRUCTION OF THE DRIVEWAY.



**FLOW-TROUGH PLANTER BOX**  
**ABOVE GRADE OPTION**  
N.T.S.

**FLOW-TROUGH PLANTER MAINTENANCE:**

Planter boxes capture runoff from downspouts or sheet flow from plazas and paved areas. The runoff briefly floods the surface of the box and then percolates through an active soil layer to drain rock below. Typically maintenance consists of the following:

- a) Examine DOWNSPOUTS from the rooftops or sheet flow from paving to insure that flow to the planter is unimpeded. Remove any debris and repair any damaged pipes. Check splash blocks or rocks and repair, replace, or replenish as necessary.
- b) Examine the OVERFLOW pipe to make sure that it can safely convey excess flow to a storm drain. Repair or replace any damaged or disconnected piping.
- c) Check the UNDERDRAIN piping to make sure it is intact and unobstructed.

d) Observe the STRUCTURE of the box and fix any holes, cracks, rotting, or failure.

e) Check that the SOIL is at the appropriate depth to allow a 8" reservoir above the soil surface and is sufficient to effectively filter stormwater. Remove any accumulations of sediment, litter, and debris. Confirm that soil is not clogging and that the planter will drain with 3-4 hours after a storm event.

f) Determine whether the VEGETATION is dense and healthy. Replace dead plants. Prune or remove any overgrown plants or shrubs that may interfere with planter operation. Clean up fallen leaves or debris and replenish mulch. Remove any nuisance or invasive vegetation.

**MAINTENANCE NOTES:**

**Pervious Walkways and Driveway Maintenance:**

The maintenance activity schedule presented below is based on recommendations provided in the California Stormwater BMP Handbook-New and Redevelopment, and the Interlocking Concrete Pavement Institute Manual (Second Edition).

The following maintenance activities should be performed on an ongoing basis:

- a) Keep landscaped areas well maintained.
- b) Prevent soil being washed onto pavement.

The following maintenance activities should be performed 2-3 times per year:

- a) Vacuum clean surface using commercially available sweeping machines at the following times:

- End of Winter (April)

- Mid-Summer (July/August)
- After Autumn-leaf fall(November)

The following maintenance activities should be performed on as-needed (infrequent) basis, maximum 15-20 years.

- a) If routine cleaning does not restore infiltration rates, then reconstruction of part of the whole of a previous surface may be required.
- b) The surface area affected by any observed hydraulic failure should be lifted for inspection of the internal materials to identify the location and the extent of the blockage.
- c) Surface materials should be lifted and replaced after brush cleaning. Geotextiles may need complete replacement.
- d) Subsurface layers may need cleaning and replacing.
- e) Removed silts may need to be disposed of as controlled waste.
- f) Repair ruts or deformations in pavement exceeding 1/8-inch or 13 mm.
- g) Replace broken paver units that impair the structural integrity of the surface.
- h) Replenish aggregate surface joint materials.