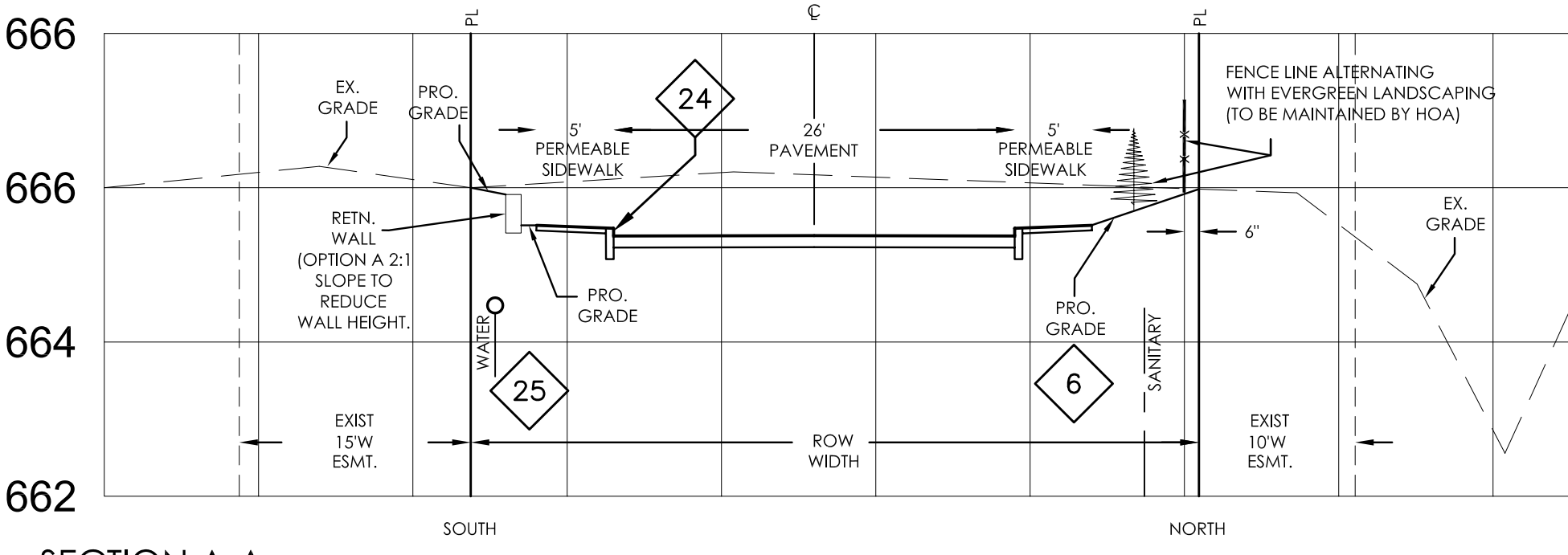
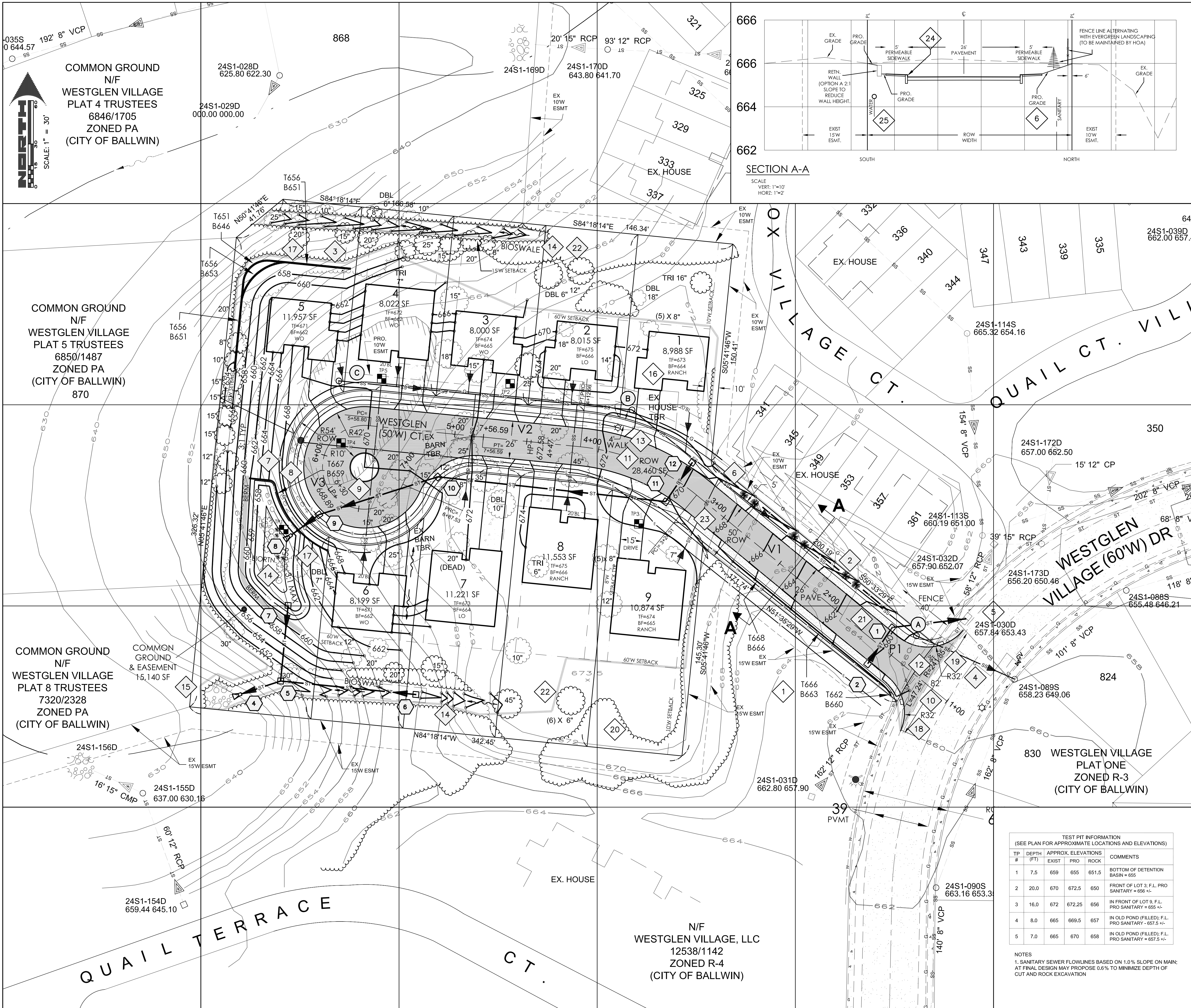




KEYED NOTES

- SEGMENTAL BLOCK RETAINING WALL (SRW) ALONGSIDE SIDEWALK AS REQUIRED TO ADAPT PROPOSED TO EXISTING GRADES AT PROPERTY LINE.
- 3:1 MAX SLOPE FROM CURB TO PROPERTY LINE NORTH SIDE OF ENTRY ROAD AS REQUIRED TO ADAPT PROPOSED TO EXISTING GRADES.
- RETAINING WALL, EXTENDED FOUNDATION AND/OR COMBINATION OF BOTH AS NEEDED TO ADAPT PROPOSED TO EXISTING GRADES, SUBJECT TO ACTUAL HOUSE MODEL AND X-Y-Z PLACEMENT ON LOT.
- CONNECT TO EXISTING SANITARY SEWER, OPEN CUT ROAD CROSSING AS PER CITY OF BALLWIN AND 15.5 R.O. REQUIREMENTS.
- CONNECT TO EXISTING DOUBLE CURB INLET.
- AMENDED SOILS NORTH SIDE OF STREET ENTRY AS B.M.P.
- ACCESS TO STORMWATER DETENTION FACILITY.
- PROVIDE SAFETY ENCLOSURE OF DETENTION FACILITY AS DIRECTED BY CITY OF BALLWIN AND/OR MSD.
- DIAMETER OF BULB IN CUL DE SAC PER CITY OF BALLWIN STANDARDS.
- PROVIDE ADA CURB RAMPS AT INTERSECTIONS AS DIRECTED BY CITY OF BALLWIN.
- PROVIDE UNDERDRAINS AS PER CITY OF BALLWIN REQUIREMENTS.
- R+R EXISTING SIDEWALK: PLATFORM AT ENTRY TO ADAPT TO ADA STDS FOR MAX CROSS SLOPE ON SIDEWALK.
- DRIVEWAYS AND APRONS TO BE IN ACCORD WITH CITY OF BALLWIN REQUIREMENTS.
- FINAL DESIGN OF STORMWATER DETENTION FACILITY AND WATER QUALITY (BMP) TECHNIQUES TO BE AS APPROVED BY M.S.D.
- STORMWATER DISCHARGE TO BE AS APPROVED BY M.S.D.
- TOP OF FOUNDATION AND BASEMENT FLOOR ELEVATIONS AS SHOWN ARE PRELIMINARY, SUBJECT TO FINAL DESIGN.
- PROVIDE SAFETY RAILINGS ATOP RETAINING WALLS AS REQUIRED BY CITY OF BALLWIN.
- ROUNDINGS AT ENTRANCE [AS EXTEND BEYOND LIMITS OF PROPERTY ACCESS] AND LIMITS OF STREET PLATFORM TO BE AS DIRECTED BY CITY OF BALLWIN.
- MATCH EXISTING GUTTER LINE AT STREET CONNECTION.
- PRESERVATION OF EXISTING TREES I.B.O. SUBJECT TO FINAL DESIGN.
- STREET NAME AND LOT ADDRESSES AS TO BE APPROVED/ASSIGNED BY ST. LOUIS COUNTY.
- DRAINAGE SWALES AS REQUIRED (TYP.).
- INSTALL PERMEABLE PAVEMENT SIDEWALKS ALONG STREET ENTRY, CONC. ELSEWHERE, AS DIRECTED BY CITY OF BALLWIN, TRANSITION FROM STANDARD TREE-LAWN SIDEWALK WITH 3" ROLLED CURB & GUTTER TO 6" VERTICAL CURB WITH URBAN-STYLE SIDEWALK.
- 6" VERTICAL CURB WHERE SIDEWALK ADJACENT STREET.
- LOCATION OF PROPOSED UTILITIES ALONG ENTRY ROAD ARE PRELIMINARY, AND SUBJECT TO LAYOUT BY UTILITY PROVIDERS AND RIGHTS OF ACCESS IN ADJOINING EXISTING PLATTED EASEMENTS.

GENERAL NOTES

- ALL SIDEWALKS TO BE CONSTRUCTED TO CURRENT CITY OF BALLWIN/ ADA STANDARDS.
- ALL PROPOSED IMPROVEMENTS SHALL BE CONSTRUCTED TO CITY OF BALLWIN STANDARDS, INCLUDING THE MOST CURRENT DETAILS LOCATED IN THE CITY OF BALLWIN'S CODE OF ORDINANCES.
- STREET SIGNAGE TO BE INSTALLED PER CITY OF BALLWIN'S REQUIREMENTS.
- ALL PROPOSED ACCESS TO CITY OF BALLWIN ROADS FOR NEW DEVELOPMENT SHALL MEET MINIMUM REQUIREMENTS.
- ALL UTILITIES TO BE UNDERGROUND.
- ALL HYDRANTS, POWER POLES OR OTHER POTENTIAL OBSTRUCTIONS WITHIN THE CITY OF BALLWIN'S ROAD RIGHT-OF-WAY, SHALL HAVE A MINIMUM TWO (2) FOOT SETBACK FROM THE FACE OF CURB, AS DIRECTED BY THE CITY OF BALLWIN.
- STREET TREES TO BE PROVIDED AS PER CITY OF BALLWIN SUBDIVISION ORDINANCE AND THE CITY OF BALLWIN.
- GROUND COVER BETWEEN CURB AND SIDEWALK TO BE PER CITY STANDARDS.
- ALL EXISTING IMPROVEMENTS ON SITE TO BE REMOVED (TYP.).
- ALL GRADING AND DRAINAGE TO BE IN CONFORMANCE WITH THE CITY OF BALLWIN AND MSD STANDARDS.
- NO SLOPES SHALL EXCEED 3% (HORIZONTAL) TO 1% (VERTICAL), UNLESS JUSTIFIED BY A GEOTECHNICAL REPORT, WHICH HAS BEEN ACCEPTED / APPROVED BY THE CITY OF BALLWIN.
- A LAND DISTURBANCE PERMIT IS REQUIRED PRIOR TO ANY LAND DISTURBANCE (CLEARING AND GRUBBING, GRADING, ETC.) ON THE SITE, NO SIGNIFICANT CHANGE IN WATERSHEDS AS DETERMINED BY THE CITY OF BALLWIN AND THE METROPOLITAN ST. LOUIS SEWER DISTRICT SHALL BE PERMITTED.
- INTERIM STORMWATER DRAINAGE CONTROL, IN THE FORM OF SITUATION CONTROL MEASURES ARE REQUIRED, IN COMPLIANCE WITH CITY OF BALLWIN'S LAND DISTURBANCE CODE.
- THE DEVELOPER IS REQUIRED TO PROVIDE ADEQUATE STORMWATER SYSTEMS IN ACCORDANCE WITH CITY OF BALLWIN STANDARDS AND THE REQUIREMENTS OF THE METROPOLITAN ST. LOUIS SEWER DISTRICT WHERE APPLICABLE.
- PROVIDE ADEQUATE OFF-STREET PARKING FOR CONSTRUCTION EMPLOYEES. PARKING ON HIGHWAY SURFACES SHALL BE PROHIBITED IN ORDER TO ELIMINATE THE CONDITION WHEREBY MUD FROM CONSTRUCTION, AND EMPLOYEE VEHICLES IS TRACKED ONTO THE PAVEMENT CAUSING HAZARDOUS ROADWAY AND DRIVEWAY CONDITIONS.
- BUILDING SIZE AND LOCATION SHOWN FOR CONCEPTUAL PURPOSES ONLY. ACTUAL SIZE AND/OR LOCATION MAY VARY.
- PER FEMA FIRM PANEL 29189C0254H DATED AUGUST 2ND, 1995, ALL OF THE PROPERTY IS IN ZONE-X, AN AREA OUTSIDE THE 500-YEAR FLOOD PLAIN.
- EXTEND/COORDINATE WITH THE CITY OF BALLWIN AND UTILITY PROVIDERS FOR SERVICES/MAIN EXTENSIONS FOR ELECTRIC/CATV/TELEPHONE.
- THE PROPOSED ROADWAY SHALL BE DEDICATED TO THE CITY OF BALLWIN AS RIGHT-OF-WAY.
- ALL UTILITIES ARE TO BE INSTALLED IN NEW UTILITY EASEMENTS AND/OR RIGHT-OF-WAY AS DIRECTED BY UTILITY PROVIDERS AND THE CITY OF BALLWIN.

STORMWATER CALCULATIONS

PRELIMINARY WATER QUALITY CALCULATIONS:
MSD WQV REQUIRED: $WQV = \left(\frac{P}{100} \right) (RV) (A) / 12$
WHERE:
WQV = WATER QUALITY VOLUME (IN ACRES-FEET)
P = 1.14 INCHES OF RAINFALL
RV = $0.05 + 0.009 (I)$
A = DRAINAGE AREA TO BMP IN ACRES
I = PERCENT IMPERVIOUS COVER AND RV IS

SITE AREA (AC)	3.00
$WQV = 1.14 (0.05 + 0.009 (I)) A$	
A, BMP DRAINAGE AREA (AC):	2.25
% PERCENT IMPERVIOUS:	46%
WQV (AF):	0.0992
WQV (GF):	4.320

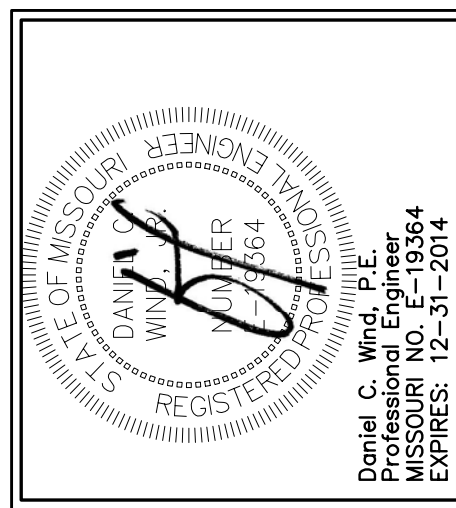
DETENTION AND WQV PROVIDED BY DETENTION PONDS AND/OR WQV CONTROLS AND PRACTICES THAT REDUCE RUNOFF VOLUME THROUGH INFILTRATION, EVAPOTRANSPIRATION, AND/OR RAINWATER HARVESTING. DESIGN SHOWN FOR CONCEPTUAL PURPOSES AND PRELIMINARY SIZING ONLY. ACTUAL DESIGN MAY VARY PER MSD REVIEW.

TEST PIT INFORMATION (SEE PLAN FOR APPROXIMATE LOCATIONS AND ELEVATIONS)					
TP #	DEPTH (FT)	APPROX. ELEVATIONS			COMMENTS
		EXIST	PRO	ROCK	
1	7.5	659	655	651.5	BOTTOM OF DETENTION BASIN = 655
2	20.0	670	672.5	650	FRONT OF LOT 3; F.L. PRO SANITARY = 656
3	16.0	672	672.25	656	IN FRONT OF LOT 3; F.L. PRO SANITARY = 655 +/-
4	8.0	665	669.5	657	IN OLD POND (FILLED); F.L. PRO SANITARY = 657.5 +/-
5	7.0	665	670	658	IN OLD POND (FILLED); F.L. PRO SANITARY = 657.5 +/-

NOTES
1. SANITARY SEWER FLOWLINES BASED ON 1.0% SLOPE ON MAIN; AT FINAL DESIGN MAY PROPOSE 0.6% TO MINIMIZE DEPTH OF CUT AND ROCK EXCAVATION

DIFFERENTIAL STORMWATER CALCULATIONS (PER CITY OF BALLWIN SEC. 25-74 (g))			
SIZE OF TRACT DESCRIPTION	%	ACRES	
		15 YR	25 YR
UNDEVELOPED CONDITIONS		1.70	2.00
UNDEVELOPED RUNOFF (cfs)	5	5.10	6.00
POST DEVELOPMENT CONDITIONS		2.58	3.02
POST DEVELOPMENT RUNOFF (cfs)	50	7.74	9.08
RUNOFF (x YR POST) - (15 YEAR EXISTING) (cfs)		2.64	3.96
30 MIN DETENTION REQ'D (cfs)		1800	4752
VOLUME PROVIDED IN DETENTION BASIN (cfs)			7188

BOTTOM OF BASIN (elev)	655
TOP OF BERM (elev)	661
HIGHWATER ELEVATION AT OVERFLOW (elev)	660
DEPTH OF PONDING (ft)	5



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WESTGLEN COURT
PRELIMINARY SITE PLAN
SITE + GRADING PLAN

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No.	Date	Description	P.E. Signature
2	2/10/14	HOUSE CHGS	
1	1/13/14	CITY COMMENTS	

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Date: 12/7/13

Field Work: DW Field Checked: GS

Drawn By: PC C.S.O.: GS

Checked By: DW

Project Number: 13086

Sheet Number: PSP2

MSD # P- BASEMAP 24-S

H & T: