

LEGISLATIVE REPORT: STORM WATER REGULATIONS IN THE SAN DIEGO REGION

In January 2007 the San Diego Regional Water Quality Control Board issued a revised Municipal Permit, which included two new site design requirements and new restrictions on grading and construction activities. The two new site design requirements are known as Low Impact Development and Hydro-modification. The new grading restrictions deal with larger sites which contain erosive soils or sites which, when subject to grading activities, can present “an exceptional threat to water quality”. ***These new regulations are effective on March 24, 2008. Approved projects and projects which are in the design and planning stages now may not be exempt from these new requirements. Applicants are encouraged to consult with their design teams and city or county staff to determine what changes, if any, might be required for their project. The BIA position’s is that any discretionary project with an application deemed complete on or before March 23, 2008, should be exempt from the new LID and hydro-modification requirements because these new requirements would entail a project redesign, an unrealistic and infeasible requirement.***

LOW IMPACT DEVELOPMENT

Low Impact Development (LID) is a set of project design techniques which attempts to mimic the natural hydrology of a development site by preserving natural drainages and sensitive natural areas (sensitive habitat, steep hillsides, wetlands, etc.) onsite and by infiltrating runoff from developed areas into various locations throughout the site. Low Impact Development tools include vegetated bio-swales, permeable pavements (porous concrete and asphalt surfaces), and landscape infiltration. Infiltration is a process where rainwater is allowed to soak either directly into the ground or through porous materials like permeable pavements into the ground onsite. The objective is to infiltrate contaminated storm water runoff onsite rather than let it enter the storm drain. LID presents many design challenges, particularly with infill and urban projects that may lack space for infiltration. Porous pavement is also significantly more expensive and may not be appropriate for most applications. Infiltration next to building foundations, road surfaces, underground utilities and manufactured slopes presents significant public health and safety risks which cannot be ignored, particularly in a locale like San Diego where most of the soils in our region are low-porosity expansive clay soils, soils which are inconducive to infiltration.





HYDRO-MODIFICATION

Hydro-modification is a project design requirement which applies to projects 50 acres or larger which would be discharging runoff directly into a stream or natural channel. Under natural conditions runoff infiltrates into the site and/or is absorbed and dissipated by the vegetation onsite before it enters the natural drainage system. When a site is developed, runoff from streets, roads, rooftops and paved areas becomes concentrated, increasing the volume of runoff that enters natural drainages and streams, which can lead to downstream erosion and habitat degradation. Hydro-modification requires this runoff to instead be detained and infiltrated onsite and/or slowly discharged into the drainage system to avoid these impacts. Although the storm runoff volume design parameters are different, Low Impact Development can be used to offset some or all of a project's need to retain and slow release runoff. Projects which would discharge directly into a storm drain or lined (concrete) channel are exempt from this new requirement if the storm drain or channel discharges directly to the ocean or bay.

NEW GRADING RESTRICTIONS

The new municipal permit now requires the cities and the county to develop limits on the amount of grading (in acres) that can be done at one time before a new area of a site is opened up for development. The permit leaves it to the discretion of the cities and the county to develop this limit and their standards for applying it. The City of San Diego is proposing no limit at this time provided that you can secure the entire site within 24 hours before a predicted rain event whereas the County is proposing a maximum of 50 acres and the City of Chula Vista is proposing 100 acres.

The new permit also requires the use of advanced treatment for projects which, during grading activities, have the potential to present “an exceptional threat to water quality”. The definition of this standard was not made clear in the permit, however the County has developed thresholds based on proximity to impaired water bodies and onsite soil and topographic conditions which the rest of the jurisdictions are expected to utilize as their thresholds. Advanced treatment is a process which captures runoff in ponds onsite and pumps the runoff into storage tanks which, through the addition of a chemical or natural flocculant, are used to remove the silt and suspended particles from the runoff. The runoff can then be discharged under controlled conditions to the drainage system. Advanced treatment is very expensive and requires a large area for establishing ponds and storage tanks.

STATUS OF DRAFT STORM WATER MANUALS AND NEXT STEPS

The Cities of San Diego and Chula Vista have both prepared updated storm water design manuals to incorporate the new LID and hydro-modification requirements and to update



existing standards, such as treatment control devices (filters, screens, etc.) and source control Best Management Practices (BMP's). The County has also prepared draft regulations and recently finalized its LID Handbook, a handbook of LID design tools and concepts. The other jurisdictions in the region are expected to follow the County's regulations to implement the new requirements. The new requirements are to be effective on March 24, 2008. The City of San Diego will be exempting projects from the new LID and hydro-modification requirements if those projects have an application deemed complete on or before March 23, 2008. The County is proposing to exempt Vested Tentative Maps. Chula Vista is still grappling with whether any exemptions are appropriate, recognizing there is a distinction between an urban infill project which has undergone extensive design and review versus a phase or development area identified in a Master Planned Community which may be more conceptual in design.

When site conditions are conducive to infiltration, LID has the most flexibility and versatility in that a combination of LID BMP tools can be employed and those same tools can also satisfy some of the other requirements, such as the treatment control BMP's and, where applicable, the hydro-modification requirement. LID presents major design challenges, however, and geotechnical professionals will need to be intimately involved in the project design to authorize the use of infiltration areas and ensure that health and safety risks are avoided.

COMPREHENSIVE WATERSHED-BASED APPROACH IS NEEDED

The cost of the new regulations will definitely increase for the vast majority of projects. And the overall benefit to water quality will continue to pale in comparison to a more watershed-based approach which addresses contaminated storm water runoff from areas which are already developed and not subject to these regulations. A good illustration of this fact is the City of San Diego which is 96% built out. The city's future growth will primarily occur in areas planned for higher density infill and urban development, realistically around 10% of the city's presently developed land area. In other words, if 30 years from now the City of San Diego has grown outwardly on 4% of its land and upwardly on 10% of its land, that means that over 85% of the city will still be largely the same, unaffected by the new storm water regulations. The runoff coming from this 85% will still be contaminated and will overwhelm the clean runoff coming from the 15% that has been developed or redeveloped. Many other cities in the region will experience this same outcome without a more comprehensive watershed-based approach.

The cost of the new regulations is estimated to be between \$15,000 and \$20,000 per home with the per unit cost likely to be higher for single-family projects versus multi-family projects, an alarming cost impact given the region's housing affordability problem. But perhaps what is even more alarming is that the total cost to new development will far exceed the cost of a regional or watershed-based approach which addresses both new and existing development comprehensively. As is the case with other infrastructure-related problems, government agencies have chosen to burden new development with solving the problem but unwilling or unable to address the broader deficiencies in the infrastructure for existing development. The approach is inefficient and costly and leaves the problem largely unsolved.

As part of its 2008 legislative priorities, our state organization the California Building Industry Association (CBIA) is undertaking two separate efforts to develop a better approach to our infrastructure needs. CBIA is developing legislation which will outline a process for a more watershed-based approach to storm water runoff whereby development contributes its fair share to a more comprehensive approach. CBIA is also working on a legislative initiative which will clarify the nexus law associated with assessing development impact fees on new development. Both of these efforts will lay the foundation for a more effective approach to infrastructure deficiencies and a more equitable approach to infrastructure financing. They will pressure government to directly address infrastructure issues like storm water and transportation rather than transfer the responsibility to new development.

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